DRAFT ENVIRONMENTAL IMPACT REPORT SAN RAFAEL TRANSIT CENTER REPLACEMENT PROJECT

PREPARED FOR:

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Acronyms and Abbreviations

°C	degree Celsius
µg/m^3	microgram per cubic meter
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACM	asbestos-containing materials
ADL	aerially deposited lead
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act of 1972
AVE	area of visual effects
BAAQMD	Bay Area Air Quality Management District
Basin Plan	San Francisco Bay Basin (Region 2) Water Quality Control Plan
BAU	business-as-usual
BCDC	Bay Conservation and Development Commission
BMP	best management practice
BTU	British thermal unit
C/O	Commercial/Office
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy Standards
cal	calibrated
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAP	Climate Change Action Plan

CCAP 2030	*San Rafael Climate Change Action Plan 2030*
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	methane
CHRS	California Historical Resource Status
City	City of San Rafael
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Construction General Permit	General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
District	Golden Gate Bridge, Highway and Transportation District
Downtown Precise Plan	*Downtown San Rafael Precise Plan*
Downtown SAP	*San Rafael Downtown Station Area Plan*
Downtown Vision	*Our Vision of Downtown San Rafael and Our Implementation Strategy*

DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EMFAC2017	Emission Factor 2017
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERP	Emergency Recovery Plan
ESA	Endangered Species Act
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FHSZ	fire hazard severity zone
FTA	Federal Transit Administration
Geotechnical Recommendation	Preliminary Geotechnical Design Recommendations
GHG	greenhouse gas
GWP	global warming potential
HABS	Historic American Buildings Survey
HCM	Highway Capacity Manual
HCP	habitat conservation plan
HO	Hetherton Office
"Hot Spots" Act	Air Toxics "Hot Spots" Information and Assessment Act of 1987
HRA	health risk assessment
HVAC	heating, ventilation, and air-conditioning
Industrial Permit	General Industrial Activities Stormwater Permit
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
L_{dn}	day-night sound level
LED	light-emitting diode

LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent sound level
$L_{eq}(h)$	hourly equivalent sound level
LHMP	Local Hazard Mitigation Plan
L_{max}	maximum sound level
L_{min}	minimum sound level
LOS	level of service
LRA	Local Responsibility Area
LT	long-term
Marin Transit	Marin County Transit District
MCE	Marin Clean Energy
MCSTOPPP	Marin County Stormwater Pollution Prevention Program
MMWD	Marin Municipal Water District
MS4	Municipal Separate Storm Sewer System
MTC	Metropolitan Transportation Commission
MWh	megawatt-hours
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	natural community conservation plan
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHTSA	National Highway Traffic Safety Administrative
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
NWP	Northwestern Pacific Railroad

O_3	ozone
OA	Operational Area
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
P/QP	Public/Quasi-Public
PDA	Priority Development Area
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM_{10}	inhalable coarse particles
$PM_{2.5}$	inhalable fine particles
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	peak particle velocity
PRC	California Public Resources Code
Procedures	*Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*
proposed project	San Rafael Transit Center Replacement Project
R/O	Residential/Office
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RMS	root-mean-square
ROG	reactive organic gas
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District

SCS	sustainable communities strategy
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	short-lived climate pollutant
SMART	Sonoma-Marin Area Rail Transit
SO_2	sulfur dioxide
SO_X	sulfur oxides
SRA	State Responsibility Area
SRFD	San Rafael Fire Department
SRPD	San Rafael Police Department
STIP	State Transportation Improvement Program
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAM	Transportation Authority of Marin
Tanner Act	Toxic Air Contaminant Identification and Control Act
TMDL	Total Maximum Daily Load
U.S.C.	United States Code
Under2 MOU	Global Climate Leadership Memorandum of Understanding
US-101	U.S. Highway 101
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
VdB	vibration decibels
VMT	vehicle miles traveled

Executive Summary

ES.1 Introduction

This Draft Environmental Impact Report (EIR) has been prepared in accordance with the provisions of the California Environmental Quality Act (CEQA) to evaluate the potential impacts of the proposed San Rafael Transit Center Replacement Project (proposed project) and other build alternatives. Four build alternatives are being considered for the proposed project: the Move Whistlestop Alternative (the preferred project), Adapt Whistlestop Alternative, 4th Street Gateway Alternative, and Under the Freeway Alternative. All build alternatives are within Downtown San Rafael. As required by Section 15123 of the State CEQA Guidelines, this Executive Summary contains the following sections.

- Project Overview
- Project Objectives
- Preferred Project
- Other Build Alternatives
- No Project Alternative
- Significant and Unavoidable Impacts
- Potential Areas of Controversy and Issues to Be Resolved

ES.2 Project Overview

The Golden Gate Bridge, Highway and Transportation District (District), in coordination with the City of San Rafael (City), Marin County Transit District (Marin Transit), Transportation Authority of Marin (TAM), and Sonoma-Marin Area Rail Transit (SMART), plans to replace the transit center in Downtown San Rafael. The proposed project is needed primarily to replace the existing transit center following the loss of some of the transit center facilities that resulted from the implementation of the SMART Phase 2 line to Larkspur. A new transit center solution in Downtown San Rafael would address near-term and long-term transit needs while improving the desirability and usability of transit for both local residents and regional commuters.

ES.3 Project Objectives

The project objectives are to:

- Provide improved transit connectivity and ease of use in and around Downtown San Rafael.
- Enhance local and regional transit use by bringing together multiple modes of the transportation network—including the SMART-bus connection—into a hub that affords transit users the safest, most efficient means of using bus and rail services.

- Efficiently accommodate transit users and services, optimize operating costs, and improve transit desirability.
- Design a functional, attractive, and cost-effective facility that can meet long-term projected service levels and be implemented in an expeditious manner, so as to minimize the period of use of the interim facility.
- Provide a transit facility that is readily accessible to individuals with disabilities, transit users, and transit-dependent populations, including those with low incomes.
- Provide a secure, safe, and inviting space for transit patrons.
- Create a more accessible transit facility for all users by reducing vehicular, rail, bicycle, and pedestrian conflicts and improving safety.
- Provide convenient, pedestrian connections to surrounding land uses.

A new transit center solution in Downtown San Rafael would address near-term and long-term transit needs while improving the desirability and usability of transit for local residents and regional commuters. It would also, to the extent feasible, minimize traffic congestion and facilitate efficient transit operations while also promoting pedestrian safety.

Table ES-1 provides a comparison of the potential impacts of the three build alternatives compared to the impacts of the preferred alternative, by resource topic.

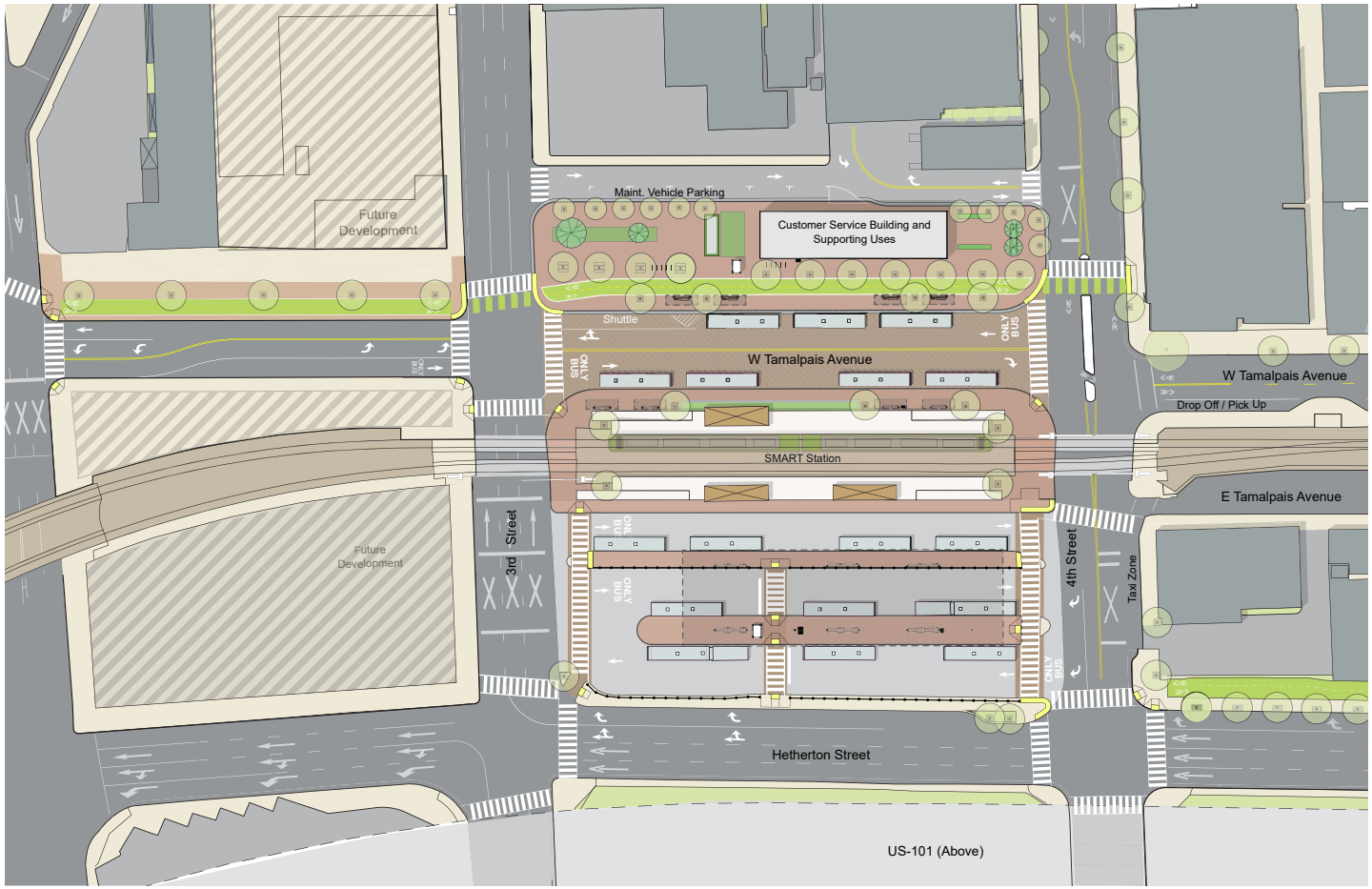
ES.4 Preferred Project

The Move Whistlestop Alternative has been identified as the District's preferred alternative. The site is generally between West Tamalpais Avenue to the west, Hetherton Street to the east, 4th Street to the north, and 3rd Street to the south. Additional improvements are included to shift West Tamalpais Avenue to the east from 2nd Street to 4th Street. This modification would align West Tamalpais Avenue with the block to the north and include construction of a bike path and sidewalk improvements on the west side of West Tamalpais Avenue from 2nd Street to 4th Street. From 2nd to 3rd Street, this improvement would extend into space occupied by the existing transit center and from 3rd Street to 4th Street, this improvement would extend onto the existing west sidewalk along West Tamalpais Avenue. See Figure ES-1 for the site plan.

The Move Whistlestop Alternative would feature five platforms, A through E, and one District building. It would utilize the curbside bays on both sides of West Tamalpais Avenue between 3rd and 4th Streets. West Tamalpais Avenue between 2nd and 4th Streets would be shifted east to be more proximate to the SMART tracks. The Whistlestop building would be relocated to the west side of West Tamalpais Avenue between 3rd and 4th Streets. Alternatively, a new building could be constructed utilizing similar façades or architectural elements from structures currently on the Whistlestop site. This building would include District customer service and operations building space. The District building would be one story and an estimated 3,000 square feet. It would include a driver break room with restrooms, District offices and customer support area with restrooms and a kitchen, and a public lobby with a service counter and restrooms. Tamalpais Avenue between 3rd and 4th Streets would be limited to buses only. Bus bays on the parcel containing the Citibank building and its affiliated parking lot, also referred to as the "Citibank parcel," would be accessed via driveways along 3rd and 4th Streets. The area west of West Tamalpais Avenue between 3rd and 4th

Streets (i.e., space not utilized by the relocated Whistlestop building) would be provided for public plazas, customer service, bicycle parking, and/or transit-supportive land uses. The existing SMART pick-up/drop-off area on East Tamalpais Avenue between 3rd and 4th Streets would be removed and replaced with a pick-up/drop-off area for six vehicles on West Tamalpais Avenue between 4th Street and 5th Avenue. Fifty feet of shuttle parking would be provided on West Tamalpais Avenue between 3rd Street and 4th Street. Maintenance vehicle parking for six District vehicles would be provided on a new access alley constructed at the western edge of the site, connecting between 3rd Street and 4th Street. This would connect to a new driveway on 4th Street between Tamalpais Avenue and Lincoln Avenue to replace the removed driveway on West Tamalpais Avenue to the condo complex at Lincoln Avenue and 4th Street. Construction of the bicycle path on Tamalpais Avenue from 2nd Street to 4th Street would reflect implementation of one of the City's planned bicycle infrastructure improvements. This bike path would connect to the Mahon Creek Path.

Refer to Table ES-2 for a summary of the environmental impacts of the Move Whistlestop Alternative.



Legend

- Feature Tree
- Tree with Tree Well
- Tree
- Platform Seating
- Bus Canopy
- Landscaped Area
- Bike Racks
- Secure Bike Parking
- Security Kiosk
- Bike Path
- Canopy Overhead
- Ped Safety Barrier
- Ticket Machine
- Improved Paving
- Typical Paving

N

Source: Kimley-Horn, Via Architecture, 2021.

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Figure ES-1
Move Whistlestop Alternative

ES.5 Other Build Alternatives

This EIR analyzes three other build alternatives at an equal level of detail. The build alternatives vary in site area and location as well as specific features. Similar to the preferred project, all build alternatives have the following components:

- Installation of 17 straight-curb bus bays to accommodate transit, airport coach services, and Greyhound services at the transit center
- Provision of paratransit, pick-up/drop-off, maintenance vehicle, and shuttle curb space
- Provision of bicycle parking, including racks and lockers
- Installation of minimum 9-foot-wide platforms adjacent to bus bays
- Installation of passenger amenities including weather protection (such as shelters or canopies) and seating
- Installation of other features including public art, security, and wayfinding signage
- Provision of a roughly 3,000-square-foot building including customer service, public restrooms, driver relief facilities, small retail, maintenance, and security

Adapt Whistlestop Alternative: This alternative site is generally between West Tamalpais Avenue to the east, Hetherton Street to the west, 4th Street to the north, and 3rd Street to the south. This alternative would include the construction of a bike path and pedestrian improvements on the west side of West Tamalpais Avenue from 2nd Street to 4th Street. See Figure ES-2 for the site plan. This alternative is on the same block as the existing SMART station. This alternative site crosses nine parcels currently occupied by the Whistlestop building, a café, a restaurant, parking spaces, the SMART tracks, and the Citibank parcel. Uses surrounding the project site include retail, commercial, and office uses to the north, U.S. Highway 101 (US-101) to the east, the existing San Rafael Transit Center to the south, and restaurants, residential, and retail facilities to the west.

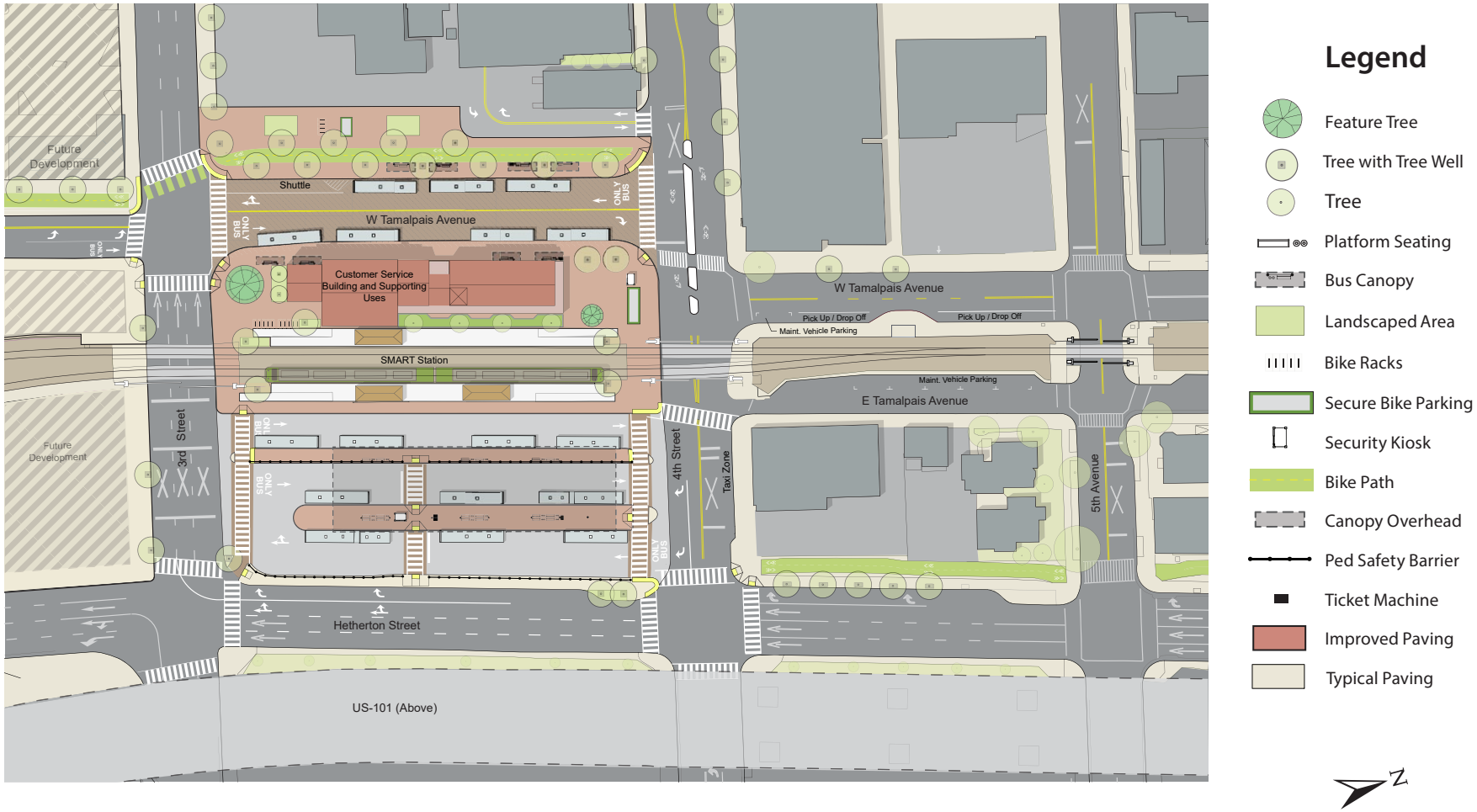
The Adapt Whistlestop Alternative would feature five platforms, A through E, and one District building. There would be 17 straight-curb bus bays to accommodate transit, airport coach services, and Greyhound services at the transit center. Each bus bay would have a minimum 9-foot-wide platform adjacent and platforms would provide passenger amenities including weather protection (such as shelters or canopies) and seating. Paratransit, pick-up/drop-off, maintenance vehicle, and shuttle curb space would be provided. Other features would include public art, security, provision for bicycle parking including racks and lockers, and wayfinding signage. The Whistlestop building (minus the Jackson Café) would be renovated or remodeled to serve as District customer service and operations building space. Space would be provided for public plazas, customer service, bicycle parking, and/or transit-supportive land uses. Construction of the bicycle path on Tamalpais Avenue from 2nd Street to 4th Street would reflect implementation of one of the City's planned bicycle infrastructure improvements. This bike path would connect to the Mahon Creek Path.

Table ES-2 summarizes the impacts of the Adapt Whistlestop Alternative.

4th Street Gateway Alternative: This alternative site is bounded by 5th Avenue, 3rd Street, Hetherton Street, and the SMART tracks, as well as curb space along West Tamalpais Avenue; see Figure ES-3 for the site plan. The 4th Street Gateway Alternative would feature six platforms, A through F, and two District buildings. There would be three on-street bays located curbside on the

west side of Hetherton Street between 4th Street and 5th Avenue. In order to accommodate these curbside bays, southbound right turns from Hetherton Street to 4th Street would be precluded. On the east side of both sites, space would be provided for public plazas, customer service, bicycle parking, and/or transit-supportive land uses. Table ES-3 summarizes impacts of the 4th Street Gateway Alternative.

Under the Freeway Alternative: This alternative site is generally located beneath US-101 and bounded by 5th Avenue, south of 4th Street, Irwin Street, and Hetherton Street; see Figure ES-4 for the site plan. Underneath US-101 there is a park-and-ride lot, maintained and operated by the California Department of Transportation. Irwin Creek, underneath US-101, flows parallel to US-101. The Under the Freeway Alternative would feature six platforms, A through F, and one District building. The affiliated bus bays would be accessed via driveways on 4th Street, Irwin Street, and Hetherton Street. Internal circulation would be provided for the northern block to allow buses accessing bays from either side of the site to egress on either side as well, which is critical given the diverse bus routing accessing the site. Space would be provided for public plazas, customer service, and/or transit-supportive land uses. This would require three bridges/viaducts over Irwin Creek to connect Hetherton Street to the bus bays. Table ES-4 summarizes impacts of the Under the Freeway Alternative.



Source: Kimley-Horn, Via Architecture, 2021.

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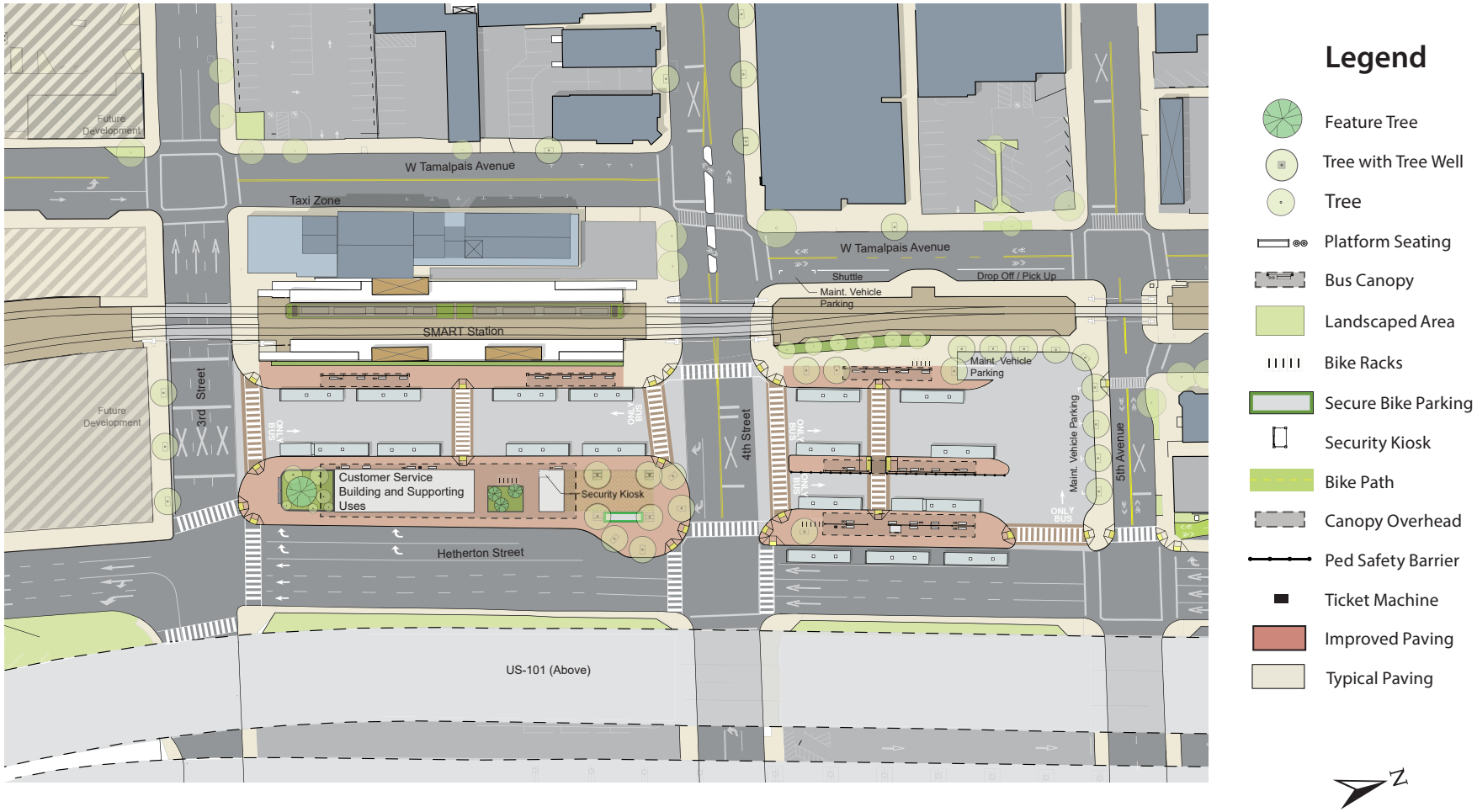
Figure ES-2
Adapt Whistlestop Alternative



Source: Kimley-Horn, Via Architecture, 2021.

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Figure ES-3
4th Street Gateway Alternative

Legend

- Feature Tree
- Tree with Tree Well
- Tree
- Platform Seating
- Bus Canopy
- Landscaped Area
- Bike Racks
- Secure Bike Parking
- Security Kiosk
- Bike Path
- Canopy Overhead
- Ped Safety Barrier
- Ticket Machine
- Improved Paving
- Typical Paving

N

Source: Kimley-Horn, Via Architecture, 2021.

Graphics ... 0748.17 (6/24/21) AB

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Figure ES-4
Under the Freeway Alternative

ES.6 No-Project Alternative

The No-Project Alternative is based on what would reasonably be expected to occur if the proposed project is not implemented. Under the No-Project Alternative, the District would not relocate the transit center; it would remain at its current location in Downtown San Rafael between 2nd Street, 3rd Street, West Tamalpais Avenue, and Hetherton Street and continue to operate as it does currently. The No-Project Alternative would include the existing transit center, which has been compromised by the implementation of the SMART Phase 2 line and is currently deficient in bus operations, connectivity between modes, and pedestrian safety. The 17 existing bus bays are fully utilized at peak times and would not allow for any additional growth in bus volumes. Additionally, there is no land available for provision of paratransit, additional pick-up/drop-off, maintenance vehicle, and shuttle curb space.

ES.7 Significant and Unavoidable Impacts

Section 15126.2(b) of the State CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. The following environmental impacts were determined to be significant and unavoidable.

ES.7.1 Move Whistlestop Alternative (Preferred Project)

There are no significant and unavoidable impacts associated with the Move Whistlestop Alternative.

ES.7.2 Adapt Whistlestop Alternative

There are no significant and unavoidable impacts associated with the Adapt Whistlestop Alternative.

ES.7.3 4th Street Gateway Alternative

ES.7.3.1 Cultural Resources

This alternative would cause a significant and unavoidable impact due to loss of historical resources.

ES.7.3.2 Transportation

The 4th Street Gateway Alternative would also be partially inconsistent with Program M-2.2B and Policy M-2.5 of the Draft *San Rafael General Plan 2040*, due to the substantial increases in vehicle idling time in the project vicinity under Year 2040 conditions and the removal of the southbound right-turn from Hetherton Street to 4th Street. Additionally, while the 4th Street Gateway Alternative would result in substantial increases in vehicle idling time in the project vicinity under Year 2040 conditions, this alternative would not be subject to level of service standards due to the Policy M-2.5(c) Downtown Standards, resulting in partial consistency with the policy. The alternative's inconsistencies with *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040* would interfere with the implementation of future land use development and long-term roadway improvements identified by these plans. Mitigation for these inconsistencies is considered infeasible due to the existing level of development in the City and the planned future development identified in *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan*

2040. Therefore, impacts associated with the 4th Street Gateway Alternative would remain significant and unavoidable under Year 2040 conditions.

ES.7.4 Under the Freeway Alternative

ES.7.4.1 Cultural Resources

This alternative would cause a significant and unavoidable impact due to loss of historical resources.

ES.7.4.2 Transportation

The Under the Freeway Alternative would result in the displacement of 72 park-and-ride spaces. Replacement parking within Downtown San Rafael may be infeasible due to the existing level of development in the City and the planned future development identified in *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*. Therefore, this impact would be inconsistent with the City's parking policies. Impacts associated with inconsistency with parking policies for the Under the Freeway Alternative would be significant and unavoidable.

ES.8 Potential Areas of Controversy and Issues to Be Resolved

On October 16, 2018, the District filed a Notice of Preparation with the Governor's Office of Planning and Research. During the 30-day comment period (ending November 19, 2018), written comments regarding the scope and content of the Draft EIR were received from regulatory agencies and the public. Additionally, a scoping session on the Draft EIR was held on October 30, 2018, at the Whistlestop building at 930 Tamalpais Avenue in San Rafael. All written and oral comments received during the comment period and scoping session were considered in the preparation of the Draft EIR. A copy of the Notice of Preparation and all comments are included in the Scoping Summary Report, which is included as Appendix A. Issues to be resolved include but are not limited to the following:

- Consensus around the preferred alternative
- Final design of the preferred alternative
- Disposition of the existing transit center

Table ES-1. Comparison of Other Build Alternatives to the Preferred Project

Resource	Move Whistlestop Alternative (Preferred Project) Level of Impact	No-Project Alternative		Adapt Whistlestop Alternative		4th Street Gateway Alternative		Under the Freeway Alternative	
		Level of Impact	Comparison to Preferred Project	Level of Impact	Comparison to Preferred Project	Level of Impact	Comparison to Preferred Project	Level of Impact	Comparison to Preferred Project
Aesthetics	LTS	NI	<	LTS	=	LTS w/MM	>	LTS w/MM	>
Air Quality	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Biological Resources	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	>
Cultural Resources	LTS w/MM	NI	<	LTS w/MM	=	SU	>	SU	>
Energy	LTS w/MM	NI	<[a]	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Geology and Soils	LTS	NI	<	LTS	=	LTS	=	LTS	=
Greenhouse Gas Emissions	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Hazards and Hazardous Materials	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Hydrology and Water Quality	LTS w/ MM	NI	<	LTS w/ MM	=	LTS w/ MM	=	LTS w/ M	>
Land Use and Planning	LTS	SU	<[a]	LTS	=	LTS	=	LTS	=
Noise and Vibration	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	>	LTS w/MM	>
Population and Housing	LTS	NI	<	LTS	=	LTS	=	LTS	=
Public Services and Recreation	LTS	NI	<	LTS	=	LTS	=	LTS	=
Transportation	LTS	SU	>[a]	LTS	=	SU	>	SU	>
Tribal Cultural Resources	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Utilities and Service Systems	LTS	NI	<	LTS	=	LTS	=	LTS	=
Wildfire	LTS	NI	<	LTS	=	LTS	=	LTS	=

NI: No Impact
LTS: Less than Significant
LTS w/MM: Less than Significant with Mitigation
SU: Significant and Unavoidable

<: Impacts would be less than the impacts of the Move Whistlestop Alternative.
>: Impacts would be greater than the impacts of the Move Whistlestop Alternative.
=: Impacts would be equivalent to the impacts of the Move Whistlestop Alternative.

[a] Under the No-Project Alternative, the beneficial transportation impacts of the Move Whistlestop Alternative would not occur.

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Aesthetics				
Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and its Surroundings in a Non-Urbanized Area, Including Scenic Vistas, or Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality in an Urbanized Area, Including Scenic Vistas	Both	Less than significant	--	--
Substantially Damage Scenic Resources, Including, but not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway	Both	No Impact	--	--
Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views Near the Project Improvements	Construction	Less than significant	--	--
	Operations	Significant	MM-AES-OP-3: Apply Minimum Lighting Standards	Less than significant
Cumulative Impacts (light and glare)	Construction	Less than significant	--	--
	Operations	Significant	MM-AES-OP-3	Less than significant
Cumulative Impacts (historic structures)	Both	No impact	--	--
Air Quality				
Conflict With or Obstruct Implementation of the Applicable Air Quality Plan	Both	Less than significant	--	--
Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region Is a Nonattainment Area for an Applicable Federal or State Ambient Air Quality Standard	Both	Less than significant	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Expose Sensitive Receptors to Substantial Pollutant Concentrations	Construction	Significant	MM-AQ-CNST-1: Use Clean Diesel-Powered Equipment during Construction to Control Construction-Related Emissions	Less than significant
	Operations	Less than Significant	--	--
Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People	Both	Less than significant	--	--
Cumulative Impacts: Conflict With or Obstruct Implementation of the Applicable Air Quality Plan	Both	Less than significant	--	--
Cumulative Impacts: Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region Is a Nonattainment Area for an Applicable Federal or State Ambient Air Quality Standard	Both	Less than significant	--	--
Cumulative Impacts: Expose Sensitive Receptors to Substantial Pollutant Concentrations	Both	Less than significant	--	--
Cumulative Impacts: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People	Both	Less than significant	--	--
Biological Resources				
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	Both	No impact	--	--
Have a Substantial Adverse Effect on any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Both	No impact	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
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	Both	No impact	--	--
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	Construction	Significant	MM-BIO-CNST-1: Conduct Environmental Awareness Training for Construction Employees MM-BIO-CNST-6: Conduct a Preconstruction Survey for Nesting Birds and Implement Protective Buffers Around Active Nests	Less than significant
	Operations	No Impact	--	--
Conflict with Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance	Construction	Significant	MM-BIO-CNST-3: Install Orange Construction Fencing Between the Construction Area and Adjacent Sensitive Biological Resources	Less than significant
	Operations	No impact	--	--
Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan	Both	No impact	--	--
Cumulative Impacts	Construction	Significant	MM-BIO-CNST-1 MM-BIO-CNST-3 MM-BIO-CNST-6	Less than significant
Cultural Resources				
Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5	Construction	Less than significant	--	--
	Operations	No Impact	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Cause a Substantial Adverse Change in the Significance of an Archaeological Resource Pursuant to Section 15064.5	Construction	Significant	MM-CULT-CNST-4: Develop and Implement an Archaeological Testing Plan MM-CULT-CNST-5: Conduct Cultural Resource Awareness Training Prior to Project-Related Ground Disturbance and Stop Work if Archaeological Deposits Are Encountered During Ground-Disturbing Activities MM-CULT-CNST-6: Develop and Implement a Tribal Cultural and Archaeological Monitoring Plan	Less than significant
	Operations	No Impact	--	--
Disturb Any Human Remains, Including those Interred Outside of Formal Cemeteries	Construction	Significant	MM-CULT-CNST-4 MM-CULT-CNST-5 MM-CULT-CNST-6 MM-CULT-CNST-7: Comply with State Laws Relating to Human Remains	Less than significant
	Operations	Significant	MM-CULT-CNST-4 MM-CULT-CNST-5	Less than significant
Cumulative (built environment historical resources)	Both	Less than significant	--	--
Cumulative (archaeological resources)	Construction	Significant	MM-CULT-CNST-4 MM-CULT-CNST-5 MM-CULT-CNST-6	Less than significant
	Operations	No Impact	--	--
Cumulative (human remains)	Both	Significant	MM-CULT-CNST-4 MM-CULT-CNST-5 MM-CULT-CNST-6 MM-CULT-CNST-7	Less than significant

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Energy				
Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction Or Operation	Construction	Significant	MM-GHG-CNST-1: Implement BAAQMD's Best Management Practices to Reduce GHG Emissions from Construction	Less than significant
	Operations	Less than significant	--	--
Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency	Both	Less than significant	--	--
Cumulative Impacts	Both	Less than significant	--	--
Geology and Soils				
Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Rupture of a Known Earthquake Fault, Strong Seismic Ground Shaking, Seismic-Related Ground Failure (Including Liquefaction), or Landslides	Both	Less than significant	--	--
Result in Substantial Soil Erosion or the Loss of Topsoil	Both	Less than significant	--	--
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 Onsite or Offsite Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse	Both	Less than significant	--	--
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	Both	Less than significant	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Have Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Waste Water Disposal Systems Where Sewers Are not Available for the Disposal of Wastewater	Both	No impact	--	--
Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature	Construction	Less than significant	--	--
	Operations	No impact	--	--
Cumulative Impacts	Both	Less than significant	--	--
Greenhouse Gas Emissions				
Generate Greenhouse Gas Emissions During Construction, Either Directly or Indirectly, that May Have a Significant Impact on the Environment	Construction	Significant	MM-GHG-CNST-1: Implement BAAQMD's Best Management Practices to Reduce GHG Emissions from Construction	Less than significant
	Operations	Less than significant	--	--
Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases	Both	Less than significant	--	--
Cumulative Impacts	Both	Less than significant	--	--
Hazards and Hazardous Materials				
Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials	Both	Less than significant	MM-HYD-CNST-1: Prepare and Implement a Stormwater Pollution Prevention 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	Construction	Significant	MM-HAZ-CNST-1: Phase II Site Investigation MM-HYD-CNST-1	Less than significant
	Operations	Less than significant	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School	Both	Less than significant	--	--
Be Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code § 65962.5 and, as a Result, Create a Significant Hazard to the Public or the Environment	Both	No impact	--	--
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	Both	No impact	--	--
Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan	Both	Less than significant	--	--
Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury or Death Involving Wildland Fires	Both	Less than significant	--	--
Cumulative Impacts	Both	Less than significant	--	--
Hydrology and Water Quality				
Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality	Construction	Significant	MM-HYD-CNST-1	Less than Significant
	Operation	Less than significant	--	--
Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such that the Project May Impede Sustainable Groundwater Management of the Basin	Both	Less than significant	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alternation of the Course of a Stream or River or through the Addition of Impervious Surfaces, in a Manner that Would Result in Substantial Erosion or Siltation On or Off Site, Substantially Increase the Rate or Amount of Surface Runoff in a Manner that Would Result in 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, or Impede or Redirect Flood Flows	Both	Less than significant	--	--
In Flood Hazard, Tsunami, or Seiche Zones, Risk Release of Pollutants Due to Project Inundation	Both	Less than significant	--	--
Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan	Both	No impact	--	--
Cumulative Impacts	Both	Less than significant	--	--
Land Use and Planning				
Physically Divide an Established Community	Both	Less than significant	--	--
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	Both	Less than significant	--	--
Cumulative Impacts	Both	Less than significant	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Noise				
Generation of 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	Construction	Significant	MM-NOI-CNST-1: Use Best Noise Control Practices During Construction	Less than significant
	Operations	Significant	MM-NOI-OP-2: Provide Acoustical Treatments for Mechanical Equipment as Needed to Comply with City Noise Standards	Less than significant
Generation of Excessive Groundborne Vibration or Groundborne Noise Levels	Construction	Significant	MM-NOI-CNST-3: Implement Vibration-Reducing Practices During Construction	Less than significant
	Operations	Less than significant	--	--
Cumulative Impacts	Construction	Significant	MM-NOI-CNST-1	Less than significant
	Operations	Less than significant	--	--
Population and Housing				
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)	Both	Less than significant	--	--
Displace Substantial Numbers of Existing People or Housing, Necessitating the Construction of Replacement Housing Elsewhere	Both	No impact	--	--
Cumulative Impacts	Both	Less than significant	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Public Services and Recreation				
Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities or a 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 Following Public Services	Both	Less than significant	--	--
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	Both	No impact	--	--
Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities that Might Have an Adverse Physical Effect on the Environment	Both	Less than significant	--	--
Cumulative Impacts	Both	Less than significant	--	--
Transportation				
Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities	Both	Less than significant	--	--
Conflict or Be Inconsistent with CEQA Guidelines §15064.3, Subdivision (b)	Both	Less than significant	--	--
Substantially Increase Hazards Due to a Geometric Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)	Both	Less than significant	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Result in Inadequate Emergency Access	Both	Less than significant	--	--
Cumulative Impacts	Both	Less than significant	--	--
Tribal Cultural Resources				
Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code § 21074 as Either a Site, Feature, Place, Cultural Landscape that Is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that Is Listed or Eligible for Listing in the California Register of Historical Resources, or in a Local Register of Historical Resources as Defined in Public Resources Code Section 5020.1(k) or a Resource Determined by the Lead Agency, in Its Discretion and Supported by Substantial Evidence, to Be Significant Pursuant to Criteria Set Forth in Subdivision (c) of Public Resources Code § 5024.1	Construction		MM-CULT-CNST-4: Develop and Implement an Archaeological Testing Plan MM-CULT-CNST-5: Conduct Cultural Resource Awareness Training Prior to Project-Related Ground Disturbance and Stop Work if Archaeological Deposits are Encountered During Ground-Disturbing Activities MM-CULT-CNST-6: Develop and Implement a Tribal Cultural and Archaeological Monitoring Plan MM-CULT-CNST-7: Comply With State Laws Relating to Human Remains	Less than significant
	Operations	Less than significant	--	--
Cumulative Impacts	Construction	Significant	MM-CULT-CNST-4 MM-CULT-CNST-5 MM-CULT-CNST-6 MM-CULT-CNST-7	Less than significant
	Operations	No Impact	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Utilities and Service Systems				
Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment, or Stormwater Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects	Both	Less than significant	--	--
Have Sufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry, and Multiple Dry Years	Both	Less than significant	--	--
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	Both	Less than significant	--	--
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; and Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste	Both	Less than significant	--	--
Cumulative Impacts	Both	Less than significant	--	--
Wildfire				
Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan	Both	Less than significant	--	--
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	Both	Less than significant	--	--

Table ES-2. Summary of Move Whistlestop Alternative and Adapt Whistlestop Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
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 on the Environment	Both	Less than significant	--	--
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	Both	Less than significant	--	--
Cumulative Impacts	Both	Less than significant	--	--

Table ES-3. Summary of 4th Street Gateway Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Aesthetics				
Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and its Surroundings in a Non-Urbanized Area, Including Scenic Vistas, or Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality in an Urbanized Area, Including Scenic Vistas	Operations	Significant	MM-CULT-CNST-1: Prepare and Implement Relocation Plans	Less than significant
Cumulative Impacts (historic structures)	Construction	Significant	MM-CULT-CNST-1	Less than significant
	Operations	No Impact	--	--
The remaining impacts are the same as those listed in Table ES-2.				
Air Quality				
Same as those listed in Table ES-2.				
Biological Resources				
Same as those listed in Table ES-2.				
Cultural Resources				
Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5	Construction	Significant	MM-CULT-CNST-1 MM-CULT-CNST-2: Prepare and Submit Historical Documentation MM-CULT-CNST-3: Develop and Implement an Interpretive Program	Significant and unavoidable (potential damage to two historical resources)
The remaining impacts are the same as those listed in Table ES-2.				
Energy				
Same as those listed in Table ES-2.				
Geology and Soils				
Same as those listed in Table ES-2.				
Greenhouse Gas Emissions				
Same as those listed in Table ES-2.				

Table ES-3. Summary of 4th Street Gateway Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Hazards and Hazardous Materials				
Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School	Both	No Impact	--	--
Same as those listed in Table ES-2.				
Hydrology and Water Quality				
Same as those listed in Table ES-2.				
Land Use and Planning				
Same as those listed in Table ES-2.				
Noise				
Cumulative	Construction	Less than significant	--	--
The remaining impacts are the same as those listed in Table ES-2.				
Population and Housing				
Same as those listed in Table ES-2.				
Public Services and Recreation				
Same as those listed in Table ES-2.				
Transportation				
Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities	Operations	Significant	None	Significant and unavoidable (inconsistency with polices related to travel times)
The remaining impacts are the same as those listed in Table ES-2.				
Tribal Cultural Resources				
Same as those listed in Table ES-2.				

Table ES-3. Summary of 4th Street Gateway Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Utilities and Service Systems				
Same as those listed in Table ES-2.				
Wildfire				
Same as those listed in Table ES-2.				

Table ES-4. Summary of Under the Freeway Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Aesthetics				
Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and its Surroundings in a Non-Urbanized Area, Including Scenic Vistas, or Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality in an Urbanized Area, Including Scenic Vistas	Construction	Significant	MM-AES-CNST-1: Install Visual Barriers Between Construction Work Areas and Sensitive Receptors	Less than significant
	Operations	Significant	MM-CULT-CNST-1: Prepare and Implement Relocation Plans	Less than significant
Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views Near the Project Improvements	Construction	Significant	MM-AES-CNST-2: Limit Construction Near Residences to Daylight Hours	Less than significant
Cumulative Impacts (historic structures)	Construction	Significant	MM-CULT-CNST-1	Less than significant
	Operations	No Impact	--	--
The remaining impacts are the same as those listed in Table ES-2.				
Air Quality				
Same as those listed in Table ES-2.				
Biological Resources				
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	Construction	Significant	MM-BIO-CNST-1: Conduct Environmental Awareness Training for Construction Employees MM-BIO-CNST-2: Conduct Preconstruction Surveys for Bats and Implement Protective Measures	Less than significant
	Operation	No impact	--	--

Table ES-4. Summary of Under the Freeway Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
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	Construction	Significant	MM-BIO-CNST-3: Install Orange Construction Fencing Between the Construction Area and Adjacent Sensitive Biological Resources MM-BIO-CNST-4: Conduct Periodic Biological Monitoring MM-BIO-CNST-5: Compensate for Temporary and Permanent Loss of Perennial Stream	Less than significant
Cumulative Impacts	Construction	Significant	MM-BIO-CNST-1 MM-BIO-CNST-2: Conduct Preconstruction Surveys for Bats and Implement Protective Measures MM-BIO-CNST-3 MM-BIO-CNST-4: Conduct Periodic Biological Monitoring MM-BIO-CNST-5: Compensate for Temporary and Permanent Loss of Perennial Stream MM-BIO-CNST-6	Less than significant
The remaining impacts are the same as those listed in Table ES-2.				
Cultural Resources				
Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5	Construction	Significant	MM-CULT-CNST-1: Prepare and Implement Relocation Plans MM-CULT-CNST-2: Prepare and Submit Historical Documentation MM-CULT-CNST-3: Develop and Implement an Interpretive Program	Significant and unavoidable (demolition of a historical resource)
The remaining impacts are the same as those listed in Table ES-2.				
Energy				
Same as those listed in Table ES-2.				

Table ES-4. Summary of Under the Freeway Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Geology and Soils				
Same as those listed in Table ES-2.				
Greenhouse Gas Emissions				
Same as those listed in Table ES-2.				
Hazards and Hazardous Materials				
Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School	Both	No Impact	--	--
The remaining impacts are the same as those listed in Table ES-2.				
Hydrology and Water Quality				
Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality	Construction	Significant	MM-HYD-CNST-1: Prepare and Implement a Stormwater Pollution Prevention Plan MM-CNST-BIO-5	Less than Significant
	Operation	Less than Significant	--	--
The remaining impacts are the same as those listed in Table ES-2.				
Land Use and Planning				
Same as those listed in Table ES-2.				
Noise				
Cumulative	Construction	Less than significant	--	--
The remaining impacts are the same as those listed in Table ES-2.				
Public Services and Recreation				
Same as those listed in Table ES-2.				

Table ES-4. Summary of Under the Freeway Alternative Impacts and Required Mitigation Measures

Impact	Phase	Significance before Mitigation	Mitigation	Significance after Mitigation
Transportation				
Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities	Operations	Significant	None	Significant and unavoidable (inconsistent with policies related to parking)
The remaining impacts are the same as those listed in Table ES-2.				
Tribal Cultural Resources				
Same as those listed in Table ES-2.				
Utilities and Service Systems				
Same as those listed in Table ES-2.				
Wildfire				
Same as those listed in Table ES-2.				

Chapter 1
Introduction

1.1 Overview

The Golden Gate Bridge, Highway and Transportation District (District), in coordination with the City of San Rafael (City), Marin County Transit District (Marin Transit), Transportation Authority of Marin (TAM), and Sonoma-Marin Area Rail Transit (SMART), plans to replace the transit center in Downtown San Rafael (known as the San Rafael Transit Center or the C. Paul Bettini Transit Center). The proposed San Rafael Transit Center Replacement Project (proposed project) is needed primarily to replace the existing transit center following the loss of some of the transit center facilities that resulted from the implementation of the SMART Phase 2 line to Larkspur. A new transit center solution in Downtown San Rafael would address near-term and long-term transit needs while improving the desirability and usability of transit for both local residents and regional commuters. A detailed description of the proposed project is provided in Chapter 2, Project Description.

This Draft Environmental Impact Report (EIR) was prepared in compliance with the California Environmental Quality Act (CEQA). The District, as the owner of the transit center, is the CEQA Lead Agency for the proposed project and has prepared this Draft EIR to evaluate potential impacts and identify required mitigation to avoid or reduce potentially significant impacts.

1.2 Project History

Development of the proposed project began with the *San Rafael Downtown Station Area Plan* (Downtown SAP) in 2012. The proposed project has involved a multi-year process to identify a new transit center site and configuration that will provide for the current and future mobility needs of San Rafael and Marin County. The extension of the SMART line south to Larkspur affected the existing transit center's functionality by installing train tracks that bisect the existing transit center. The proposed project is an opportunity to create a more accessible transit facility for all users and improve both connectivity and safety.

Providing improved access to transit in Marin County and the North Bay Area is consistent with the transportation goals established in prior studies and plans including the *San Rafael Transit Center Relocation Study* (City of San Rafael et al. 2017) and the Downtown SAP (City of San Rafael 2012) and supports the long-range Marin *Strategic Vision Plan* (TAM 2017). Two of the key tenets of the vision developed through the Downtown SAP process is to provide a safe and comfortable environment for transit users and a clear, safe, and pleasant connection between the transit center and surrounding neighborhoods. The primary goal of the *Strategic Vision Plan* is to provide transportation facilities and services that support and enhance Marin County's high quality of life and vibrant economy. Other goals are to support a healthy and safe environment and maximize mobility for all residents. The proposed project is an essential tool to achieve regional auto trip reduction goals by enhancing the desirability and functionality of non-auto-dependent modes. An improved transit center could help generate increased ridership for SMART rail service, increasing the success of the new line. The proposed project provides an improved customer service facility, improvements to safety and security, and modernized amenities. For the residents, students, and

employees of San Rafael, including disadvantaged communities, a new transit center will be safer to access, more inviting, and easier to use, improving quality of life.

Improvements to the transit center also would support goals identified in the Metropolitan Transportation Commission's *Plan Bay Area* (2013), which include increasing non-auto mode share and preserving economic vitality by concentrating future development around transit nodes and along transit corridors. The transit center is within a designated priority development area in *Plan Bay Area*, which is defined as a locally designated area within existing communities that provides infill development opportunities and is easily accessible to transit, jobs, shopping, and services. A new transit center also brings the opportunity to not only improve mobility for residents but also enhance the vibrancy of Downtown San Rafael with a new public space that is aesthetically pleasing and improves circulation. Similarly, the Downtown SAP sets the stage to create a mixed-use, livable area around the future Downtown transit center and calls for a Downtown station that efficiently brings together several modes of transportation.

1.3 Project Objectives

The objectives of the proposed project are to:

- Provide improved transit connectivity and ease of use in and around Downtown San Rafael.
- Enhance local and regional transit use by bringing together multiple modes of the transportation network—including the SMART-bus connection—into a hub that affords transit users the safest, most efficient means of using bus and rail services.
- Efficiently accommodate transit users and services, optimize operating costs, and improve transit desirability.
- Design a functional, attractive, and cost-effective facility that can meet long-term projected service levels and be implemented in an expeditious manner, so as to minimize the period of use of the interim facility.
- Provide a transit facility that is readily accessible to individuals with disabilities, transit users, and transit-dependent populations, including those with low incomes.
- Provide a secure, safe, and inviting space for transit patrons.
- Create a more accessible transit facility for all users by reducing vehicular, rail, bicycle, and pedestrian conflicts and improving safety.
- Provide convenient, pedestrian connections to surrounding land uses.

The proposed project is needed primarily to replace the existing transit center following impacts on the functionality of some of the transit center facilities resulting from the implementation of the SMART Phase 2 line to Larkspur. With the extension of SMART through the existing transit center south of 3rd Street, Platform C was reconfigured, negatively affecting bus circulation and bus bay flexibility within and around the transit center and disrupting pedestrian access and transfer activity among the remaining platforms at the site. SMART riders transferring from the Downtown San Rafael SMART station to access the current transit center south of 3rd Street, as well as riders originating from Downtown San Rafael, must navigate heavy traffic crossing through local intersections and accessing the U.S. Highway 101 on-ramps adjacent to the transit center. The

configuration of the SMART rail tracks directly through the transit center is detrimental to bus, vehicle, and pedestrian access and safety. A new transit center solution in Downtown San Rafael would address near-term and long-term transit needs while improving the desirability and usability of transit for both residents and regional commuters. It would also reduce traffic congestion, facilitate more efficient transit operations, and promote pedestrian safety.

1.3.1 Agency and Public Outreach

In early 2018, the District convened a Joint Project Team composed of staff from the partnering agencies including the City, Marin Transit, TAM, SMART, and the Metropolitan Transportation Commission as part of the alternatives development and screening process. The Joint Project Team identified potential site locations, reviewed proposed project facilities and amenities, screened locations, and provided input on options to continue to advance. The project team conducted presentations to executive leadership representing the partner agencies and to various elected boards, including the District Board of Directors Transportation Committee and San Rafael City Council.

The District has held various workshops on concept development and meetings since 2017, with community representatives including the San Rafael Chamber of Commerce, Federation of Neighborhoods, League of Women Voters, San Rafael Heritage, and Canal Alliance.

The District has held five public meetings during the project development process, including a public scoping meeting for this Draft EIR as outlined below:

- Public Meeting #1: March 20, 2018 (Open House & Survey)
- Public Meeting #2: June 12, 2018 (Input on Specific Concepts)
- Public Meeting #3: Notice of Preparation of Draft EIR and Scoping Meeting—October 30, 2018 (Scoping for Environmental Analysis)
- Public Meeting #4: Facebook Live Event with Omar Carrera, Executive Director of the Canal Alliance—November 9, 2020
- Public Meeting #5: Community Meeting on Zoom—November 19, 2020 (Project Update/Review of Alternatives)

In addition to the meetings outlined above, public outreach has included bilingual outreach activities at the existing transit center and Food Pantry. Additional outreach to businesses through the San Rafael Chamber of Commerce and San Rafael Business Improvements District has been done and over 100 email notifications were sent out to the community, neighborhood, and business organizations. Community members have completed over 1,000 online surveys in both English and Spanish. The project team has presented on the proposed project to the following organizations: San Rafael High School English Learner Advisory Committee, San Rafael Heritage, San Rafael Chamber of Commerce, League of Women Voters, and District Bus Passengers Advisory Committee.

1.4 Environmental Review Process

1.4.1 California Environmental Quality Act

CEQA applies to all discretionary activities proposed to be implemented by California public agencies, including state, regional, county, and local agencies (California Public Resources Code Section 21000 et seq.). CEQA requires agencies to estimate and evaluate the environmental impacts of their actions, avoid or reduce significant environmental impacts when feasible, and consider the environmental implications of their actions prior to making a decision. CEQA also requires agencies to inform the public and other relevant agencies and consider their comments in the evaluation and decision-making process. The State CEQA Guidelines are the primary source of rules and interpretation of CEQA (California Public Resources Code Section 21000 et seq.; 14 California Code of Regulations 15000 et seq.).

1.4.2 Purpose of this EIR

The purpose of the EIR is to provide the information necessary for the District to make an informed decision about the proposed project and to supply the information necessary to support related permit applications and review processes.

This Draft EIR has been prepared in compliance with CEQA to achieve the following goals.

- Identify potential direct, indirect, and cumulative environmental impacts associated with the proposed project.
- Describe feasible mitigation measures intended to avoid or reduce potentially significant impacts to a less-than-significant level.
- Disclose the environmental analysis, including the potential project impacts and proposed mitigation measures, for public and agency review and comment.
- Discuss potential alternatives to the proposed project that can meet the basic project objectives, are feasible, and would avoid or reduce identified significant project impacts.

One of the purposes of CEQA is to establish opportunities for the public and relevant agencies to review and comment on projects that might affect the environment. Scoping activities are discussed below. The District will provide a public review period for this Draft EIR of 60 days from release of the Draft EIR for comment. The District will also conduct a public meeting to receive comments during the comment period. Once the public review period is complete, the District will prepare a Final EIR that includes all the comments received on the Draft EIR, responses to all comments, and any necessary revisions to the Draft EIR. CEQA requires the District to review and consider the information in the EIR before making a decision on the proposed project.

1.4.3 Scope and Content of EIR

Scoping refers to the process used to assist the lead agency (the District) in determining the focus and content of an EIR. Scoping solicits input on the potential topics to be addressed in an EIR, the range of project alternatives, and possible mitigation measures. Scoping is also helpful in establishing methods of assessment and in selecting the environmental effects to be considered in detail.

1.4.3.1 Notice of Preparation and Scoping

The scoping process for this EIR formally began on October 16, 2018, when the Notice of Preparation was submitted to the State Clearinghouse for distribution to federal, state, and local agencies. The purpose of the Notice of Preparation is to solicit participation from relevant agencies and from the public in determining the scope of an EIR. The scoping period ended on November 19, 2018.

The District distributed the Notice of Preparation to approximately 36 federal, state, regional, and local agencies. The District also notified potentially interested individuals and organizations regarding the scoping process and public scoping meeting for the proposed project. The District used multiple methods to announce the scoping process and public meetings, including display advertisements in local newspapers, postcard mailing to addresses within a half-mile radius of the existing transit center, poster displays attached to sandwich boards at the transit center and in nearby windows, project website updates, information posted on the City of San Rafael's Nextdoor account, emails sent to the District's email database, a press release circulated to media outlets, social media postings, and phone and email outreach to leaders of the Canal Alliance, Canal Multicultural Center, and Ad Hoc Committee. Further information regarding the Notice of Preparation process is discussed in Section 1.4.3.1 below.

The project team held a public scoping meeting on October 30, 2018, at the Whistlestop building at 930 Tamalpais Avenue in San Rafael to provide an opportunity for attendees to comment on environmental issues of concern.

Written and oral comments received during the scoping process are on file with the District and can be accessed online at https://www.goldengate.org/district/district-projects/san-rafael-transit-center/project-documents-materials/. Public comments are also included in the scoping summary report in Appendix A. This draft EIR considers the comments received during the scoping period.

1.4.3.2 Resource Topics

Consistent with Appendix G of the State CEQA Guidelines, this Draft EIR evaluates the potential impacts of the proposed project for the following resource areas.

- 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 and Vibration

- Population and Housing
- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

The following topics are also analyzed in this Draft EIR.

- Cumulative impacts
- Alternatives to the proposed project
- Significant and unavoidable impacts
- Significant irreversible changes in the environment
- Growth inducement

Although agricultural and mineral resources are identified in Appendix G of the State CEQA Guidelines, this EIR analysis does not include these topics because there would be no impact, as described below.

- **Agricultural Resources.** Changes in the status of agricultural lands may constitute significant impacts under CEQA; examples include direct conversion of state-designated Important Farmlands to nonagricultural use, conflict with Williamson Act (California Land Conservation Act) contracts, and various other types of environmental changes that have the potential to result indirectly in conversion of farmland to nonagricultural use. No agricultural land exists in the project area. No impacts on agricultural resources would result from project implementation or operation. Consequently, the proposed project would not have the potential to contribute directly or indirectly to conversion of farmland to nonagricultural use, and agricultural resources are not discussed further.
- **Mineral Resources.** A project typically would cause a significant impact on mineral resources when it results in the loss of availability of a known mineral resource important to the region and state or a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. *The City San Rafael General Plan 2020* does not include policies relating to mineral resources because the City does not contain any mineral deposits of regional significance. There are no mineral extraction uses in the project area. There would be no impact during project construction or operation and mineral resources are not discussed further.

1.5 EIR Organization

This Draft EIR is organized in the chapters and appendices listed below:

- Chapter 1, Introduction, includes a brief overview of the proposed project; an overview of the environmental review process; and the scope, content, and organization of the Draft EIR.
- Chapter 2, Project Description, includes a comprehensive description of the proposed project.

- Chapter 3, Environmental Analysis, includes an evaluation of the resource topics outlined above. Each resource-specific section discusses the environmental setting, impacts, and mitigation measures.
- Chapter 4, Cumulative Impacts, includes a discussion of the proposed project's potential impacts related to past, present, and reasonably foreseeable development in the project area.
- Chapter 5, Alternatives, includes a description of the project alternatives considered and evaluation of several alternatives to the proposed project, including those removed from further consideration.
- Chapter 6, Other CEQA-Required Analysis, includes a discussion of significant environmental impacts that cannot be avoided, significant irreversible changes in the environment, and growth-inducing impacts.
- Chapter 7, List of Preparers, includes a list of staff who contributed to preparation of the Draft EIR.
- Chapter 8, References, includes a list of the printed references and personal communications cited in the Draft EIR.
- Appendices
    - A. Scoping Summary Report
    - B. Air Quality and Greenhouse Gas Modeling Files
    - C. Transportation Summary Report
    - D. Biological Resources: Plants and Animal Species Observed
    - E. Biological Resources: U.S. Fish and Wildlife Service, California Natural Diversity Database, and California Native Plant Society Lists
    - F. Cultural Resources: Department of Parks and Recreation Forms
    - G. Cultural Resources: Northwest Information Center Records Search Results
    - H. Preliminary Geotechnical Design Recommendations
    - I. Phase I Environmental Site Assessment
    - J. Noise Field Data

Chapter 2
Project Description

2.1 Project Overview

The Golden Gate Bridge, Highway and Transportation District (District), in coordination with the City of San Rafael (City), Marin County Transit District (Marin Transit), Transportation Authority of Marin (TAM), and Sonoma-Marin Area Rail Transit (SMART), plans to replace the transit center in Downtown San Rafael (known as the San Rafael Transit Center, or the C. Paul Bettini Transit Center). The proposed San Rafael Transit Center Replacement Project (proposed project) is needed primarily to replace the existing transit center following the impact on some of the transit center facilities that resulted from the implementation of the SMART Phase 2 line to Larkspur. A new transit center solution in Downtown San Rafael would address near-term and long-term transit needs while improving the desirability and usability of transit for the local community and region.

2.2 Project Background

The San Rafael Transit Center, also known as the C. Paul Bettini Transit Center, is owned by the District, which operates Golden Gate Transit regional and inter-county bus transit services. Figure 2-1 shows the transit center's regional location. The transit center is in Downtown San Rafael, between 2nd Street, 3rd Street, Tamalpais Avenue, and Hetherton Street (see Figure 2-2). With over 800 bus trips daily and 17 operating bus bays, the transit center is the largest regional transit hub in Marin County, providing access to the regional transportation network for area residents and a key transfer point for employees, visitors, and students in San Rafael and the greater North Bay region. The transit center primarily serves bus routes operated by Golden Gate Transit and Marin Transit, but Sonoma County Transit, Sonoma County Airport Express, Greyhound, and paratransit services also use the transit center. On weekdays, there are approximately 9,000 bus boardings and alightings at the transit center. Downtown San Rafael is an important destination, with nearly half of the passengers traveling to or from Downtown and the remaining riders making transfers to other destinations. The 17 bus bays are fully occupied at times during the peak-period pulse. Figure 2-3 shows the layout of the existing transit center.

In August 2017, the SMART District commenced passenger rail service on its initial corridor, consisting of 43 miles of rail and 10 stations (Phase 1) in Sonoma and Marin Counties. SMART's Phase 1 corridor parallels U.S. Highway 101 (US-101) beginning at the Sonoma County Airport and terminating in Downtown San Rafael just north of the transit center. SMART riders transferring from the Downtown San Rafael SMART station—located north of 3rd Street—to access the existing transit center south of 3rd Street, as well as riders originating from downtown San Rafael, must navigate a high volume of local and regional vehicular traffic along 3rd Street.

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Figure 2-1
Regional Location Map

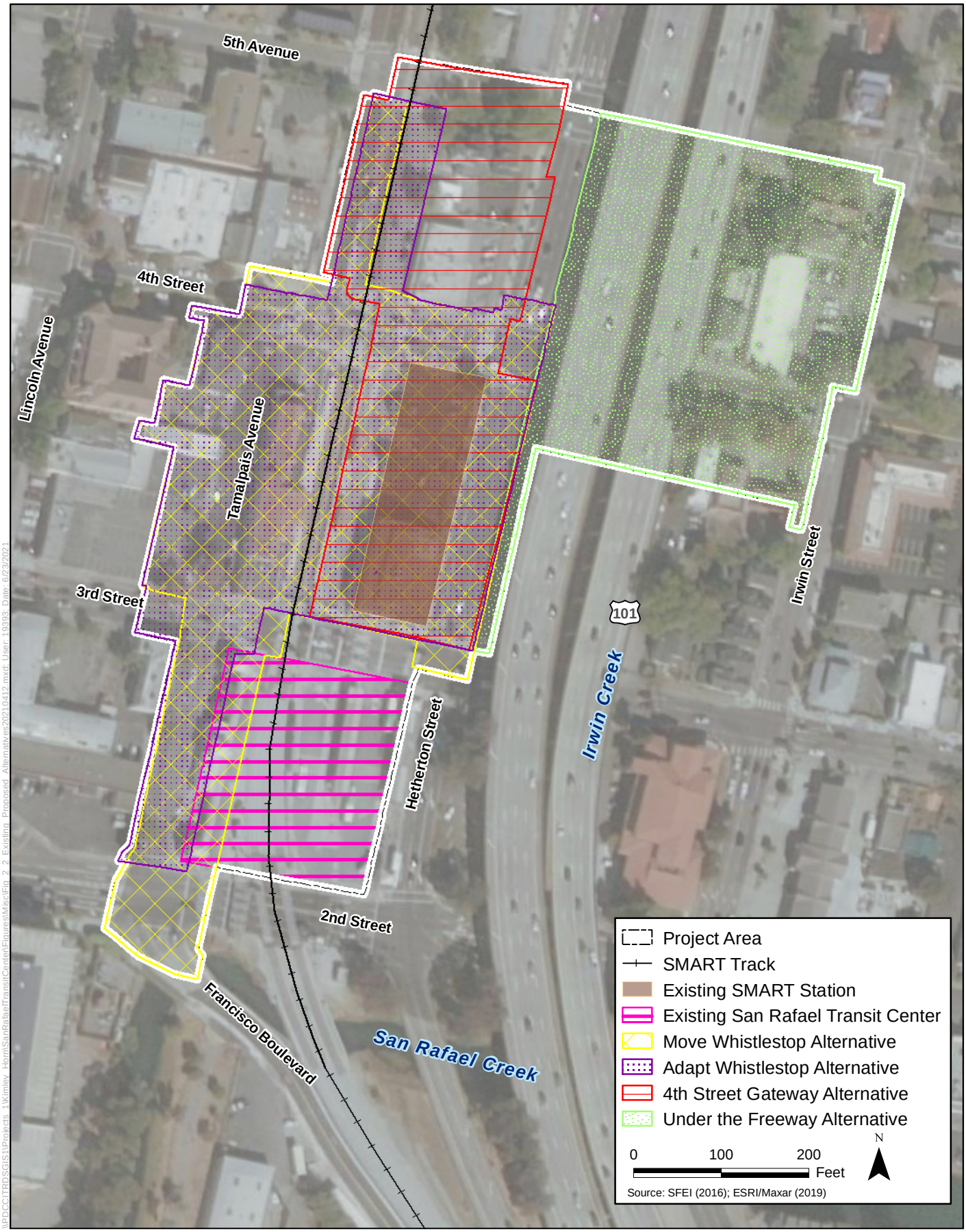
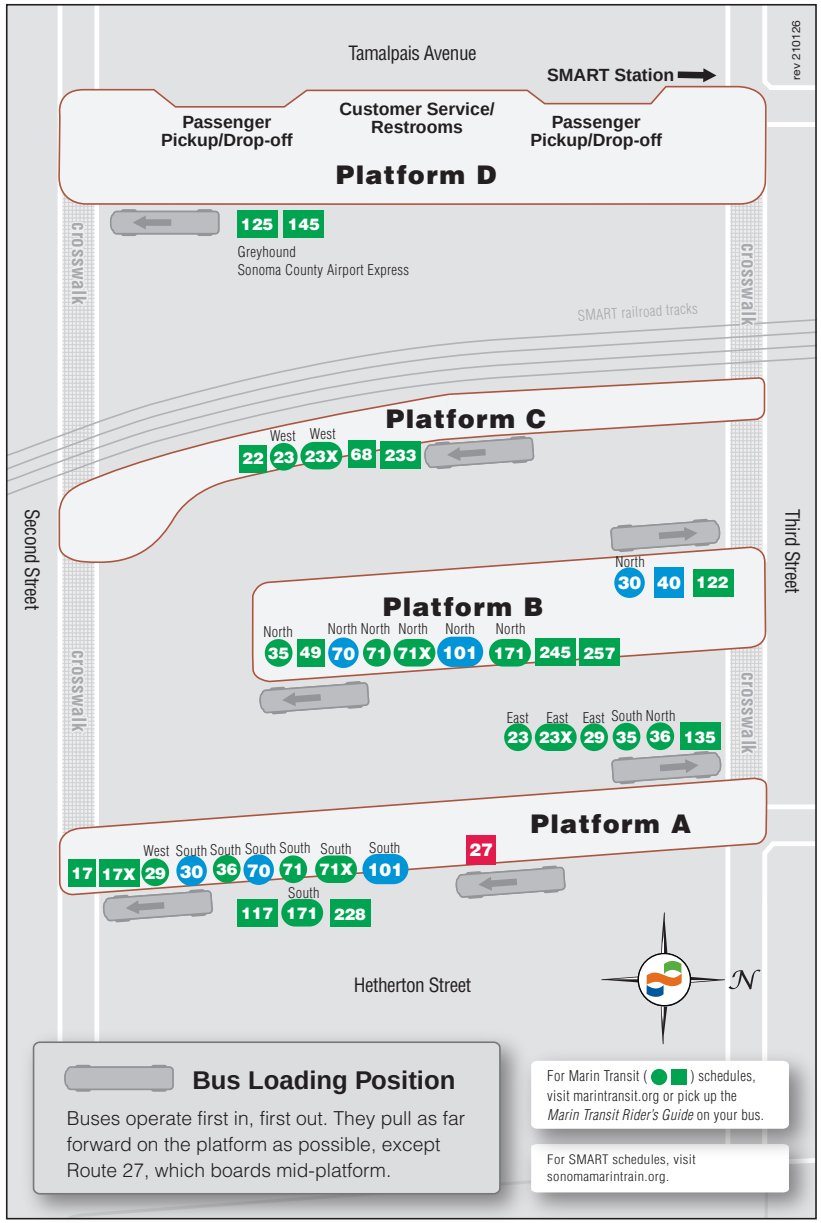


Figure 2-2
Existing San Rafael Transit Center and Proposed Alternatives



Source: www.sonomamarintrain.org, 2021

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Figure 2-3
Existing Transit Center Layout

Phase 2 of the SMART project, which completed construction and began service in late 2019, extended passenger rail service from its previous Downtown San Rafael terminus to Larkspur. The southward extension of SMART required the construction of two sets of tracks through the middle of the existing transit center site south of 3rd Street. The SMART Phase 2 line bisected the existing transit center; reconfigured Platforms C and B, negatively affecting bus circulation and bus bay flexibility within and around the transit center; and disrupted pedestrian access and transfer activity among the remaining platforms at the site. This change affected how buses and people access and travel through the transit center and reduced the amount of space available for buses and riders, which was detrimental to bus, vehicle, and pedestrian access and safety. As a result, the transit center must be relocated to another location in Downtown San Rafael.

2.3 Project Objectives

The District, in coordination with the City, Marin Transit, TAM, and SMART, plans to replace the transit center in Downtown San Rafael. The proposed project is needed primarily to replace the existing transit center following the loss of some of the transit center facilities that resulted from the implementation of the SMART Phase 2 line to Larkspur. Specifically, the purpose of the proposed project is to:

- Provide improved transit connectivity and ease of use in and around Downtown San Rafael.
- Enhance local and regional transit use by bringing together multiple modes of the transportation network—including the SMART-bus connection—into a hub that affords transit users the safest, most efficient means of using bus and rail services.
- Efficiently accommodate transit users and services, optimize operating costs, and improve transit desirability.
- Design a functional, attractive, and cost-effective facility that can meet long-term projected service levels and be implemented in an expeditious manner, so as to minimize the period of use of the interim facility.
- Provide a transit facility that is readily accessible to individuals with disabilities, transit users, and transit-dependent populations, including those with low incomes.
- Provide a secure, safe, and inviting space for transit patrons.
- Create a more accessible transit facility for all users by reducing vehicular, rail, bicycle, and pedestrian conflicts and improving safety.
- Provide convenient, pedestrian connections to surrounding land uses.

A new transit center solution in Downtown San Rafael would address near-term and long-term transit needs while improving the desirability and usability of transit for the local community and region. It would also, to the extent feasible, minimize traffic congestion and facilitate efficient transit operations while also promoting pedestrian safety.

2.4 Project Location

The San Rafael Transit Center is in Downtown San Rafael, between 2nd Street, 3rd Street, Tamalpais Avenue, and Hetherton Street (see Figure 2-2). There are four project alternatives being considered for this project: Move Whistlestop Alternative (the preferred alternative), Adapt Whistlestop Alternative, 4th Street Gateway Alternative, and Under the Freeway Alternative. All project alternatives are within Downtown San Rafael. Each alternative is within 500 feet of the existing San Rafael Transit Center and is bordered with a mix of office, residential, and retail uses. See Sections 2.5 and 2.6 below for more details regarding the specific location and boundaries of each alternative. Table 2-1 shows the zoning designation for each parcel where the four build alternatives would be located.

Table 2-1. Land Use and Zoning Designations of the Build Alternative Footprints

Parcel Number	Land Use-Zoning Designation	Address
Move Whistlestop Alternative		
011-279-07	Mixed Use-Public/Quasi-Public	N/A
011-279-01	Mixed Use-Public/Quasi-Public	800 Tamalpais Avenue
014-121-14	Mixed Use-Hetherton Office	666 3rd Street
011-277-02	Mixed Use-Hetherton Office	680 3rd Street
011-277-01	Mixed Use-Hetherton Office	930 Tamalpais Avenue
011-275-13	Mixed Use-Hetherton Office	706 3rd Street
011-275-05	Mixed Use-Hetherton Office	N/A
011-275-04	Mixed Use-Hetherton Office	927 Tamalpais Avenue
011-275-01	Mixed Use-Hetherton Office	729 4th Street
011-275-02	Mixed Use-Hetherton Office	709 4th Street Unit 200
011-275-03	Mixed Use-Hetherton Office	701 4th Street
Adapt Whistlestop Alternative		
014-121-14	Mixed Use-Hetherton Office	666 3rd Street
011-277-02	Mixed Use-Hetherton Office	680 3rd Street
011-277-01	Mixed Use-Hetherton Office	930 Tamalpais Avenue
011-275-13	Mixed Use-Hetherton Office	706 3rd Street
011-275-05	Mixed Use-Hetherton Office	N/A
011-275-04	Mixed Use-Hetherton Office	927 Tamalpais Avenue
011-275-01	Mixed Use-Hetherton Office	729 4th Street
011-275-02	Mixed Use-Hetherton Office	709 4th Street Unit 200
011-275-03	Mixed Use-Hetherton Office	701 4th Street
4th Street Gateway Alternative		
014-121-14	Mixed Use-Hetherton Office	666 3rd Street
011-277-02	Mixed Use-Hetherton Office	680 3rd Street
014-084-14	Mixed Use-Hetherton Office	1006 Tamalpais Avenue
014-084-13	Mixed Use-Hetherton Office	637 5th Avenue
014-084-02	Mixed Use-Hetherton Office	633 5th Avenue
Under the Freeway Alternative		
014-122-12	Mixed Use-Commercial/Office District	915 Irwin Street

Parcel Number	Land Use-Zoning Designation	Address
014-122-13	Mixed Use-Commercial/Office District	615 4th Street
014-085-07	Mixed Use-Commercial/Office District	610 4th Street
014-085-09	Mixed Use-Commercial/Office District	1001 Irwin Street
014-085-10	Mixed Use-Residential/Office District	1011 Irwin Street
014-085-11	Mixed Use-Residential/Office District	1015 Irwin Street

2.5 Preferred Alternative: Move Whistlestop

The District has identified the Move Whistlestop Alternative as its preferred alternative.

2.5.1 Existing Uses and Site Characteristics

The site is generally between West Tamalpais Avenue to the west and Hetherton Street to the east, 4th Street to the north, and 3rd Street to the south. Additional improvements are included to shift West Tamalpais Avenue to the east from 2nd Street to 4th Street. This modification would align West Tamalpais Avenue with the block to the north and include construction of a bike path and sidewalk improvements on the west side of West Tamalpais Avenue from 2nd Street to 4th Street. From 2nd to 3rd Street, this improvement would extend into space occupied by the existing transit center. From 3rd Street to 4th Street, this improvement would extend onto the existing west sidewalk along West Tamalpais Avenue. See Figure 2-4 for the site plan. This alternative is on the same block as the existing SMART station. This alternative includes several parcels and is currently occupied by the Whistlestop building, a café, a restaurant, parking spaces, the SMART tracks, and the parcel containing the Citibank building and its affiliated parking lot, also referred to as the "Citibank parcel." Surrounding the project site are retail, commercial, and office uses to the north, US-101 to the east, the existing San Rafael Transit Center to the south, and restaurants and retail facilities to the west.

2.5.2 Project Characteristics, Circulation, and Pick-up/Drop-off

The Move Whistlestop Alternative would feature five platforms, A through E, and one District building. It would utilize curbside bays on both sides of West Tamalpais Avenue between 3rd and 4th Streets. West Tamalpais Avenue between 2nd and 4th Streets would be shifted east to be more proximate to the SMART tracks. The Whistlestop building would be relocated to the west side of West Tamalpais Avenue between 3rd and 4th Streets. Alternatively, a new building could be constructed utilizing similar façades or architectural elements from structures currently on the Whistlestop site. This building would include District customer service and operations building space. The District building would be one story and an estimated 3,000 square feet. It would include a driver break room with restrooms, District offices and customer support area with restrooms and a kitchen, and a public lobby with a service counter and restrooms. Tamalpais Avenue between 3rd and 4th Streets would be limited to buses only. Bus bays on the Citibank parcel would be accessed via driveways along 3rd and 4th Streets. The area west of West Tamalpais Avenue between 3rd and 4th Streets (i.e., space not utilized by the relocated Whistlestop building) would be provided for public plazas, customer service, bicycle parking, and/or transit-supportive land uses. The existing

SMART pick-up/drop-off area on East Tamalpais Avenue between 3rd and 4th Streets would be removed and replaced with a pick-up/drop-off area for six vehicles on West Tamalpais Avenue between 4th Street and 5th Avenue. Fifty feet of shuttle parking would be provided on West Tamalpais Avenue between 3rd Street and 4th Street. Maintenance vehicle parking for six District vehicles would be provided on a new access alley constructed at the western edge of the site, connecting between 3rd Street and 4th Street. This would connect to a new driveway on 4th Street between Tamalpais Avenue and Lincoln Avenue to replace the removed driveway on West Tamalpais Avenue to the condo complex at Lincoln Avenue and 4th Street. Construction of the bicycle path on Tamalpais Avenue from 2nd Street to 4th Street, as described in Section 2.5.1, would reflect implementation of one of the City's planned bicycle infrastructure improvements. This bike path would connect to the Mahon Creek Path.

A Traffic Control Plan that addresses circulation for transit, bicycles, pedestrians, and private vehicles will be prepared and implemented for the duration of construction of the proposed project. This plan would follow the guidance contained in the California Manual on Uniform Traffic Control Devices on temporary closures of vehicle lanes, bicycle lanes, and sidewalks and appropriate detours for these facilities.

2.5.3 Utilities

The Move Whistlestop Alternative would require the removal of existing storm drain infrastructure, relocation of the storm drain infrastructure on West Tamalpais Avenue between 2nd Street and 3rd Street, and installation of new inlets, manholes, and bioretention facilities.

The Move Whistlestop Alternative would include a total of seven bioscope vaults that would be installed at the southern portion of transit center drive aisles to treat runoff from the site prior to discharge into the existing storm drain infrastructure. Additionally, operation of the Move Whistlestop Alternative would include operational stormwater best management practices such as filters and bioscope vaults that remove pollutants combined with onsite retention of stormwater, which reduces the conveyance of any remaining pollutants. Additional post-construction design features would include, but not be limited to:

- All new storm drain inlets and catch basins within the project site shall be marked with prohibitive language and/or graphical icons to discourage illegal dumping.
- Outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system shall be covered and protected by secondary containment.
- Permanent trash container areas shall be enclosed to prevent offsite transport of trash, or drainage from open trash container areas shall be directed to the sanitary sewer system.

All applicable design features would be incorporated into project development plans and construction documents and would be operational at the time of project occupancy.

The existing sewer infrastructure between 2nd Street and 3rd Street would also require relocation due to the shift of West Tamalpais Avenue. Utilities, including traffic signal poles, streetlights, overhead power lines, and fire hydrants, would need to be relocated and/or removed.

The Move Whistlestop Alternative would include the installation of solar panels on site. Electrical facility needs at the transit center and platforms include ticketing and fare collection machines and real-time transit information signs, as well as light fixtures and other electrically powered features

at the facility. Additional electrical requirements and infrastructure may be needed for onsite charging of future battery electric buses at the transit center bus bays. However, because the preferred technology for fleetwide rollout of zero-emission buses has not yet been determined, these utility needs should be incorporated in future design phases of the proposed project. Fleetwide rollout of zero-emission buses, along with related infrastructure to support the zero-emission fleet, is a separate planning initiative that is outside the scope of the proposed project. The District would implement the fleetwide rollout in a manner that is consistent with the California Environmental Quality Act (CEQA) and any additional energy and utility needs for the fleetwide rollout would be addressed as part of that initiative.

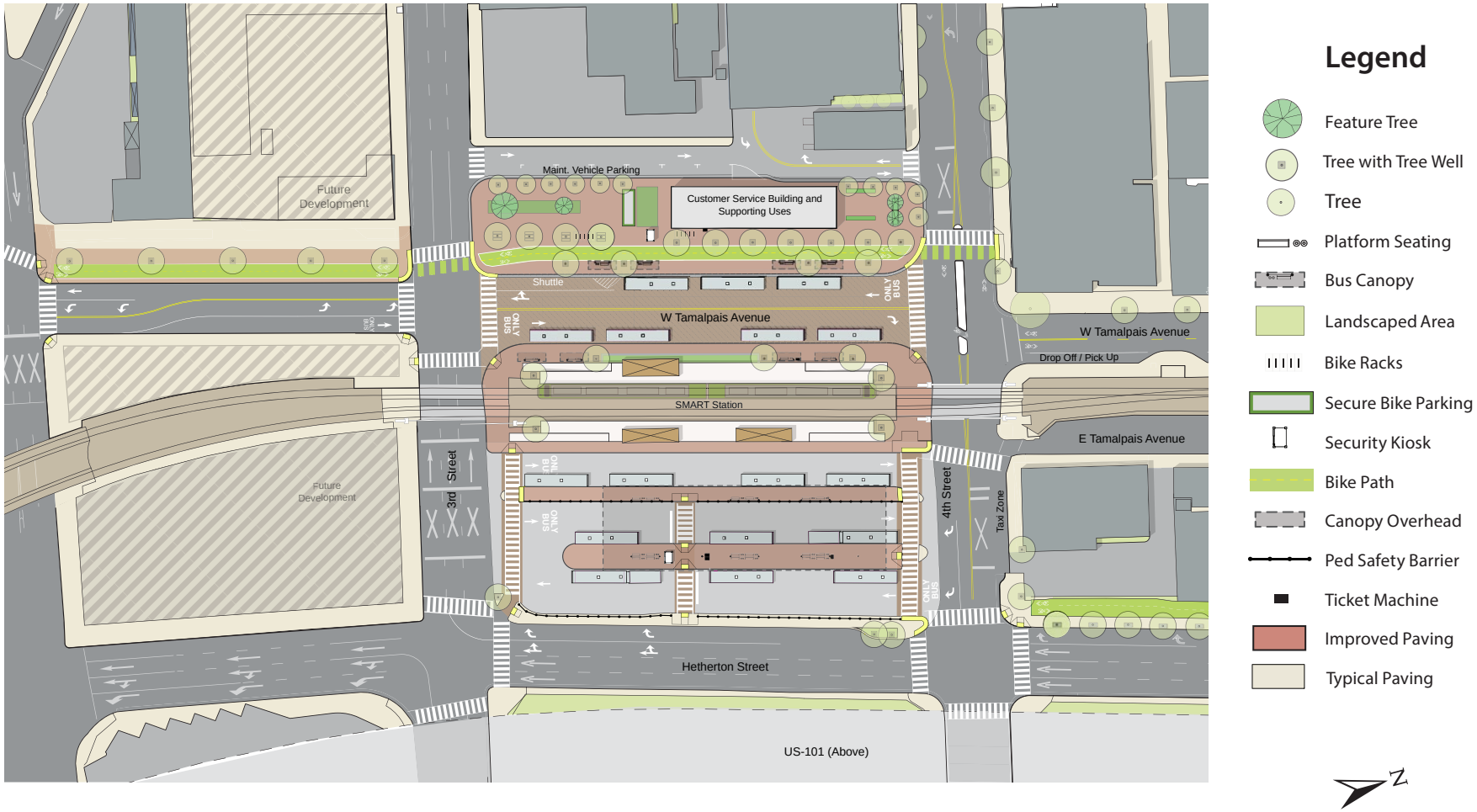
2.5.4 Disposition of Existing Transit Center Site

The District would relocate the existing transit center and dispose of the property where existing facilities are located between 2nd Street, 3rd Street, Tamalpais Avenue, and Hetherton Street. The District does not have any planned use for the existing site/center once the proposed transit center is operational at a new location and there are no plans for the disposition of the site. Therefore, future development of the site is unknown at this time.

Under the currently adopted *City of San Rafael General Plan 2020*, the existing transit center site is zoned as Public – Quasi-Public (City of San Rafael 2016) and the 2012 *San Rafael Station Area Plan* designates the site as Civic/Non-Taxable, both of which reflect its current use. However, the Draft *San Rafael General Plan 2040*, which is expected to be adopted in 2021, designates the site as "Downtown Mixed Use" (City of San Rafael 2020) in anticipation of the transit center relocation. Any future use or development of the site would conform with City procedures for entitlements, zoning, and land use. The existing transit center was developed using federal funds; therefore, any proceeds from the sale of the property would be allocated to the new transit center. As required by state law, future development of the site would comply with CEQA, the Surplus Lands Act, and other applicable laws. For purposes of this Environmental Impact Report (EIR), it is assumed that the existing site would likely be sold and developed as some form of a mixed-use project, subject to more detailed design and approvals and subsequent CEQA review.

2.5.5 Construction Schedule

The District estimates construction activities would occur over 18 months after the final design is approved. The construction start date is estimated to be 2023 or 2024. The construction period would include mobilization, demolition, utility work, civil and vertical structures work, vertical structures finishing and inspections, and close-out.



Source: Kimley-Horn, Via Architecture, 2021.

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Figure 2-4
Move Whistlestop Alternative

2.6 Other Build Alternatives

This EIR analyzes three build alternatives to the preferred alternative at an equal level of detail. The build alternatives vary in site area and location as well as specific features:

- Adapt Whistlestop Alternative,
- 4th Street Gateway Alternative, and
- Under the Freeway Alternative

These alternatives, as well as their common components, including disposition of the existing transit center and common improvements, are described in detail below.

2.6.1 Components Common to All Build Alternatives

For all build alternatives, disposition of the existing transit center site and construction schedule would be the same as described in Section 2.5.4 and Section 2.5.5, respectively. Similar to the preferred alternative, the Move Whistlestop Alternative, all build alternatives include the following components:

- Installation of 17 straight-curb bus bays to accommodate transit, airport coach service, and Greyhound services at the transit center
- Provision of paratransit, pick-up/drop-off, maintenance vehicle, and shuttle curb space
- Provision of bicycle parking, including racks and lockers
- Installation of minimum 9-foot-wide platforms adjacent to bus bays
- Installation of passenger amenities including weather protection (such as shelters or canopies) and seating
- Installation of other features including public art, security, and wayfinding signage
- Provision of a roughly 3,000-square-foot building including customer service, public restrooms, driver relief facilities, small retail, maintenance, and security as identified below and shown on Figures 2-5 through 2-7 below

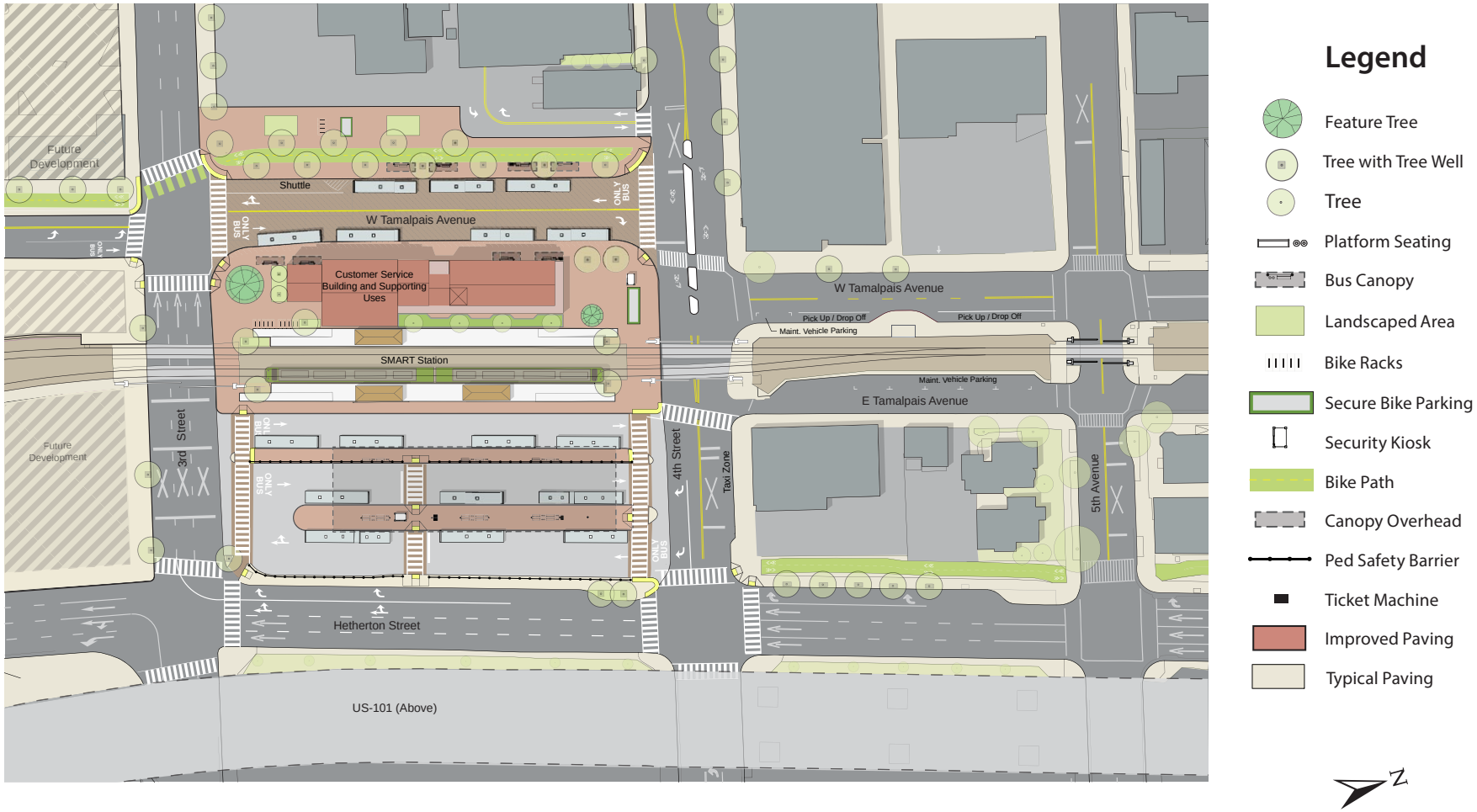
The proposed transit center facilities for all alternatives would require connection to existing sewer, water, and power infrastructure to operate the planned restrooms, kitchenette, and building spaces. The transit center would also provide wireless internet capabilities for District operation facilities and passengers. All alternatives would implement operational stormwater best management practices, as described for the Move Whistlestop Alternative in Section 2.5.3, Utilities, including filters and bioscope vaults that remove pollutants combined with onsite retention of stormwater, which reduces the conveyance of any remaining pollutants. Additional post-construction design features would include, but not be limited to:

- All new storm drain inlets and catch basins within the project site shall be marked with prohibitive language and/or graphical icons to discourage illegal dumping.
- Outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system shall be covered and protected by secondary containment.

- Permanent trash container areas shall be enclosed to prevent offsite transport of trash, or drainage from open trash container areas shall be directed to the sanitary sewer system.

All alternatives would include the installation of solar panels at the project site. Electrical facility needs at the transit center and platforms include ticketing and fare collection machines and real-time transit information signs. Additional electrical requirements and infrastructure may be needed for onsite charging of future battery electric buses at the transit center bus bays. However, because the preferred technology for fleetwide rollout of zero-emission buses has not yet been determined, these utility needs would be incorporated in a future project. Fleetwide rollout of zero-emission buses, along with related infrastructure to support the zero-emission fleet, is a separate planning initiative that is outside the scope of the proposed project. The District would implement the fleetwide rollout in a manner that is consistent with CEQA and any additional energy and utility needs for the fleetwide rollout would be addressed as part of that initiative.

Under all build alternatives, a Traffic Control Plan would address circulation for transit, bicycles, pedestrians, and private vehicles for the duration of construction of the proposed project. This plan would follow the guidance contained in the California Manual on Uniform Traffic Control Devices on temporary closures of vehicle lanes, bicycle lanes, and sidewalks and appropriate detours for these facilities.



Source: Kimley-Horn, Via Architecture, 2021.

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Figure 2-5
Adapt Whistlestop Alternative

Legend

- Feature Tree
- Tree with Tree Well
- Tree
- Platform Seating
- Bus Canopy
- Landscaped Area
- Bike Racks
- Secure Bike Parking
- Security Kiosk
- Bike Path
- Canopy Overhead
- Ped Safety Barrier
- Ticket Machine
- Improved Paving
- Typical Paving

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Source: Kimley-Horn, Via Architecture, 2021.

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Figure 2-6
4th Street Gateway Alternative

Source: Kimley-Horn, Via Architecture, 2021.

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Figure 2-7
Under the Freeway Alternative

2.6.2 Adapt Whistlestop Alternative

2.6.2.1 Existing Site Characteristics

The site is generally between West Tamalpais Avenue to the west, Hetherton Street to the east, 4th Street to the north, and 3rd Street to the south. This alternative would include the construction of a bike path and pedestrian improvements on the west side of West Tamalpais Avenue from 2nd Street to 4th Street. See Figure 2-5 for the site plan. This alternative is on the same block as the existing SMART station. This alternative site crosses nine parcels currently occupied by the Whistlestop building, a café, a restaurant, parking spaces, the SMART tracks, and the Citibank parcel. Uses surrounding the project site include retail, commercial, and office uses to the north, US-101 to the east, the existing San Rafael Transit Center to the south, and restaurants, residential, and retail facilities to the west.

2.6.2.2 Project Characteristics, Circulation, and Pick-up/Drop-off

The Adapt Whistlestop Alternative would feature five platforms, A through E, and one District building. There would be 17 straight-curb bus bays to accommodate transit, airport coach service, and Greyhound services at the transit center. Each bus bay would have a minimum 9-foot-wide platform adjacent and platforms would provide passenger amenities including weather protection (such as shelters or canopies) and seating. Paratransit, pick-up/drop-off, maintenance vehicle, and shuttle curb space would be provided. Other features would include public art, security, provision for bicycle parking including racks and lockers, and wayfinding signage.

The Whistlestop building (minus the Jackson Café) would be renovated or remodeled to serve as District customer service and operations building space. Some of the space within the building could be allocated for non-District uses. Tamalpais Avenue between 3rd and 4th Streets would be limited to buses only. Bus bays on the Citibank parcel would be accessed via driveways along 3rd and 4th Streets. The area on the southeast corner of the intersection of Tamalpais Avenue and 4th Street would be provided for bicycle parking. The existing SMART pick-up/drop-off area on East Tamalpais Avenue would be removed and replaced with passenger pick-up/drop-off for six vehicles on West Tamalpais Avenue between 4th Street and 5th Avenue. Fifty feet of shuttle parking would be provided on West Tamalpais Avenue between 3rd Street and 4th Street. Maintenance vehicle parking for six District vehicles would be provided on West and East Tamalpais Avenues between 4th Street and 5th Avenue. A new driveway would be installed on 4th Street between West Tamalpais Avenue and Lincoln Avenue to replace the removed driveway on West Tamalpais Avenue to the condo complex at Lincoln Avenue and 4th Street. Space would be provided for public plazas, customer service, bicycle parking, and/or transit-supportive land uses. Construction of the bicycle path on Tamalpais Avenue from 2nd Street to 4th Street, as described in Section 2.6.2.1, would reflect implementation of one of the City's planned bicycle infrastructure improvements. This bike path would connect to the Mahon Creek Path.

2.6.2.3 Utilities

The Whistlestop building would require connection to existing sewer, water, and power infrastructure to operate the planned restrooms, kitchenette, and building spaces if the existing building does not already do so. The transit center would also provide wireless internet capabilities for District operation facilities and passengers.

The Adapt Whistlestop Alternative would require the removal of existing storm drain infrastructure, relocation of the storm drain infrastructure on West Tamalpais Avenue between 2nd Street and 3rd Street, and installation of new inlets, manholes, and bioretention facilities. Utilities, including traffic signal poles, streetlights, overhead power lines, and fire hydrants, would need to be relocated and/or removed.

The Adapt Whistlestop Alternative would include one bioscape vault, four stormwater filters, and one bioretention area installed at the southern portion of the transit center drive aisles to treat the site's water before it is discharged into the existing storm drain infrastructure.

2.6.3 4th Street Gateway Alternative

2.6.3.1 Existing Uses and Site Characteristics

This alternative site is bounded by 5th Avenue, 3rd Street, Hetherton Street, and the SMART tracks, as well as curb space along West Tamalpais Avenue; see Figure 2-6 for the site plan. North of 4th Street, the existing project site is currently occupied by offices and retail (salons, bagel shop, and a cash checking location) and associated parking spaces. The Citibank building and its affiliated parking lot currently occupy the existing portion of the site south of 4th Street. To the west of the Citibank parcel are the SMART tracks, which align the western portion of the project site. Adjacent to the tracks are the Whistlestop building and Jackson Café. Surrounding the project site are retail and office uses to the north, US-101 to the east, the existing San Rafael Transit Center to the south, and restaurants and retail facilities to the west.

2.6.3.2 Project Characteristics, Circulation, and Pick-up/Drop-off

The 4th Street Gateway Alternative would feature six platforms, A through F, and two District buildings. There would be three on-street bays located curbside on the west side of Hetherton Street between 4th Street and 5th Avenue. In order to accommodate these curbside bays, southbound right turns from Hetherton Street to 4th Street would be precluded. Along Hetherton Street, space would be provided for public plazas, customer service, bicycle parking, and/or transit-supportive land uses. Bus bays would be accessed via driveways on 3rd Street, 4th Street, and Hetherton Street, and directly on Hetherton Street. Passenger pick-up/drop-off for six vehicles would be provided on West Tamalpais Avenue between 4th Street and 5th Avenue. Maintenance vehicle parking for six District vehicles would be provided on West Tamalpais Avenue between 4th Street and 5th Avenue and within the northern portion of the transit facility. In order to accommodate this alternative, the existing Mahon Creek bicycle and pedestrian path between 4th Street and 5th Avenue would be realigned around the site on 5th Avenue and West Tamalpais Avenue. The existing Victorian homes south of 5th Avenue would either be removed or relocated, and the existing SMART pick-up/drop-off area on East Tamalpais Avenue would be removed. Fifty feet of shuttle parking would be provided on West Tamalpais Avenue between 4th Street and 5th Avenue. The District buildings would be one story and an estimated 3,000 square feet in total. The main building would include a driver break room with restrooms, District offices and customer support area with restrooms and a kitchen, and a public lobby with a service counter and restrooms. The second building would include retail space and a security kiosk.

2.6.3.3 Utilities

The 4th Street Gateway Alternative would require the removal of existing storm drain infrastructure and the installation of new inlets, manholes, and bioretention facilities. Utilities, including traffic signal poles, streetlights, and fire hydrants, would need to be relocated and/or removed.

The 4th Street Gateway Alternative would include two bioscape vaults, four stormwater filters, and one bioretention area installed at the southern portion of the transit center drive aisles to treat the site's water before it is discharged into the existing storm drain infrastructure.

2.6.4 Under the Freeway Alternative

2.6.4.1 Existing Uses and Site Characteristics

This alternative site is generally located beneath US-101 and bounded by 5th Avenue, south of 4th Street, Irwin Street, and Hetherton Street; see Figure 2-7 for the site plan. Underneath US-101 within the site boundary there is a park-and-ride lot, maintained and operated by the California Department of Transportation (Caltrans). Irwin Creek, underneath US-101, flows parallel to US-101. North of 4th Street the existing project site is currently occupied by offices, a Caltrans park-and-ride lot, a bike shop, parking, and vacant storefronts and south of 4th Street the site is currently occupied by retail, offices, and a Caltrans park-and-ride lot. Surrounding the project site are residences and offices to the north; retail and residences to the east; retail and offices to the south; and retail uses, restaurants, and residences and offices to the west.

2.6.4.2 Project Characteristics, Circulation, and Pick-up/Drop-off

The Under the Freeway Alternative would feature six platforms, A through F. The affiliated bus bays would be accessed via driveways on 4th Street, Irwin Street, and Hetherton Street. Internal circulation would be provided for the northern block to allow buses accessing bays from either side of the site to egress on either side as well, which is critical given the diverse bus routing accessing the site. Space would be provided for public plazas, customer service, and/or transit-supportive land uses. This would require three bridges/viaducts over Irwin Creek to connect Hetherton Street to the bus bays. Two bridges would be located on the block north of 4th Street and one would be located on the block south of 4th Street. There would be some bus berths on the bridges, and spaces within the existing Caltrans park-and-ride lots would be displaced. A total of 72 displaced parking spaces would be replaced at a 1 to 1 ratio, with the location of the replaced spaces to be determined during final design. These parking spaces ideally would be in close proximity to the current parking location. However, if no feasible space in Downtown San Rafael is identified, then the spaces could be replaced in an alternate location near the US 101 corridor. These spaces are not expected to require any ground disturbance or affect sensitive habitats. Pick-up and drop-off space for three vehicles and 50 feet of curb space for taxis would be provided on 5th Avenue between Irwin Street and Hetherton Street. Maintenance vehicle parking for six District vehicles would be provided on the internal roadway with bus bays south of 4th Street with access from Irwin Street, and on 5th Avenue between Irwin Street and Hetherton Street. Fifty feet of shuttle parking would be provided on 4th Street between Irwin Street and Hetherton Street. The District building would be one story and an estimated 3,000 square feet. It would include a driver break room with restrooms, District offices and customer support area with restrooms and a kitchen, and a public lobby with a service counter and restrooms. Other ancillary project components, such as maintenance sheds, may be included on site within the identified project footprint.

2.6.4.3 Utilities

The Under the Freeway Alternative would require the removal of existing storm drain infrastructure, relocation of the storm drain infrastructure on Irwin Street between 4th Street and 5th Avenue, and installation of new inlets, manholes, and bioretention facilities. Utilities, including traffic signal poles, streetlights, overhead power lines, and fire hydrants, would need to be relocated and/or removed.

The Under the Freeway Alternative would include one bioretention area installed in the centermost drive aisle of the northern portion of the transit facility to treat the site's water before it is discharged into the existing storm drain infrastructure.

2.7 No-Project Alternative

The State CEQA Guidelines require a lead agency to evaluate a No-Project Alternative in an EIR to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project (State CEQA Guidelines Section 15126.6(e)). Under the No-Project Alternative, an agency must consider what would be reasonably expected to occur in the foreseeable future if the proposed project were not approved, based on current plans and consistent with available infrastructure and community services.

Under the No-Project Alternative, the District would not relocate the transit center; it would remain at its current location in Downtown San Rafael between 2nd Street, 3rd Street, Tamalpais Avenue, and Hetherton Street and continue to operate as it does currently.

The southward extension of SMART to Larkspur in late 2019 required the construction of two sets of tracks through the middle of the existing transit center site south of 3rd Street. The SMART tracks bisect the existing transit center, which required reconfiguration of platforms. These changes have led to reduced site functionality and capacity including eliminating existing bus and taxi staging platforms, as well as some bicycle facilities; inhibiting some bus turning movements; increasing bus congestion within the transit center; increasing queuing on surrounding surface streets during train crossing events; and channelizing pedestrian circulation within the transit center area. Pedestrian access and transfer activity among the remaining platforms at the transit center has also been disrupted. The existing transit center is deficient in bus operations, connectivity between modes, and pedestrian safety. The 17 existing bus bays are fully utilized at peak times and would not allow for any additional growth in bus volumes. Additionally, there is no land available for provision of paratransit, additional pick-up/drop-off, maintenance vehicle, and shuttle curb space.

Under the No-Project Alternative, the District would not be able to meet the project objectives to maintain or enhance the bus service and transfer capabilities of the existing site while maintaining accessibility and providing a positive passenger experience. Additionally, the No-Project Alternative would not meet the transportation goals established in the *San Rafael Transit Center Relocation Study* (City of San Rafael et al. 2017), the *San Rafael Downtown Station Area Plan* (City of San Rafael 2012), the long-range *Strategic Vision Plan* (TAM 2017), or *Plan Bay Area 2040* (MTC and ABAG 2017).

2.8 Approvals and Permits Required for the Preferred Project and Alternatives

The proposed project would require approvals and permits from several authorities, including those listed in Table 2-2. The project proponent may also obtain a grading permit and building permit from the City of San Rafael and site and design review and approval from the City's Planning & Transportation Commission, Architectural Review Board, and City Council.

Table 2-2. Required Permits and Approvals

Agency	Permit/Review Required
State Water Resources Control Board	• Section 401 Certification (Under the Freeway Alternative only)
U.S. Army Corps of Engineers	• Section 404 Permit (Under the Freeway Alternative only)
San Francisco Bay Regional Water Quality Control Board	• Construction General Stormwater Permit
California Department of Transportation	• Encroachment Permit (Under the Freeway Alternative only)

Chapter 3
Environmental Analysis

Introduction

Organized by environmental resource area, this chapter provides an integrated discussion of the regulatory setting, environmental setting, and impact analyses (including mitigation measures for potentially significant impacts) associated with the San Rafael Transit Center Replacement Project (proposed project) and other build alternatives. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

Chapter Organization

This chapter is organized into the following environmental resource sections.

- 3.1, Aesthetics
- 3.2, Air Quality
- 3.3, Biological Resources
- 3.4, Cultural Resources
- 3.5, Energy
- 3.6, Geology and Soils
- 3.7, Greenhouse Gas Emissions
- 3.8, Hazards and Hazardous Materials
- 3.9, Hydrology and Water Quality
- 3.10, Land Use and Planning
- 3.11, Noise
- 3.12, Population and Housing
- 3.13, Public Services and Recreation
- 3.14, Transportation
- 3.15, Tribal Cultural Resources
- 3.16, Utilities and Service Systems
- 3.17, Wildfire

Each environmental resource section in this chapter includes the following information:

- Each section begins with a brief introductory discussion presenting an overview of the environmental resource and cross-referencing related issues addressed elsewhere in the Draft Environmental Impact Report (EIR).

- **Regulatory Setting:** Identifies the federal, state, regional, and local laws, as well as regulations, ordinances, and policies that are relevant to each environmental resource area and would be applicable to the construction and operation of the build alternatives.
- **Environmental Setting:** Provides an overview of the existing physical considerations of an environmental resource in the area at the time of, or prior to, the publication of the Notice of Preparation, which could be affected by implementation of the build alternatives. A specific study area is identified for each environmental resource, as the extent of a study area varies with each resource. The study area is defined as the limits of an area in which impacts could be expected to occur for each environmental resource. The environmental setting provides the basis of analysis of potential impacts related to each resource.
- **Environmental Impacts:** Describes the methodology used for the analysis, criteria used to determine the significance of potential impacts, and corresponding discussion of impacts associated with the build alternatives. For each potential impact, the analysis makes a significance determination (i.e., no impact, less than significant, potentially significant, less than significant with mitigation, or significant and unavoidable) for construction and operations. If required to reduce a potentially significant impact, feasible mitigation measures are identified. The Approach to Impact Analysis section below describes the contents of the impact analysis discussion in further detail.

A discussion of how the proposed project would contribute to cumulative impacts is discussed separately in Chapter 4, Cumulative Impacts.

Approach to Impact Analysis

Significance Criteria

The significance criteria used in this Draft EIR to define the level at which an impact would be considered significant in accordance with the California Environmental Quality Act (CEQA) are presented under the subheading Thresholds of Significance in each environmental resource section. In accordance with Section 15022(a) of the State CEQA Guidelines, the Golden Gate Bridge, Highway and Transportation District uses significance criteria based on State CEQA Guidelines Appendix G; factual or scientific information and data; and regulatory standards of applicable federal, state, regional, and local jurisdictions.

Impact Identification and Levels of Significance

Each environmental resource section identifies and lists impacts sequentially. An impact statement precedes the discussion of each impact and provides a summary of the impact topic.

The level of significance associated with an impact is determined by comparing the environmental effects of the build alternatives with the existing environmental conditions and applying the identified significance threshold. This Draft EIR uses a variety of terms to describe the levels of significance of impacts identified within the environmental analysis. Each impact is categorized as one of the following:

- **No impact:** The build alternatives would not cause any adverse change in the environment.

- **Less-than-significant impact:** The build alternatives would not cause a substantial adverse change in the environment, as the specified standard of significance would not be exceeded; therefore, no mitigation measures are required.
- **Significant impact:** The build alternatives would cause a substantial adverse change in the physical conditions of the environment in excess of the specified standard. This is typically the level of significance of an impact prior to the application of feasible mitigation measures.
- **Less-than-significant impact with mitigation:** The build alternatives would cause a substantial adverse change in the physical conditions of the environment in excess of the specified standard of significance; however, one or more feasible mitigation measures would reduce environmental effects to levels below the specified standard of significance.
- **Significant and unavoidable impact:** The build alternatives would cause a substantial adverse change in the physical condition of the environment; there is no feasible mitigation available or, even with implementation of feasible mitigation measures, the build alternatives would cause a significant adverse effect on the environment in excess of the specified standard of significance.

Mitigation Measures

State CEQA Guidelines Section 15126.4(a)(1) states that an EIR "shall describe feasible measures which could minimize significant adverse impacts." Mitigation measures identified in this EIR were developed during the analysis and are designed to reduce, minimize, or avoid potential environmental impacts associated with the proposed project. The mitigation measures are numbered to correspond to the impacts they address. For example, Mitigation Measure MM-CULT-CNST-1 refers to the first mitigation measure for the first impact statement in the cultural resources section. Measures to be implemented during construction are distinguished by the inclusion of "CNST" in the mitigation measure title, and measures to be implemented during operations include "OP."

Section 3.1
Aesthetics

This section describes the regulatory setting and environmental setting for aesthetic resources in the vicinity of the proposed San Rafael Transit Center Replacement Project (proposed project). It also describes the impacts on aesthetic resources that would result from implementation of the proposed project and other build alternatives and mitigation measures that would reduce significant impacts, where feasible and appropriate. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.1.1 Existing Conditions

3.1.1.1 Regulatory Setting

Federal and State

There are no federal or state regulations or plans that are applicable to the proposed project. There are no roadways within or near the project area that are designated in federal or state plans as a scenic highway or a route worthy of protection for maintaining and enhancing scenic viewsheds (Caltrans 2019).

Local

City of San Rafael General Plan

The City of San Rafael General Plan 2020 contains the following policies pertaining to aesthetic resources that are relevant to the proposed project. There are no roadways within or near the project area that are designated in the general plan as a scenic highway or a route worthy of protection for maintaining and enhancing scenic viewsheds (City of San Rafael 2016). The City of San Rafael (City) is currently working on the Draft *San Rafael General Plan 2040*, which contains some of the same policies identified in the current general plan. However, a number of policies have been updated or removed to reflect the current conditions within or goals of the City (City of San Rafael 2020a).

Policy LU-12. Building Heights. Citywide height limits in San Rafael are described in Exhibits 7 and 8. For Downtown height limits see Exhibit 9:

a. Height of buildings existing or approved as of January 1, 1987 shall be considered conforming to zoning standards.[1]

b. Hotels have a 54-foot height limit, except where a taller height is shown on Exhibit 9 (Downtown Building Height Limits).

c. Height limits may be exceeded through granting of a zoning exception or variance, or through a height bonus as described in LU-13 (Height Bonuses).

[1] For the proposed project, height limits include heights of up to 36 feet east of U.S. Highway 101 and 36, 42, and 66 feet west of U.S. Highway 101.

Policy LU-14. Land Use Compatibility. Design new development in mixed residential and commercial areas to minimize potential nuisance effects and to enhance their surroundings.

Policy NH-7. Neighborhood Identity and Landmarks. Enhance neighborhood identity and sense of community by retaining and creating gateways, landmarks, and landscape improvements that help to define neighborhood entries and focal points.

Policy NH-10. Neighborhood Centers. Support the vitality of attractive, viable neighborhood centers by using incentives to encourage desired mixed-use, local-services and to create areas for the community to gather. Assist these centers to adapt to changing community needs. Retain existing neighborhood centers unless it can be clearly demonstrated that local-serving uses are not economically feasible.

Policy NH-14. Gathering Places and Events. To spark social interaction and create a greater sense of community, encourage both daytime and nighttime gathering places and events in appropriate locations, such as cafes, restaurants, outdoor eating places, bookstores, shopping facilities, libraries, schools, churches, parks, recreation facilities, community gardens, farmers' markets, transit stops, parks, recreation facilities, commercial facilities, cultural facilities, teen facilities, and City-sanctioned street closures for festivals, parades, and block parties. Improve parks and their facilities to include active recreation and passive social interaction areas, and, where appropriate, incorporate areas that can accommodate group activities such as social events, picnics and concerts in a manner respectful of nearby residents.

Policy NH-15. Downtown Vision. Continue to implement Our Vision of Downtown San Rafael.

Policy NH-23. Full Use of Street System. To enable our desired uses and activities to happen Downtown, encourage full use of streets and alleyways reflecting Downtown's urban character.

Policy NH-24. Full Range of Transportation Options. In addition to autos, encourage a variety of ways for people to travel to, in, and through Downtown, including:

- Bicycle and walking paths to other neighborhoods, Boyd and Albert Parks, and along Mahon Creek,
- Bike lanes where appropriate,
- Efficient bus service,
- A rail transitway, and
- Shuttle buses.

Policy NH-25. Pedestrian Comfort and Safety. Make Downtown's street systems more comfortable and safe for pedestrians by:

- Balancing between the needs of pedestrians and the desire for efficient traffic flow,
- Slowing traffic where necessary,
- Providing two-way traffic where feasible,
- Making pedestrian crossings direct and safe,
- Establishing pedestrian environments unique to each District,
- Improving and/or expanding sidewalks, street trees, landscaping and other sidewalk amenities,
- Increasing visibility to storefronts and businesses,
- Seeking innovative solutions and ideas.

Policy NH-26. Refine Look of Lincoln, Hetherton, Lindaro and Andersen Drive. Improve the look and function of these important streets by emphasizing safe and efficient movement of pedestrians, cars and, where feasible, bicycles traveling into and through Downtown.

Policy NH-28. Special Place. Preserve Downtown's reputation as a special place by developing a design strategy that capitalizes on Downtown's existing strengths:

- Unique urban characteristics and density,
- Diversity in architectural design, and
- Historic heritage and buildings.

Policy NH-29. Downtown Design. New and remodeled buildings must contribute to Downtown's hometown feel. Design elements that enhance Downtown's identity and complement the existing attractive environment are encouraged, and may be required for locations with high visibility or for compatibility with historic structures. Design considerations include:

- Varied and distinctive building designs,
- Sensitive treatment of historic resources,
- Generous landscaping to accent buildings,
- Appropriate materials and construction, and
- Site design and streetscape continuity.

Policy NH-30. Pedestrian Environments. Enhance Downtown's streets by establishing pedestrian environments appropriate to each District. These environments could include the following:

- Well-designed window displays and views into retail stores,
- Outdoor businesses and street vendors,
- Signs that are easy for pedestrians to see and read,
- Sun-filled outdoor courtyards, plazas and seating areas,
- Attractive street furniture and lighting,
- Information kiosks and public art.

Policy NH-31. Ground Floor Designed for Pedestrians. Ensure that all buildings, regardless of height, are comfortable for people at the street level. This includes:

- Relating wall and window heights to the height of people,
- Use of architectural elements to create visual interest,
- Adding landscaping and insets and alcoves for pedestrian interest, and,
- Stepping upper stories back as building height increases.

Policy NH-32. Historic Character. Recognize and use the unique character of Downtown's many attractive, well-liked, historic buildings. Encourage new development on sites in the Downtown area to be compatible with nearby historic buildings, the historic Downtown street pattern, and the area's historic, pedestrian-oriented character.

Policy NH-36. Hetherton Office District.

a. Office Center. Emphasize development related to the Transportation Center, especially office and professional service buildings, which could include limited areas for street-level retail uses. Residential is also strongly encouraged in this area.

b. Transportation Hub. Use the Transportation Center to coordinate and facilitate the different ways people move to and around Downtown, including bus, rail, auto, bicycle and on foot. Include safe pedestrian and bicycle connections linking this area to the stores, services, cultural facilities, and recreational opportunities in other parts of Downtown. Expand connections from the Transportation Center to other parts of the City by:

- Encouraging expanded bus transit,
- Considering shuttle service to feasible locales when such service is warranted and can be funded,
- Incorporating a rail station with the initiation of rail service;
- Improving walking and biking facilities,
- Providing a safe connection to Mahon Path,
- Facilitating the movement of commuters to and from the neighborhoods, and
- Creating safer pedestrian crossings on Second and Third Streets.

Policy NH-37. Hetherton Office District Design Considerations.

a. Downtown Gateway. Transform the Hetherton Office District into an elegant transition into Downtown San Rafael. Improve the entries to Downtown at Third Street, Fifth Street, Mission Avenue, Lincoln Avenue and the freeway ramps with entrance graphics, enhanced planting and lighting. Buildings should complement the district's entryway treatment and provide an attractive facade along Hetherton Street.

b. Fourth and Hetherton. Announce and mark this primary gateway to Downtown with a distinctive gateway treatment at Fourth Street and Hetherton, which is gracious and welcoming in character. Design issues to consider are:

   - Plaza or other open space areas both public and private,
   - Public art,
   - Strong landscaping design, and
   - Retail uses opening on to a plaza or other open space areas.

c. Hetherton Design. Encourage projects of high quality and varied design with landmark features that enhance the District's gateway image. Examples include:

   - Building design emphasizing the gateway character and complementing the district's transitional treatment by incorporating accent elements, public art and other feature items,
   - Upper stories stepped back,
   - Ground floor areas have a pedestrian scale,
   - Retail uses opening onto public areas,
   - Useable outdoor spaces, courtyards and arcades that are landscaped, in sunny locations and protected from freeway noise.

d. Under Highway 101 Viaduct. Work with [the California Department of Transportation] to make the area under the freeway attractive and safe with, for example, maintained landscaping, public art, creek enhancements or fencing.

e. Height. Building heights of three to five stories are allowed west of the rail transitway, and typically up to three stories east of the rail transitway.

Policy NH-125. Design Blend. Continue to provide a blend of architecture styles in the Montecito/Happy Valley Neighborhood compatible with and retaining the character of attractive older buildings. Newer buildings should be well designed, blend well with the existing homes and provide a "pedestrian friendly" street front.

Policy NH-127. Fourth Street. Ensure that Fourth Street provides a "pedestrian-oriented" walking street connection to Downtown. The Fourth Street view of the High School should be reestablished and improved with landscaping and fencing.

Policy NH-128. Sidewalk Improvements. Provide sidewalks that are safe and attractive to walk along.

Policy CD-1. City Image. Reinforce the City's positive and distinctive image by recognizing the natural features of the City, protecting historic resources, and by strengthening the positive qualities of the City's focal points, gateways, corridors and neighborhoods.

Policy CD-2. Neighborhood Identity. Recognize and promote the unique character and integrity of the city's residential neighborhoods and Downtown. Strengthen the "hometown" image of San Rafael by:

- Maintaining the urban, historic, and pedestrian character of the Downtown;
- Preserving and enhancing the scale and landscaped character of the City's residential neighborhoods;
- Improving the appearance and function of commercial areas; and
- Allowing limited commercial uses in residential neighborhoods that serve local residents and create neighborhood-gathering places.

Policy CD-5. Views. Respect and enhance to the greatest extent possible, views of the Bay and its islands, Bay wetlands, St. Raphael's church bell tower, Canalfront, marinas, Mt. Tamalpais, Marin Civic Center and hills and ridgelines from public streets, parks and publicly accessible pathways.

Policy CD-7. Downtown and Marin Civic Center. Build upon the character of these areas by controlling land uses to clearly distinguish their boundaries; by recognizing Mission San Rafael Arcangel and St. Raphael Church, Marin Civic Center, and other buildings that help define the City's character, and requiring that these and other architectural characteristics and land uses that give these areas their identity are strengthened.

Policy CD-8. Gateways. Provide and maintain distinctive gateways to identify City entryways.[2]

Policy CD-9. Transportation Corridors. To improve the function and appearance of corridors, recognize those shown on Exhibits 17 and 18 and define each corridor's contribution to the City based upon its land use and transportation function and how it is experienced by the public.

Policy CD-10. Nonresidential Design Guidelines. Recognize, preserve and enhance the design elements that contribute to the economic vitality of commercial areas. Develop design guidelines to ensure that new nonresidential and mixed-use development fits within and improves the immediate neighborhood and the community as a whole.

Policy CD-15. Participation in Project Review. Provide for public involvement in the review of new development, renovations, and public projects with the following:

- Design guidelines and other information relevant to the project as described in the Community Design Element that would be used by residents, designers, project developers, City staff, and City decision makers;
- Distribution of the procedures of the development process that include the following: submittal information, timelines for public review, and public notice requirements;
- Standardized thresholds that state when design review of projects is required (e.g. residential conversions, second-story additions); and
- Effective public participation in the review process.

Policy CD-17. Street Furnishings. Encourage appropriate benches, trash containers, street lighting, public art, and other street furnishings. Select styles compatible with individual neighborhoods and the Downtown to strengthen their identities.

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[2] *The City of San Rafael General Plan 2020* identifies that north- and southbound U.S. Highway 101 provide gateways to the Downtown area.

Policy CD-18. Landscaping. Recognize the unique contribution provided by landscaping, and make it a significant component of all site design.

Policy CD-19. Lighting. Allow adequate site lighting for safety purposes while controlling excessive light spillover and glare.

Policy C-22. Attractive Roadway Design. Design roadway projects to be attractive and, where possible, to include trees, landscape buffer areas, public art, integration of public spaces and other visual enhancements. Emphasize tree planting and landscaping along all streets.

Policy I-4. Utility Undergrounding. Continue to pursue the undergrounding of overhead utility lines.

Policy CA-5. Public Art. Promote a stimulating and engaging environment through the greater display of artwork in public places.

Policy CA 13. Historic Buildings and Areas. Preserve buildings and areas with special and recognized historic, architectural or aesthetic value including but not limited to those on the San Rafael Historical/Architectural Survey. New development and redevelopment should respect architecturally and historically significant buildings and areas.

San Rafael Downtown Station Area Plan

The *San Rafael Downtown Station Area Plan* (Downtown SAP), approved in 2012, was developed to focus on development within a 0.5-mile radius around the planned Downtown San Rafael Sonoma-Marin Area Rail Transit (SMART) station. It sets the stage to create a more vibrant, mixed-use, livable area supported by a mix of transit opportunities, including passenger rail service. The plan supports the vision of creating a transit-oriented, walkable, and active enrollment in the SMART station area by limiting the amount of parking provided to encourage transit use, walking, and bicycling instead of personal vehicle use (City of San Rafael 2012).

City of San Rafael Downtown Vision

The City is currently in the process of a preparing and adopting a more comprehensive, inclusive planning document, the *Downtown San Rafael Precise Plan* (City of San Rafael 2020b). However, the City's *Our Vision of Downtown San Rafael and Our Implementation Strategy* (Downtown Vision) provides the currently adopted vision and implementation strategy for Downtown San Rafael. The proposed project falls within the Hetherton Gateway District of Downtown, which serves as a "major entryway to Downtown and focus of the transportation system" (City of San Rafael 1993). The document establishes the following design principals for the district that apply to aesthetic resources and are relevant to the proposed project:

- Create a gracious and inviting entrance to all of Downtown by:
  - Improving the gateway and entry point character of Third, Fourth, Fifth Streets, Mission and Lincoln Avenues;
  - Extending the Hetherton Gateway quality of development along Fourth Street to Irwin Avenue; and
  - Making the area under the freeway attractive and safe.
- Announce and mark the edge of Downtown with a distinctive gateway treatment at Fourth Street and Hetherton. The Gateway would be gracious and welcoming in character with:
  - Plaza or other open space areas both public and private;
  - Public art;

  - Strong, colorful landscaping; and
  - Retail uses opening on to a plaza or other open space areas.
- Involve public and private contributions to the Fourth Street Gateway. New development would locate open space and landscape areas so as to expand the public areas, and retail uses would open on to these areas. Buildings would be designed to incorporate accent elements, public art and other items to emphasize the gateway character of the District.
- Improve the other entry streets of Third Street, Fifth, Mission and Lincoln Avenues with entrance graphics, planting and lighting.
- Encourage all new development to include usable outdoor spaces, courtyards and arcades in sunny locations protected from freeway noise.
- Expand connections from the Transportation Center to other parts of Downtown by:
  - Providing shuttles and trolleys to the Fourth Street Retail Core, West End Village, Montecito neighborhood and Albert Park;
  - Improving walking and biking facilities leading to nearby residential neighborhoods;
  - Providing safe connections to the bicycle and pedestrian path along San Rafael Creek; and
  - Facilitating the movement of commuters to and from the neighborhoods. Incorporate attractive parking structures throughout the District with retail or commercial uses on the ground floor areas adjacent to the street.
- Encourage high quality and varied project designs with some landmark features to enhance the District's gateway image.
- Develop the area between the Transitway and Lincoln Avenue with:
  - Larger scale buildings of three to five stories with upper stories stepped back; and
  - Ground floor area designs that are human in scale and are pleasant to walk past.
- Develop the area between Transitway and Hetherton Avenue with:
  - Smaller scale buildings of three stories with stepped back upper floors to soften the visual impact of Highway 101 and buffer Downtown from freeway noise;
  - Building designs that complement the entryway treatment; and
  - Attractive facades along Hetherton Avenue.

In addition to the Downtown Vision, the City has a resource available on its website called "*Good Design" Guidelines for Downtown: Preliminary Findings and Recommendations* that was presented at the February 5, 2017, City Council meeting. These recommendations are available to help designers and homeowners ensure that projects meet overlay zoning district standards and help in creating designs that are high quality, pedestrian friendly, and respectful of district environments (City of San Rafael 2017).

San Rafael Municipal Code

The San Rafael Municipal Code contains the following codes related to aesthetic resources that apply to the proposed project.

Section 4.16.227 - Light and glare.

Colors, materials and lighting shall be designed to avoid creating undue off-site light and glare impacts. New or amended building or site colors, materials and lighting shall comply with the

following standards, subject to review and recommendation by the police department, public works department, and community development department:

A. Glossy finishes and reflective glass such as glazed or mirrored surfaces are discouraged, and prohibited where it would create an adverse impact on pedestrian or automotive traffic or on adjacent structures; particularly within the downtown environs and in commercial, industrial and hillside areas.

B. Lighting fixtures shall be appropriately designed and/or shielded to conceal light sources from view off-site and avoid spillover onto adjacent properties.

C. The foot-candle intensity of lighting should be the minimum amount necessary to provide a sense of security at building entryways, walkways and parking lots. In general terms, acceptable lighting levels would provide one (1) foot-candle ground level overlap at doorways, one-half (½) foot-candle overlap at walkways and parking lots, and fall below one (1) foot-candle at the property line.

D. Lighting shall be reviewed for compatibility with on-site and off-sight light sources. This shall include review of lighting intensity, overlap and type of illumination (e.g., high-pressure sodium, LED, etc.). This may include a review by the city to assure that lighting installed on private property would not cause conflicts with public street lighting.

E. Installation of new lighting fixtures or changes in lighting intensity on mixed use and non-residential properties shall be subject to environmental and design review permit review as required by Chapter 14.25 (Design Review).

F. Maximum wattage of lamps shall be specified on the plans submitted for electrical permits.

G. All new lighting shall be subject to a 90-day post installation inspection to allow for adjustment and assure compliance with this section.

Section 14.18.170 - Lighting.

Lights provided to illuminate any parking facility or paved area shall be designed to reflect away from residential use and motorists. It is the intent to maintain light standards in a low profile design, as well as to be compatible to the architectural design and landscape plan. Light fixtures (e.g., pole and wall-mount) should be selected and spaced to minimize conflicts with tree placement and growth. (See Section 14.16.227 for additional standards on foot-candle intensity).

3.1.1.2 Environmental Setting

Regional Setting

The project site is in the Downtown area of the City, between the coastal range and San Francisco Bay. Visual features of the City include hills to the west, creeks, open spaces, mature trees, views of the Bay, and a Downtown with a mix of historic and contemporary architecture and pedestrian scale. Topography plays a key role in shaping San Rafael's visual character. Hills to the north and west provide a prominent visual backdrop to the commercial areas present in Downtown San Rafael. Mount Tamalpais serves as the highest point in the region and stands at approximately 2,500 feet above mean high-water sea level. The topography in the project vicinity gradually flattens out from the hills to the west and north, toward San Francisco Bay. The Draft *San Rafael General Plan 2040* identifies views of Mount Tamalpais and San Pedro Mountain as key views to be protected from the Downtown portion of the City (City of San Rafael 2020a).

The eastern City limits extend approximately 3 miles into the San Francisco Bay and include the Marin Islands. The City's waterfront serves a key role in the visual and cultural identity and consists of beaches, marinas, parks trails, wetlands, and marshes. One of the most important components of

San Rafael's waterfront is the Bay Trail, a 500-mile planned trail network that currently exists along portions of the City's shoreline and in the Downtown area (City of San Rafael 2020a).

Local Setting

The land uses closest to the project site consist primarily of Downtown mixed use, with medium- and high-density residential uses present east of Irwin Street, and parks, recreation, and open space uses south of 2nd Street. As described in Section 3.4, Cultural Resources, most of the buildings on the project area[3] were built between 1890 and 1950, with the exception of 666 3rd Street (currently Citibank), 640 4th Street, 1001 Irwin Street, and 915–917 Irwin Street, which were built after 1970. The U.S. Highway 101 (US-101) northbound viaduct was constructed in 1941 and the southbound viaduct was completed in 1965, and height and scale of these structures dominate existing views in the project area. Buildings in the project area are typically between one and two stories and there is little consistency in the building materials of each structure. Key nearby visual features include San Rafael Creek and Mount Tamalpais to the south and southwest, historic and commercial areas to the west, San Pedro Mountain to the north, and the French Quarter District, Dr. Hawkins Residence, Holtwood, and commercial areas to the east (City of San Rafael 2020a). The elevated US-101 corridor passes through the proposed project area, with the Move Whistlestop Alternative, Adapt Whistlestop Alternative, and 4th Street Gateway Alternative project sites to the west of the freeway and the Under the Freeway Alternative project site underneath and east of the freeway. Portions of the project sites would be visible in foreground views from US-101. However, the focus of views from US-101 include high-quality, scenic views of the surrounding hillsides in the middleground and background. Views of San Rafael Creek are also available from US-101. Although views of the creek from northbound US-101 are prominent and quality views, southbound views of the creek to the north are not notable because the creek narrows to a size such that it does not stand out in views. Although these views are scenic, they are not considered scenic vista views because the vantage is not high enough for expansive views and because intervening vegetation and development limit views along sections of the freeway through the project area.

Build Alternative Sites

Existing Groups and Existing Viewer Sensitivity

Existing viewer groups and viewer sensitivity is similar across all build alternatives. Viewer groups in the project area include roadway users traveling on US-101 and local roadways, commercial users, and adjacent residences. Residents would be expected to have the highest sensitivity to visual changes in the project area because of their familiarity with the view, their investment in the area, and their sense of ownership of the view. Residents with views of the project area are primarily in multifamily and mixed-use residential buildings along 5th Avenue, 4th Street, Lincoln Avenue, and Irwin Avenue. Commercial users on and adjacent to the project area would also be expected to have a moderate to a high sensitivity to visual changes due to the familiarity with the view and their investment in the area; however, commercial users are anticipated to be less sensitive to changes than residents due to their transient nature.

Existing roadway users are also an important viewer group, as the project area is in a Downtown area that receives a high level of average daily traffic and is visible from US-101, which is a heavily

[3] The "project area" refers to all areas affected by the build alternatives.

used regional corridor. Although more numerous than local roadway users, motorists on US-101 would generally be less sensitive to visual changes in the project area because of the shorter duration of their exposure to the views, as drivers pass by the site at high rates of speed, and the focus of their attention on driving along the heavily used regional corridor. Therefore, freeway motorists are considered to have limited visual sensitivity. Motorists on the local roadways surrounding the project area would have higher sensitivity to changes due to the proximity of the project area in the foreground and the longer duration of travel on these lower-speed, stop-controlled streets.

Light and Glare

Existing light and glare conditions are similar across all build alternative project sites. Existing buildings adjacent to the project area include night lighting in addition to security lights that remain illuminated through the night. Additionally, adjacent streets and surface parking lots are well lit and headlights on vehicles driving through the area contribute to nighttime lighting. Glass and reflective surfaces on buildings and vehicles, on streets, and in parking lots contribute to a high amount of glare that is typical of a downtown commercial area. Due to the urbanized nature of the surrounding area, a substantial amount of ambient nighttime lighting currently exists, affecting views of the nighttime sky.

Move Whistlestop Alternative, Adapt Whistlestop Alternative, and 4th Street Gateway Alternative

Existing Visual Character and Quality

The Move Whistlestop Alternative, Adapt Whistlestop Alternative, and 4th Street Gateway Alternative are all west of US-101 and share similar site conditions. The Move Whistlestop Alternative and Adapt Whistlestop Alternative are generally bounded by West Tamalpais Avenue and Hetherton Street to the west and east and by 4th Street and 3rd Street to the north and south. The 4th Street Gateway Alternative is bounded by 5th Avenue and 3rd Street to the north and south and by Hetherton Street to the east, and by the SMART tracks and curbs along West Tamalpais Avenue to the west. These project sites are flat. (See Figures 2-4, 2-5, and 2-6 for the alternative site plans.) As described in Chapter 2, Project Description, the Move Whistlestop Alternative, Adapt Whistlestop Alternative, and 4th Street Gateway Alternative project sites span multiple parcels that are currently occupied by a variety of businesses, existing transportation uses, and associated parking lots. The project area is composed mostly of buildings; pavement associated with roadways, sidewalks, and parking lots; aboveground utilities such as overhead streetlights and wooden utility poles and transmission lines; fencing and signage; and the SMART tracks.

Buildings on the project sites are typically between one and two stories and there is little consistency in the building materials of each structure. Landscape features on the project site are limited to street trees and parking lot islands. Landscaping is generally focused on screening and shading surfaces and street parking, and each parcel associated with these project sites exhibits its own onsite landscape approach. However, there are a limited amount of street trees, the canopy is not very dense, and the street trees are not a defining element of the visual character of the Move Whistlestop Alternative, Adapt Whistlestop Alternative, or 4th Street Gateway Alternative project sites.

Surrounding the three project sites are retail, commercial, and office uses to the north, US-101 to the east, the existing San Rafael Transit Center and San Rafael Creek to the south, and restaurants and retail facilities to the west. There is little relationship between existing buildings on and adjacent to these project sites, and the area generally lacks visual continuity.

San Pedro Mountain and Mount Tamalpais are identified in the Draft *San Rafael General Plan 2040* as key views to be protected from the Downtown portion of the City. Roadways surrounding the sites have expansive views of the wooded hills of the San Pedro Mountain and Southern Heights Ridge to the north and the wooded hills of Mount Tamalpais to the south; however, from many locations these features are not visible because of existing buildings and/or onsite trees and other vegetation. Additionally, the height and scale of the US-101 viaduct dominates the existing eastern views for these three build alternatives and limits ground-level views.

Consistent with the natural and built environments, these project sites have a moderate coherence and a moderate overall visual quality.

Under the Freeway Alternative

Existing Visual Character and Quality

The Under the Freeway Alternative is east of US-101 and is independent of the other three project sites. The site is mostly flat and is bounded by 5th Avenue, 4th Street, Irwin Street, and Hetherton Street (see Figure 2-7 for the site plan). As described in Chapter 2, Project Description, the Under the Freeway Alternative project site spans multiple parcels that are currently mostly occupied by a variety of businesses, existing transportation uses, and associated parking lots. The project area is composed mostly of buildings; pavement associated with roadways, sidewalks, and parking lots; aboveground utilities such as overhead streetlights and wooden utility poles and transmission lines; fencing and signage; and US-101 viaduct.

This project site is partially underneath US-101 on one park-and-ride lot, maintained and operated by the California Department of Transportation (Caltrans), and on parcels east of US-101. This project site crosses Irwin Creek, which is underneath US-101, and flows parallel to the viaduct. Portions of the existing project site not located under US-101 are currently occupied by offices, a bike shop, parking, vacant storefronts, and a Caltrans park-and-ride lot north of 4th Street and retail, offices, and a Caltrans park-and-ride lot south of 4th Street. Buildings on the project site are typically between one and two stories and there is little consistency in the building materials of each structure. Landscape features on the project site are limited to street trees and parking lot islands. Landscaping is generally focused on screening and shading surfaces and street parking, and each parcel associated with this project site exhibits its own onsite landscape approach. The street tree canopy associated with the Under the Freeway Alternative is denser than the canopy associated with the Move Whistlestop Alternative, Adapt Whistlestop Alternative, or 4th Street Gateway Alternative and is a defining element of the visual character with this alternative that improves the visual quality of the project site.

Surrounding this site are offices and residences to the north; residences and offices to the east; retail and offices to the south; and retail uses, restaurants, and offices to the west. Residential uses to the north are largely obscured from the site by an existing office building. However, residential land uses to the east have direct views of the site. There is little relationship between

existing buildings on and adjacent to this project site, and the area generally lacks visual continuity. In addition, US-101 provides a distinct visual separation between land uses to the east and west of the freeway.

As described above, San Pedro Mountain and Mount Tamalpais are identified in the Draft *San Rafael General Plan 2040* as key views to be protected from the Downtown portion of the City. However, existing buildings and the urban forest canopy limits views to these features east of US-101. However, Irwin Street and other roadways running north to south have narrow, partially obscured views of the wooded hills of San Pedro Mountain to the north and the wooded hills of the Southern Heights Ridge to the south. Additionally, the height and scale of the US-101 viaduct dominates the existing western views for this build alternative and limits ground-level views to the west.

Consistent with the natural and built environments, this project site has moderate coherence and a moderate overall visual quality.

3.1.2 Environmental Impacts

Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.1.2.1 Methodology

Aesthetic resources are all objects (artificial and natural, moving and stationary) and features (e.g., landforms and waterbodies) visible on a landscape. These resources add to or detract from the scenic quality (i.e., the visual appeal) of the landscape. A visual impact is the creation of an intrusion or perceptible contrast that affects the scenic quality of a viewscape. A visual impact can be perceived by an individual or group as either positive or negative, depending on a variety of factors or conditions (e.g., personal experience, time of day, weather, or seasonal conditions).

Identifying a study area's aesthetic resources and conditions involves understanding the visual character of the area's visual features and the regulatory context. Once those parameters are understood, a study area's aesthetic resources are further defined by establishing the area of visual effects (AVE) and documenting the visual character of the environmental setting, including the natural and cultural environments. For the purposes of this analysis, the AVE encompasses the land that would be developed by the project alternatives. The *affected population*, or viewers, is defined by its relationship to the alternatives, its visual preferences, and its sensitivity to changes associated with the proposed project. Visual preferences, or what viewers like and dislike about the alternatives' visual character, define the alternatives' *visual quality*. Visual quality serves as the baseline for determining the degree of visual impacts and whether a project's visual impacts would be negative, beneficial, or neutral.

The impact assessment methodology for aesthetic resources includes the following components.

- Establishing the AVE for aesthetics resources
- Reviewing the build alternatives in regard to compatibility with state and local ordinances and regulations and professional standards pertaining to visual quality, and the extent to which the

affected environment contains places or features that have been designated in plans and policies for protection or special consideration (e.g., as designated scenic vistas or highways)

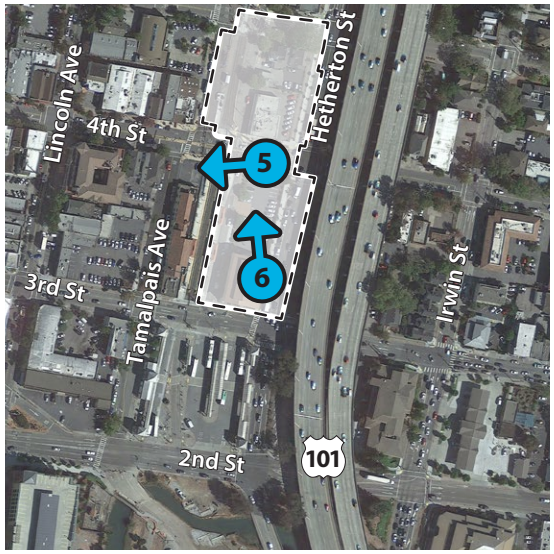
- Inventorying and describing the affected environment, affected viewers, and existing visual quality, and identifying key viewpoints and views for visual assessment
- Reviewing project construction drawings
- Evaluating visual renderings. The visual renderings do not provide a side-by-side comparison of existing to proposed conditions. However, they do convey how the proposed project is likely to look within the existing landscape and the vantages of each rendering are shown on Figure 3.1-1. Existing condition picture snapshots taken from Google Street View, shown on Figures 3.1-2 through 3.1-9, provide the approximate view angle and a representation of the existing conditions found within the view angle that was rendered.
- Assessing visual compatibility and viewer sensitivity and analyzing the proposed project's visual impacts
- Proposing methods to mitigate significant visual impacts (FHWA 2015)

The focus of this visual analysis is on the alternatives' potential to negatively affect views from publicly accessible locations. Publicly accessible locations in the communities from which residents would view the study area are, therefore, considered to be of primary importance in this analysis.

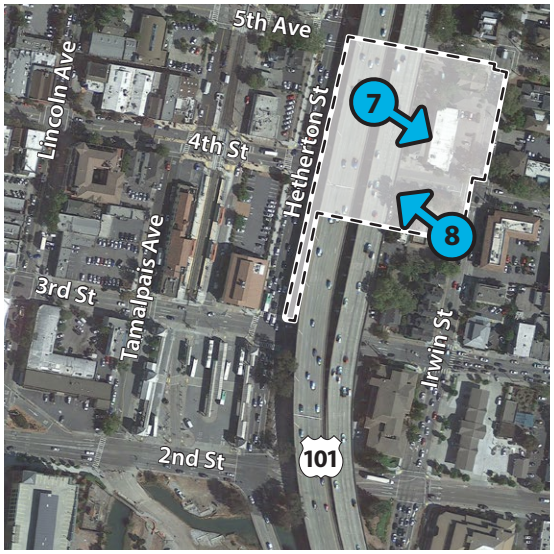
The methods for evaluating impacts are intended to satisfy the federal and state requirements, including the California Environmental Quality Act (CEQA). In accordance with CEQA requirements, an environmental impact report must include a description of the existing physical environmental conditions in the vicinity of the proposed project. Those conditions, in turn, "will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant" (14 California Code of Regulations 15125(a).

Move Whistlestop Alternative

Adapt Whistlestop Alternative



4th Street Gateway Alternative



Under the Freeway Alternative

Legend

Key View

Affected Parcels

N

Source: Google Earth Pro 2020.

ICF Graphics ... 0748.17 (6/23/21) AB

ICF

Figure 3.1-1
Key View Location Map

Existing

Source: Google Street View

Rendering

Graphics … 00748.17 (6/23/21) AB

Figure 3.1-2
Key View 1 – Existing View and Proposed Rendering for Move Whistlestop Alternative

Existing

Source: Google Street View

Rendering

Graphics … 00748.17 (13-2-2021) JC

Figure 3.1-3
Key View 2 – Existing View and Proposed Rendering for Adapt Whistlestop Alternative

Existing

Source: Google Street View

Rendering

Graphics … 00748.17 (6-2-2021) JC

Figure 3.1-4
Key View 3 – Existing View and Proposed Rendering for Adapt Whistlestop Alternative

Existing

Source: Google Street View

Rendering

Graphics … 00748.17 (6-2-2021) JC

Figure 3.1-5
Key View 4 – Existing View and Proposed Rendering for Adapt Whistlestop Alternative

Existing

Source: Google Street View

Rendering

Graphics … 00748.17 (13-2-2021) JC

Figure 3.1-6
Key View 5 – Existing View and Proposed Rendering for 4th Street Gateway Alternative

Existing

Source: Google Street View

Rendering

Graphics … 00748.17 (13-2-2021) JC

Figure 3.1-7
Key View 6 – Existing View and Proposed Rendering for 4th Street Gateway Alternative

Existing

Source: Google Street View

Rendering

Graphics … 00748.17 (13-2-2021) JC

Figure 3.1-8
Key View 7 – Existing View and Proposed Rendering for Under the Freeway Alternative

Existing

Source: Google Street View

Rendering

Graphics … 00748.17 (13-2-2021) JC

Figure 3.1-9
Key View 8 – Existing View and Proposed Rendering for Under the Freeway Alternative

3.1.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to aesthetic resources and visual quality.

Would the proposed project:

- Substantially degrade the existing visual character or quality of public views of the site and its surroundings in a non-urbanized area, including scenic vistas?
- Conflict with applicable zoning and other regulations governing scenic quality in an urbanized area, including scenic vistas?
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Create a new source of substantial light or glare that would adversely affect day or nighttime views near the project improvements?

3.1.2.3 Impacts

Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and its Surroundings in a Non-Urbanized Area, Including Scenic Vistas, or Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality in an Urbanized Area, Including Scenic Vistas

Scenic Vistas

All Build Alternatives

All four build alternatives would be within an urbanized area of San Rafael. Therefore, these alternatives would have no visual impact on non-urbanized areas. In addition, as described under Section 3.1.1.1, Regulatory Setting, the US-101 corridor is elevated as it passes through the proposed project area. Although these views are scenic, they are not considered scenic vista views because the vantage is not high enough for expansive views and intervening vegetation and development limit views along sections of the freeway through the project area. Therefore, there would be ***no impact*** on scenic vistas as a result of the proposed project and no mitigation is required.

The City's Municipal Code Section 4.16.227, Light and glare, and Section 14.18.170, Lighting, contain codes that help to prevent impacts associated with light and glare. The impacts associated with light and glare are discussed below and are not under this threshold.

Construction

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives

Construction activities would introduce considerable heavy equipment and associated vehicles, including backhoes, compactors, tractors, and trucks, into the viewshed of all viewer groups over the course of 18 months. Temporary visual changes due to construction signaling and signage also

would occur. As identified under Section 3.1.1.1, Regulatory Setting, *The City of San Rafael General Plan 2020* and Downtown Vision provide guidance and policies that support the transition of land uses along Hetherton Street, 3rd Street, 4th Street, 5th Avenue, Mission Avenue, Lincoln Avenue, and the freeway ramps to support transportation-oriented uses, including better connections for rail and bus transit; the creation of public plazas; the improvement of bicycle and pedestrian connections; and the installation of landscaping and beautification of the project area. Construction would be required to facilitate these modifications supported by the City. Therefore, all build alternatives are in keeping with the direction of the City plans. However, construction activities occurring near sensitive residential receptors could result in an invaded sense of privacy and disruptive views when experienced from residential areas, which could result in potentially significant visual impacts during construction. As described in Section 3.10, Land Use and Planning, residential land uses do not surround the Move Whistlestop Alternative, Adapt Whistlestop Alternative, or 4th Street Gateway Alternative project sites. Therefore, construction impacts for these build alternatives would be ***less than significant***, and no mitigation is required.

Under the Freeway Alternative

Visual conditions for this project site are similar to those described above. However, construction would require the demolition of 1011 Irwin Street, a historic resource. In addition, although residential uses to the north are largely obscured from the site by an existing office building, residential land uses to the east have direct views of the Under the Freeway Alternative project site. This would result in a **significant** impact during construction due to the potential for invasions of privacy and the change in existing visual quality of having direct, extended views of construction activities and staging areas. Implementation of Mitigation Measure MM-AES-CNST-1 for the Under the Freeway Alternative would reduce impacts to a ***less-than-significant level with mitigation*** by screening disruptive construction activities near residences while helping to maintain residents' privacy.

Operations

The City of San Rafael General Plan 2020 and Municipal Codes (i.e., Zoning Ordinances) pertaining to light and glare, described in detail in Section 3.1.1.1, Regulatory Setting, contain policies and goals pertaining to aesthetic resources. These policies and goals are established to prevent undue light and glare and ensure that new development is designed to enhance their surroundings, preserve historic and architecturally significant structures, and maintain an aesthetically pleasing, residential character of the neighborhood. Additionally, *The City of San Rafael General Plan 2020* identifies the Hetherton Office District, which establishes the district as a transportation hub and an office center with development that relates to the existing transit center. The focus on this district is to improve pedestrian facilities, expand bus transit, and incorporate rail services while creating the design measures to transform the Hetherton Office District into an elegant transition into Downtown San Rafael.

The existing transit center facility would be vacated under all four of the build alternatives. All build alternatives would have similar visual components such as straight-curb bus bays, pick-up/drop-off curb space, bicycle parking, 9-foot-wide platforms along bus bays, weather protection facilities and seating, public art, landscaping, security, wayfinding signage, and a new, roughly 3,000-square-foot Golden Gate Bridge, Highway and Transportation District (District) building to support the transit center. This would include customer service, public restrooms, driver relief, small retail, maintenance, and security facilities.

Move Whistlestop and Adapt Whistlestop Alternatives

The Move Whistlestop and Adapt Whistlestop Alternatives share the same general location. As shown on Figures 2-4 and 2-5, both of these alternatives would have very similar features and a very similar layout and, therefore, would have a very similar appearance. The primary difference between the alternatives is that the Move Whistlestop Alternative would relocate the existing Whistlestop building west across Tamalpais Street or would build a new structure that utilizes similar façades and architectural elements from the existing Whistlestop building, whereas the Adapt Whistlestop Alternative would retain a portion of the existing Whistlestop building. In addition, both alternatives would include a substantial amount of landscaping compared to existing conditions, aesthetic paving details, unified color schemes, and site furnishings. As shown in the visual renderings on Figure 3.1-2, landscaping, aesthetic paving details, unified color schemes, and site furnishings associated with the Move Whistlestop Alternative would improve visual conditions at this project site by providing visual interest, softening the appearance of built structures in the landscape, and screening or undergrounding utilities and infrastructure such as transmission poles, fencing, and railings associated with the transit center. As shown in the visual renderings on Figures 3.1-3 through 3.1-5, landscaping, aesthetic paving details, color schemes, and site furnishings associated with the Adapt Whistlestop Alternative would be similar to under the Move Whistlestop Alternative. These changes would create an attractive, pedestrian-scale environment with visually pleasing plaza spaces, streetscapes, and transportation facilities. The public spaces in the station area would closely resemble what was described in the Downtown SAP, including the inclusion of a station plaza near West Tamalpais and 4th Street. As further shown in the visual rendering on Figure 3.1-2, the District building associated with the Move Whistlestop Alternative would have the same architectural style and visual character of the Whistlestop building and both the Move Whistlestop Alternative and the Adapt Whistlestop Alternative would implement the same design strategies. In addition, as shown in the visual renderings on Figures 3.1-2 through 3.1-5, views toward the hills and ridgelines may be screened down West Tamalpais Avenue due to landscaping proposed under both alternatives. However, views of the hillsides from Hetherton Street may open up and become more prominent, as shown in the visual rendering on Figure 3.1-4. In addition, views of the hills from US-101 would not be affected because building heights and trees planted by these build alternatives would not obscure views of these features.

Under both alternatives, all of the proposed building and structure heights would fall within the limits identified in *The City of San Rafael General Plan 2020* and the Downtown SAP and retain many views toward the surrounding hillsides. Both alternatives would also enhance their surroundings associated with Downtown's existing urban and historic character; create pleasant and attractive streets that are bicycle- and pedestrian-friendly; include landscaping, sidewalks, and other site amenities; and create social gathering places in a manner that is consistent with *The City of San Rafael General Plan 2020*, Downtown SAP, and Downtown Vision. Both alternatives would satisfy *The City of San Rafael General Plan 2020*'s, Downtown SAP's, and Downtown Vision's goals of establishing the Hetherton Office District as a transportation hub and enhancing the district's gateways image by improving the visual quality of the streets surrounding the transit center. Therefore, both the Move Whistlestop and Adapt Whistlestop Alternatives would not conflict with zoning and other regulations governing scenic quality. Impacts would be ***less than significant***. No mitigation is required.

4th Street Gateway Alternative

The 4th Street Gateway Alternative shares the same general location as the Move Whistlestop and Adapt Whistlestop Alternatives. This alternative would also have similar features and a similar appearance to the Move Whistlestop and Adapt Whistlestop Alternatives. The primary difference between the alternatives is that the Whistlestop building would not be utilized by this build alternative and it would not be removed or relocated under the 4th Street Gateway Alternative. Instead, the proposed District building would be on the corner of Hetherton and 3rd Streets, replacing the existing Citibank building. As shown in the visual renderings on Figures 3.1-6 and 3.1-7, landscaping, aesthetic paving details, unified color schemes, and site furnishings associated with the 4th Street Gateway Alternative would also improve visual conditions at the project site by providing visual interest, softening the appearance of built structures in the landscape, and screening or undergrounding utilities and infrastructure such as transmission poles, fencing, and railings associated with the transit center. These changes would create an attractive, pedestrian-scale environment with visually pleasing plaza spaces, streetscapes, and transportation facilities. As shown in the visual renderings on Figure 3.1-6, views toward the hills and ridgelines may be screened down Hetherton and 4th Streets due to landscaping proposed under this alternative. Although not rendered, views of the hillsides from 5th Avenue may also be screened by landscaping. However, views of the hillsides from Hetherton Street may open up and become more prominent, as shown in the visual rendering on Figure 3.1-7. In addition, views of the hills from US-101 would not be affected because building heights and trees planted by the 4th Street Gateway Alternative would not obscure views of these features.

Proposed building and structure heights and site enhancements would be the same as described for the Move Whistlestop and Adapt Whistlestop Alternatives above. The changes under the 4th Street Gateway Alternative would be consistent with those of the Move Whistlestop and Adapt Whistlestop Alternatives. However, the 4th Street Gateway Alternative would remove historic structures along 5th Avenue and, therefore, would conflict with zoning and other regulations governing scenic quality that are in place to protect such resources, resulting in a **significant** impact. Impacts would be reduced to ***less-than-significant levels with mitigation*** with implementation of Mitigation Measure MM-CULT-CNST-1, which would relocate and preserve these historic structures.

Under the Freeway Alternative

The Under the Freeway Alternative is located independently of the other alternatives. However, this alternative would have similar design features as the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives. Although the Under the Freeway Alternative would have similar design features, it would generally have a more urban appearance because it would be largely amongst the US-101 freeway piers, as shown in the visual rendering on Figure 3.1-8. This would create a transit center that does not have the same pedestrian-scale feeling as the other three alternatives. However, having an active transit center that improved the aesthetics associated with the area under the freeway would improve visual conditions and make this area feel safer, which would be consistent with the goals identified in *The City of San Rafael General Plan 2020* and Downtown Vision. In addition, this alternative would utilize areas that are not under the freeway, which are to the east of the freeway. As shown in the visual renderings on Figure 3.1-9, these parcels would have landscaping, aesthetic paving details, unified color schemes, and site furnishings associated with the Under the Freeway Alternative that would improve visual conditions at the project site by providing visual interest, softening the appearance of built structures in the landscape, and screening or undergrounding utilities and infrastructure such as transmission poles, fencing, and railings

associated with the transit center. These changes would create an attractive, pedestrian-scale environment with visually pleasing plaza spaces, streetscapes, and transportation facilities. Views toward the surrounding hills and ridgelines from local streets are not likely to be affected by this alternative because the freeway and existing structures largely obscure views of these features west of the freeway. In addition, views of the hills from US-101 would not be affected because building heights and trees planted by this build alternative would not obscure views of these features.

Proposed building and structure heights and site enhancements would be the same as described for the Move Whistlestop and Adapt Whistlestop Alternatives above. The changes under this alternative would be consistent with the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives. However, the Under the Freeway Alternative would remove a historic structure (i.e., 1011 Irwin Street) and, therefore, would conflict with zoning and other regulations governing scenic quality that are in place to protect such resources, resulting in a **significant** impact. Impacts would be reduced to ***less-than-significant levels with mitigation*** with implementation of Mitigation Measure MM-CULT-CNST-1, which would relocate and preserve these historic structures.

Mitigation Measures

MM-AES-CNST-1: Install Visual Barriers Between Construction Work Areas and Sensitive Receptors

The project proponent or its contractor(s) shall install visual barriers between stationary construction work areas and sensitive residential receptors adjacent to the Under the Freeway Alternative site to reduce the impact on these receptors from invasions of privacy and the change in existing visual quality. Barriers shall be placed to obscure views of stationary work areas (e.g., staging areas or areas of fixed construction) where construction activity and equipment would be disruptive and lower the existing visual quality. These efforts shall include the following actions and performance standards:

- The project proponent or its contractors(s) shall install visual barriers to minimize sensitive residential receptors' views of construction work areas.
- The visual barriers shall be placed around the north, east, and south sides of the Under the Freeway Alternative site to protect residents that are within one block of the construction site because these residences would have an unobstructed view of the construction area.
- The visual barrier may be chain link fencing with privacy slats, fencing with windscreen material, wood barrier, or other similar barrier.
- The visual barrier shall be a minimum of 6 feet high to help to maintain the privacy of residents and block ground-level views toward stationary construction activities.

While the visual barriers would introduce a visual intrusion, they would greatly reduce the visual effects associated with visible construction activities, and screening construction activities would protect privacy. The visual barriers are an effective means of reducing the visibility of active construction work areas, thereby minimizing the impact on existing localized visual quality.

MM-CULT-CNST-1: Prepare and Implement Relocation Plans

Refer to Section 3.4, Cultural Resources, for the full text of this measure.

Substantially Damage Scenic Resources, Including, but not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

All Build Alternatives

As described above under Section 3.1.1.1, Regulatory Setting, there are no roadways within or near the project area that are designated in federal, state, or local plans as a scenic highway or a route worthy of protection for maintaining and enhancing scenic viewsheds (Caltrans 2019; City of San Rafael 2016). Therefore, there would be **no impact** on scenic resources along a scenic route and no mitigation is required.

Mitigation Measures

No mitigation is required.

Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views Near the Project Improvements

Construction

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternative

Nighttime construction would occur on a limited basis for in-lane street work to reduce traffic impacts during the day. Therefore, high-intensity nighttime lighting would be needed, intermittently, for short periods of time. As described in Section 3.10, Land Use and Planning, residential land uses do not surround the Move Whistlestop Alternative, Adapt Whistlestop Alternative, or 4th Street Gateway Alternative. Therefore, impacts would be ***less than significant***, and no mitigation is required.

Under the Freeway Alternative

Although residential uses to the north are largely obscured from the site by an existing office building, residential land uses to the east have direct views of the Under the Freeway Alternative project site. The use of high-intensity nighttime lighting could negatively affect sensitive residential viewers next to this project site and result in substantial increases in light and glare during construction when high-intensity nighttime lighting is in use, resulting in a **significant** impact. Implementation of Mitigation Measure MM-AES-CNST-2 would reduce impacts to a ***less-than-significant level with mitigation*** by limiting construction to daylight hours near residences.

Operations

All Build Alternatives

Each of the alternatives would require the removal of existing buildings and landscaping; construction of District buildings or renovation of an existing building to include District offices; construction of station platforms, curbside bays, and space for public plazas, customer service facilities, bicycle parking, and/or transit-supportive land uses; and the relocation and/or removal of traffic signal poles and streetlights to accommodate the proposed project. The removal of existing

buildings would remove existing sources of glare and nighttime lighting associated with street lighting and interior and exterior lighting associated with the existing buildings. However, street lighting would be relocated or removed and new buildings associated with the proposed project would include interior and exterior lighting.

The removal of vegetation would slightly increase glare in the project area, but glare associated with the urban areas is already a prominent visual element associated with all alternatives. Landscaping, including trees, would also be installed as part of the proposed project, which would replace sources of shade as trees mature and help to reduce glare and filter nighttime lighting. New structures built in the project area could be a source of glare, depending on the color and design selection for the structure, and relocated lighting could increase nighttime light and glare at certain locations. Due to the effect of landscaping and shade trees, it is expected that any shadows cast by relocated buildings would not have a noticeable effect on the visual experience of individuals at the project site.

However, Section 4.16.227, Light and glare, of the City's Municipal Code helps to limit and prevent undue offsite light and glare through colors and material selections that avoid glossy finishes and reflective surfaces and to ensure that lighting fixtures are designed and shielded to conceal light sources from views off site and avoid spillover onto adjacent properties. This applies to new lighting fixtures or changes in lighting intensity on mixed-use and non-residential properties, which are subject to environmental and design review permit review by the City. In addition, Section 14.18.170, Lighting, of the Municipal Code ensures that lighting for parking facilities and paved areas is designed be shielded away from residential uses and motorists. Compliance with the Municipal Code, which would be enforced through design review, would help to reduce the potential for increases in light and glare resulting from the proposed project.

However, even with compliance with the Municipal Code, the potential for impacts associated with light-emitting diode (LED) lighting would still exist and could affect sensitive receptors if not properly designed. LED lights can negatively affect humans by increasing nuisance light and glare, in addition to increasing ambient light glow, if blue-rich white light lamps (BRWL) lamps are used (American Medical Association 2016; International Dark-Sky Association 2010a, 2010b, 2015). Studies have found that a 4000 Kelvinwhite LED light causes approximately 2.5 times more light pollution than high-pressure sodium lighting with the same lumen output, which would affect sensitive receptors and more than double the perceived brightness of the night sky (Aubé et al. 2013; Falchi et al. 2011, 2016). This would result in a substantial source of nighttime light and glare that could adversely affect nighttime views in the area for all alternatives, resulting in a **significant** impact. Impacts associated with the Under the Freeway Alternative may be more pronounced if BRWL LED lighting affects sensitive residential viewers. Implementation of Mitigation Measure MM-AES-OP-3 would ensure that lighting impacts associated with all alternatives are reduced to ***less-than-significant levels with mitigation*** by employing measures to prevent light pollution and by preventing the use of BRWL LED lighting.

Mitigation Measures

MM-AES-CNST-2: Limit Construction Near Residences to Daylight Hours

Construction activities scheduled to occur between 6 p.m. and 7 a.m. shall not take place before or past daylight hours (which vary according to season) near residences within one block of the Under the Freeway Alternative site. This will reduce the amount of construction experienced by viewer groups because most construction activities would be occurring during business hours

(when most viewer groups are likely to be at work) and eliminate the need to introduce high-wattage lighting sources to operate in the dark near residences.

MM-AES-OP-3: Apply Minimum Lighting Standards

All artificial outdoor lighting and overhead street lighting shall be designed in accordance with Section 4.16.227, Light and glare, and Section 14.18.170, Lighting, of the City's Municipal Code. In addition, all lighting shall use downcast, cut-off type fixtures that are shielded and direct the light only toward objects requiring illumination. Therefore, lights shall be installed at the lowest allowable height and cast low-angle illumination while minimizing incidental light spill onto adjacent properties or open spaces, or backscatter into the nighttime sky. The lowest allowable wattage shall be used for all lighted areas, and the number of nighttime lights needed to light an area shall be minimized to the highest degree possible. Lighting shall be designed for energy efficiency, with daylight sensors or timers with an on/off program. Lights shall provide good color rendering with natural light qualities, with the minimum intensity feasible for security, safety, and personnel access. Lighting, including light color rendering and fixture types, shall be designed to be aesthetically pleasing.

LED lighting shall avoid the use of BRWL lamps and use a correlated color temperature that is no higher than 3,000 Kelvin, consistent with the International Dark-Sky Association's Fixture Seal of Approval Program (International Dark-Sky Association 2010a, 2010b, 2015). In addition, LED lights shall use shielding to ensure that nuisance glare and light spill does not affect sensitive residential viewers.

Lights along pathways and bridge safety lighting shall use shielding to minimize offsite light spill and glare and shall be screened and directed away from adjacent uses to the highest degree possible. The number of nighttime lights used along pathways shall be minimized to the highest degree possible to ensure that spaces are not unnecessarily over-lit. For example, the amount of light can be reduced by limiting the amount of ornamental light posts to higher-use areas and by using bollard lighting on travel way portions of pathways.

Technologies to reduce light pollution evolve over time; design measures that are currently available may help but may not be the most effective means of controlling light pollution once the proposed project is designed. Therefore, all design measures used to reduce light pollution shall use the technologies available at the time of project design to allow for the highest potential reduction in light pollution.

Section 3.2
Air Quality

This section describes the regulatory setting and environmental setting for air quality. It also describes the air quality impacts that would result from implementation of the San Rafael Transit Center Replacement Project (proposed project) and other build alternatives and mitigation measures that would reduce significant impacts, where feasible and appropriate. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.2.1 Existing Conditions

3.2.1.1 Regulatory Setting

The federal Clean Air Act (CAA) and its subsequent amendments form the basis for the nation's air pollution control effort. The United States Environmental Protection Agency (EPA) is responsible for implementing most aspects of the CAA. A key element of the CAA is the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The CAA delegates enforcement of the NAAQS to the states. In California, the California Air Resources Board (CARB) is responsible for enforcing air pollution regulations and ensuring the NAAQS and California Ambient Air Quality Standards (CAAQS) are met. CARB, in turn, delegates regulatory authority for stationary sources and other air quality management responsibilities to local air agencies. The Bay Area Air Quality Management District (BAAQMD) is the local air agency for the project area. The following sections provide more detailed information on federal, state, and local air quality regulations that apply to the proposed project.

Federal

Clean Air Act and National Ambient Air Quality Standards

The CAA was first enacted in 1963 and has been amended in 1965, 1967, 1970, 1977, and 1990. The CAA establishes federal air quality standards, known as NAAQS, for six criteria pollutants and specifies future dates for achieving compliance. The CAA also mandates that the states submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 CAA amendments identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. Table 3.2-1 shows the NAAQS currently in effect for each criteria pollutant, as well as the CAAQS (discussed further below).

Table 3.2-1. Federal and State Ambient Air Quality Standards

Criteria Pollutant	Average Time	California Standards	National Standards[a]	
			Primary	Secondary
Ozone	1-hour	0.09 ppm	None[b]	None[b]
	8–hour	0.070 ppm	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	8-hour	9.0 ppm	9 ppm	None
	1-hour	20 ppm	35 ppm	None
Coarse Particulate Matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual mean	20 µg/m^3	None	None
Fine Particulate Matter ($PM_{2.5}$)	24-hour	None	35 µg/m^3	35 µg/m^3
	Annual mean	12 µg/m^3	12.0 µg/m^3	15 µg/m^3
Nitrogen Dioxide (NO_2)	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppm	None
Sulfur Dioxide (SO_2)[c]	Annual mean	None	None	None
	24-hour	0.04 ppm	None	None
	3-hour	None	None	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm	None
Lead	30-day average	1.5 µg/m^3	None	None
	Calendar quarter	None	1.5 µg/m^3	1.5 µg/m^3
	3-month average	None	0.15 µg/m^3	0.15 µg/m^3
Sulfates	24-hour	25 µg/m^3	None	None
Visibility-Reducing Particles	8-hour	-[c]	None	None
Hydrogen Sulfide	1-hour	0.03 ppm	None	None
Vinyl Chloride	24-hour	0.01 ppm	None	None

Source: CARB 2016
[a] National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.
[b] The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for SIPs.
[c] CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer, which is visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.
ppm = parts per million; µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter

Non-Road Diesel Rule

EPA has established a series of increasingly strict emission standards for new off-road diesel equipment, on-road diesel trucks, and locomotives. New equipment, including heavy-duty trucks and off-road construction, is required to comply with these emission standards.

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy Standards (CAFE) were first enacted in 1975 to improve the average fuel economy of cars and light-duty trucks. The National Highway Traffic Safety Administrative (NHTSA) sets the CAFE standards, which are regularly updated to require additional improvements in fuel economy. The standards were last updated in October 2012 to apply to new passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2017

through 2025, and are equivalent to 54.5 miles per gallon. However, On August 2, 2018, NHTSA and EPA proposed to amend the fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 per the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule. On September 19, 2019, EPA and NHTSA issued a final action on the One National Program Rule, which is considered Part 1 of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards. The One National Program Rule enables EPA/NHTSA to provide nationwide uniform fuel economy and greenhouse gas (GHG) vehicle standards, specifically by (1) clarifying that federal law preempts state and local tailpipe GHG standards, (2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and (3) withdrawing California's CAA preemption waiver to set state-specific standards.

EPA and NHTSA published their decisions to withdraw California's waiver and finalize regulatory text related to the preemption on September 27, 2019, in Volume 84, Number 188 of the *Federal Register*, page 51310. The agencies also announced that they will later publish the second part of the SAFE Vehicles Rule (i.e., the standards). California, 22 other states, the District of Columbia, and two cities filed suit against the proposed One National Program Rule on September 20, 2019.[1] The lawsuit requests a "permanent injunction prohibiting Defendants from implementing or relying on the Preemption Regulation," but does not stay its implementation during legal deliberations. Part 1 of the SAFE Vehicles Rule went into effect on November 26, 2019, and Part 2 went into effect on March 30, 2020. The SAFE Vehicles Rule will decrease the stringency of CAFE standards to 1.5 percent each year through model year 2026, as compared with the standards issued in 2012, which would have required annual increases of about 5 percent. California, 22 other states, and the District of Columbia filed a petition for review of the final rule on May 27, 2020. The fate of the SAFE Vehicles Rule remains uncertain in the face of pending litigation and potential rulemakings by the Biden Administration.

State

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the state legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. The CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. The CAAQS and NAAQS are shown above in Table 3.2-1.

CARB and local air districts bear responsibility for meeting the CAAQS, which are to be achieved through district-level air quality management plans incorporated into a SIP. In California, EPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

[1] *California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution.

Air Toxic Control Measure

In 2004, CARB developed multiple measures under its Air Toxic Control Measure to address specific mobile- and stationary-source categories that can have an impact on the public health of communities. The measures mainly focused on reducing public exposure to diesel particulate matter (DPM) and toxic air contaminant (TAC) emissions. The Air Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling required heavy-duty trucks with a gross vehicle weight rating greater than 10,000 pounds, including buses and sleeper berth–equipped trucks, to not idle the primary engine for more than 5 minutes at any given time or operate an auxiliary power system for more than 5 minutes within 100 feet of a restricted area (CARB 2005).

Statewide Truck and Bus Regulation

CARB also focused its efforts to reduce DPM, oxides of nitrogen (NO_X), and other criteria pollutants from diesel-fueled vehicles by adopting the Truck and Bus Regulation in 2008. This regulation applied to any diesel-fueled, dual-fuel, or alternative diesel-fueled vehicle that would travel on public highways, yard trucks with on-road engines, yard trucks with off-road engines used for agricultural operations, school buses, and vehicles with a gross vehicle weight greater than 14,000 pounds. The purpose of the regulation is to require nearly all trucks and buses registered in the state to have a 2010 or newer model engine year by 2023. Compliance schedules have been established for lighter vehicles (14,000–26,000 gross vehicle weight rating) and heavier vehicles (over 26,001 gross vehicle weight rating) (CARB 2020a). Beginning January 1, 2020, only vehicles that meet the requirements of the Trucks and Bus Regulation will be allowed to register with the California Department of Motor Vehicles.

State Tailpipe Emission Standards

Like EPA at the federal level, CARB has established a series of increasingly strict emission standards for new off-road diesel equipment and on-road diesel trucks operating in California. New equipment used to construct the proposed project would be required to comply with the standards.

Carl Moyer Program

The Carl Moyer Memorial Air Quality Standards Attainment Program is a voluntary program that offers grants to owners of heavy-duty vehicles and equipment. The program is a partnership between CARB and the local air districts throughout the state to reduce air pollution emissions from heavy-duty engines. Locally, the air districts administer the program.

Toxic Air Contaminant Regulation

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("Hot Spots" Act). In the early 1980s, CARB established a statewide comprehensive air toxics program to

reduce exposure to air toxics. The Tanner Act created California's program to reduce exposure to air toxics. The "Hot Spots" Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Local

Bay Area Air Quality Management District

At the local level, responsibilities of air quality districts include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by the California Environmental Quality Act (CEQA). The air quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that NAAQS and CAAQS are met.

The proposed project falls under the jurisdiction of BAAQMD. BAAQMD has local air quality jurisdiction over projects in the San Francisco Bay Area Air Basin (SFBAAB) including Marin County. BAAQMD developed advisory emission thresholds to assist CEQA lead agencies in determining the level of significance of a project's emissions, which are outlined in its *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2017a). BAAQMD has also adopted air quality plans to improve air quality, protect public health, and protect the climate, including the 2017 Clean Air Plan: *Spare the Air, Cool the Climate* (BAAQMD 2017b).

The 2017 Clean Air Plan was adopted by BAAQMD on April 19, 2017. The 2017 Clean Air Plan updates the prior 2010 Bay Area ozone (O_3) plan and outlines feasible measures to reduce O_3; provides a control strategy to reduce particulate matter (PM), air toxics, and GHGs in a single, integrated plan; and establishes emission control measures to be adopted or implemented. The 2017 Clean Air Plan contains the following primary goals; consistency with these goals is evaluated in this section:

- Protect Air Quality and Health at the Regional and Local Scale: Attain all state and national air quality standards and eliminate disparities among Bay Area communities in cancer health risk from TACs.
- Protect the Climate: Reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050; the 2017 Clean Air Plan is the most current applicable air quality plan for the air basin and consistency with this plan is the basis for determining whether the proposed project would conflict with or obstruct implementation of an air quality plan.

In addition to air quality plans, BAAQMD adopts rules and regulations to improve existing and future air quality. The proposed project may be subject to the following district rules:

- Regulation 2, Rule 5 (New Source Review of Toxic Air Contaminants): This regulation outlines guidance for evaluating TAC emissions and their potential health risks.
- Regulation 6, Rule 1 (PM): This regulation restricts emissions of PM darker than a 1 on the Ringlemann Chart to less than 3 minutes in any 1 hour.

- Regulation 7 (Odorous Substances): This regulation establishes general odor limitations on odorous substances and specific emission limitations on certain odorous compounds.
- Regulation 8, Rule 3 (Architectural Coatings): This regulation limits the quantity of reactive organic gas (ROG) in architectural coatings.
- Regulation 11, Rule (Hazardous Pollutants – Asbestos Demolition, Renovation, and Manufacturing): This regulation, which incorporates EPA's asbestos National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations, controls emissions of asbestos to the atmosphere during demolition, renovation, and transport activities.

City of San Rafael

The City of San Rafael General Plan 2020 was adopted in 2004. The Air and Water Quality Element and Circulation Element outline goals and policies that will improve air quality in the City of San Rafael (City). The relevant policies are as follows (City of San Rafael 2016):

Air and Water Quality Element

AW-1. State and Federal Standards. Continue to comply and strive to exceed state and federal standards for air quality for the benefit of the Bay Area.

AW-3. Air Quality Planning with Other Processes. Integrate air quality considerations with the land use and transportation processes by mitigating air quality impacts through land use design measures, such as encouraging project design that will foster walking and bicycling.

AW-6. Education and Outreach. Support public education of regarding air pollution and prevention and mitigation programs.

AW-6b. Benefits of Transit-Oriented Development. Assist in educating developers and the public on the benefits of pedestrian and transit-oriented development.

Circulation Element

C-11. Alternative Transportation Mode Users. Encourage and promote individuals to use alternative modes of transportation, such as regional and local transit, carpooling, bicycling, walking and use of low-impact alternative vehicles. Support development of programs that provide incentives for individuals to choose alternative modes.

C-16. Transit Information. Encourage the development and dissemination of local and regional transit information to facilitate greater use of transit systems. This includes service, educational and promotional information. Support efforts to provide transit information in languages other than English as needed.

3.2.1.2 Environmental Setting

The project area is within the SFBAAB. Ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. The following sections summarize how air pollution moves through the air, water, and soil within the air basin, and how it is chemically changed in the presence of other chemicals and particles. This section also summarizes regional and local climate conditions, existing air quality conditions, and sensitive receptors that may be affected by project-generated emissions.

Pollutants of Concern

Criteria Pollutants

The federal and state governments have established ambient air quality standards for six criteria pollutants. These pollutants are PM, photochemical oxidants (including O_3), carbon monoxide (CO), sulfur oxides (SO_X), NO_X, and lead. O_3 is considered a regional pollutant because its precursors affect air quality on a regional scale. Pollutants such as CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead are considered local pollutants that tend to accumulate in the air locally. PM is both a regional and local pollutant. The primary pollutants that would be generated by the proposed project are O_3 precursors (i.e., NO_X and ROGs), CO, and PM (Reşitoğlu 2018).[2,3]

All criteria pollutants can have human health effects at elevated concentrations. The ambient air quality standards for these pollutants are set to protect public health and the environment with an adequate margin of safety (CAA Section 109). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants and form the scientific basis for new and revised ambient air quality standards.

The principal characteristics and possible health and environmental effects from exposure to the primary criteria pollutants generated by the proposed project are discussed below.

Ozone, or smog, is photochemical oxidant that is formed when ROGs and NO_X (both byproducts of the internal combustion engine) react with sunlight. ROGs are compounds made up primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle use is the major source of hydrocarbons. Other sources of ROGs are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. The two major forms of NO_X are nitric oxide and NO_2. Nitric oxide is a colorless, odorless gas that forms from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown, irritating gas formed by the combination of nitric oxide and oxygen. In addition to serving as an integral participant in O_3 formation, the NO_2 component of NO_X also acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

O_3 poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoors. Exposure to O_3 at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggravate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term O_3 exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to O_3 may increase the risk of respiratory-related deaths (EPA 2020a). The concentration of O_3 at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding, for individuals exposed to 400 parts per billion of O_3

[2] As discussed above, there are also ambient air quality standards for SO_2, lead, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. However, these pollutants are typically associated with industrial sources, which are not included as part of the project. Accordingly, they are not evaluated further.

[3] Most emissions of NO_X are in the form of nitric oxide. Conversion to NO_2 occurs in the atmosphere as pollutants disperse downwind. Accordingly, NO_2 is not considered a local pollutant of concern for the project and is not evaluated further.

for 2 hours including 1 hour of heavy exercise, that the least responsive individual experienced no symptoms or lung function changes while the most sensitive individual experienced a 50-percent reduction in forced expiratory volume along with severe coughing and shortness of breath (EPA 2016). Although the results vary, evidence suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum O_3 concentration reaches 80 parts per billion (EPA 2016). The average background level of O_3 in the Bay Area is approximately 45 parts per billion (BAAQMD 2017b).

In addition to human health effects, O_3 has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O_3 can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

Carbon monoxide is a colorless, odorless toxic gas produced by incomplete combustion of hydrocarbons, such as gasoline or diesel fuel. High CO levels are of greatest concern during the winter, when periods of light winds combine with the formation of ground-level temperature inversions from evening through early morning. These conditions trap pollutants near the ground, reducing the dispersion of vehicle emissions. Moreover, motor vehicles exhibit increased CO emission rates at low air temperatures. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects of CO at or near existing background CO levels (CARB 2020b).

Particulate matter consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of particulates are now generally considered: inhalable coarse particles, or PM_{10}, and inhalable fine particles, or $PM_{2.5}$. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading.

Particulate pollution can be transported over long distances and may adversely affect humans, especially people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that long-term exposure to $PM_{2.5}$ was associated with increased risk of mortality, ranging from a 6 to 13 percent increased risk per 10 micrograms per cubic meter ($\mu g/m^3$) of $PM_{2.5}$ (CARB 2010). Every 1 $\mu g/m^3$ reduction in $PM_{2.5}$ results in a 1-percent reduction in the mortality rate for individuals over 30 years old (CARB 2010). Studies also show an increase in overall mortality of approximately 0.5 percent for every 10 milligrams per cubic meter increase in PM_{10} measured the day before death (EPA 2005). PM_{10} levels have been greatly reduced since 1990. Peak concentrations have declined by 60 percent, and annual average values have declined by 50 percent (EPA 2005). Depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (EPA 2020b).

Toxic Air Contaminants

Although ambient air quality standards have been established for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs

that are known or suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA). The primary TACs of concern associated with the proposed project are asbestos and DPM.

Asbestos is the name given to several naturally occurring fibrous silicate minerals. Before the adverse health effects of asbestos were identified, asbestos was widely used as insulation and fireproofing in buildings, and it can still be found in some older buildings. It is also found in its natural state in rock or soil. The inhalation of asbestos fibers into the lungs can result in a variety of adverse health effects, including inflammation of the lungs, respiratory ailments (e.g., asbestosis, which is scarring of lung tissue that results in constricted breathing), and cancer (e.g., lung cancer and mesothelioma, which is cancer of the linings of the lungs and abdomen).

DPM is generated by diesel-fueled equipment and vehicles. Within the Bay Area, BAAQMD has found that of all controlled TACs, emissions of DPM are responsible for about 82 percent of the total ambient cancer risk (EPA 2020b). Short-term exposure to DPM can cause acute irritation (e.g., eye, throat, and bronchial), neurophysiological symptoms (e.g., lightheadedness and nausea), and respiratory symptoms (e.g., cough and phlegm). EPA has determined that diesel exhaust is "likely to be carcinogenic to humans by inhalation" (EPA 2003).

Odors

Offensive odors can be unpleasant and lead to citizen complaints to local governments and air districts. According to CARB's *Air Quality and Land Use Handbook,* land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, manufacturing facilities, and agricultural activities (CARB 2005). CARB provides recommended screening distances for siting new receptors near existing odor sources.

Climate and Meteorology

Although the primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted from those sources, meteorological conditions and topography are also important factors. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients, interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. Unique geographic features throughout the state define 15 air basins with distinctive regional climates. The air quality study area is in the Marin County Basin portion of the SFBAAB (BAAQMD 2017a).

Marin County is bounded on the west by the Pacific Ocean, on the east by San Pablo Bay, on the south by the Golden Gate Bridge, and on the north by the Petaluma Gap. Most of Marin County's population lives in the eastern part of the county, in small, sheltered valleys (BAAQMD 2017a).

Although there are a few mountains above 1,500 feet in height, most of the terrain is only 800 to 1,000 feet high, which usually is not high enough to block the marine layer. Because of the wedge shape of the county, northeast Marin County is farther from the ocean than is the southeastern section. This extra distance from the ocean allows the marine air to be moderated by bayside conditions as it travels to northeastern Marin County. In southern Marin County, the distance from

the ocean is short and elevations are lower, resulting in higher incidence of maritime air in that area (BAAQMD 2017a).

Wind speeds are highest along the west coast of Marin County, averaging about 8 to 10 miles per hour. The complex terrain in central Marin County creates sufficient friction to slow the air flow. At Hamilton Air Force Base, in Novato, the annual average wind speeds are only 5 miles per hour. The prevailing wind directions throughout Marin County are generally from the northwest (BAAQMD 2017a).

In the summer months, areas along the coast are usually subject to onshore movement of cool marine air. In the winter, proximity to the ocean keeps the coastal regions relatively warm, with temperatures varying little throughout the year. Coastal temperatures are usually in the high 50s in the winter and the low 60s in the summer. The warmest months are September and October (BAAQMD 2017a).

The eastern side of Marin County has warmer weather than the western side because of its distance from the ocean and because the hills that separate the eastern portion of the county from western portion occasionally block the flow of the marine air. The temperatures of cities next to the Bay are moderated by the cooling effect of the Bay in the summer and the warming effect of the Bay in the winter. For example, San Rafael experiences average maximum summer temperatures in the low 80s and average minimum winter temperatures in the low 40s. Inland towns such as Kentfield experience average maximum temperatures that are 2 degrees cooler in the winter and 2 degrees warmer in the summer (BAAQMD 2017a).

Air pollution potential is highest in eastern Marin County, where most of the population is in semi-sheltered valleys. In the southeast, the influence of marine air keeps pollution levels low. As development moves farther north, there is greater potential for air pollution to build up because the valleys are more sheltered from the sea breeze. While Marin County does not have many polluting industries, the air quality on its eastern side—especially along the U.S. Highway 101 corridor—may be affected by emissions from increasing motor vehicle use within and through the county (BAAQMD 2017a).

Existing Air Quality Conditions

Ambient Criteria Pollutant Concentrations

A number of ambient air quality monitoring stations are in the SFBAAB to monitor progress toward air quality standards attainment of the NAAQS and CAAQS. The NAAQS and CAAQS are discussed further under Section 3.2.1.1, Regulatory Setting. The nearest monitoring station to the proposed project is CARB's San Rafael monitoring station, within 0.10 mile of the project study area. This monitoring station reported data for all pollutants except CO. CO data for Marin County were obtained using EPA monitoring data.

Table 3.2-2 summarizes data for criteria air pollutant levels from the San Rafael Station for 2017–2019 and shows that measured concentrations exceeded federal and state O_3 standards in 2019, state and federal PM_{10} standards in 2017 and 2018, and the federal $PM_{2.5}$ standard in 2017 and 2018. Federal and state standards for other pollutants were not exceeded. These existing O_3 and PM violations of ambient air quality standards indicate that some individuals exposed to these pollutants may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

Table 3.2-2. Ambient Air Quality Data at the San Rafael Monitoring Station (2017–2019)

Pollutant and Standards	2017	2018	2019
Ozone (O_3)			
Maximum 1-hour concentration (ppm)	0.088	0.072	0.096
Maximum 8-hour concentration (ppm)	0.063	0.053	0.080
Number of days standard exceeded[a]			
CAAQS 1-hour (>0.09 ppm)	0	0	**1**
CAAQS 8-hour (>0.070 ppm)	0	0	**1**
NAAQS 8-hour (>0.070 ppm)	0	0	**1**
Carbon Monoxide (CO)			
Maximum 8-hour concentration (ppm)	1.6	1.6	0.9
Maximum 1-hour concentration (ppm)	2.6	2.0	1.4
Number of days standard exceeded[a]			
NAAQS 8-hour (≥9 ppm)	0	0	0
CAAQS 8-hour (>9.0 ppm)	0	0	0
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
National maximum 1-hour concentration (ppb)	53.4	55.3	49.9
National second-highest 1-hour concentration (ppb)	52.2	53.9	47.7
State maximum 1-hour concentration (ppb)	53	55	49
State second-highest 1-hour concentration (ppb)	52	53	47
Annual average concentration (ppb)	9	9	8
Number of days standard exceeded[a]			
CAAQS 1-hour (>180 ppb)	0	0	0
CAAQS Annual (>30 ppb)	0	0	0
NAAQS 1-hour (>100 ppb)	0	0	0
NAAQS Annual (>53 ppb)	0	0	0
Particulate Matter (PM_{10})			
National maximum 24-hour concentration (μg/m^3)	91.5	160.0	31.9
National second-highest 24-hour concentration (μg/m^3)	50.5	95.2	30.7
State maximum 24-hour concentration (μg/m^3)	94.0	166.0	33.0
State second-highest 24-hour concentration (μg/m^3)	53.0	99.0	32.0
National annual average concentration (μg/m^3)	16.2	18.4	13.9
State annual average concentration (μg/m^3)	16	19	19
Number of days standard exceeded[a]			
NAAQS 24-hour (>150 μg/m^3)	0	**1**	0
CAAQS 24-hour (>50 μg/m^3)	**2**	**2**	0
CAAQS Annual (>20 μg/m^3)	0	0	0

Pollutant and Standards	2017	2018	2019
Fine Particulate Matter ($PM_{2.5}$)			
National maximum 24-hour concentration (μg/m³)	74.7	167.6	19.5
National second-highest 24-hour concentration (μg/m³)	65.6	119.9	18.3
State maximum 24-hour concentration (μg/m³)	74.7	167.6	19.5
State second-highest 24-hour concentration (μg/m³)	65.6	119.9	17.3
National annual average concentration (μg/m³)	9.6	11.0	6.3
State annual average concentration (μg/m³)	9.7	11.1	6.4
Measured number of days standard exceeded[a]			
NAAQS 24-hour (>35 μg/m³)	**8**	**13**	0
NAAQS Annual (>12.0 μg/m³)	0	0	0
CAAQS Annual (>12.0μg/m³)	0	0	0

Sources: CARB 2020c, 2020d; EPA 2020c, 2020d
[a] An exceedance of a standard is not necessarily a violation because of the regulatory definition of a violation.
[b] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.
[c] State statistics are based on California approved samplers.
[d] State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
ppb = parts per billion; ppm = parts per million; mg/m³ = milligrams per cubic meter

Existing TAC Sources and Health Risks

BAAQMD maintains an inventory of health risks associated with all permitted stationary sources within the SFBAAB. The inventory was last updated in 2020 and is publicly available online. The existing stationary TAC sources within 1,000 feet of the project area are five gas-dispensing facilities, shown on Figure 3.2-1.

Aside from stationary sources, emissions of TACs around the project area are also generated from mobile sources and railways. BAAQMD considers roadways with greater than 10,000 average daily traffic as “high-volume roadways” and recommends they be included in the analysis of health risks. In addition, there are Sonoma-Marin Area Rail Transit tracks within 1,000 feet of the project area.

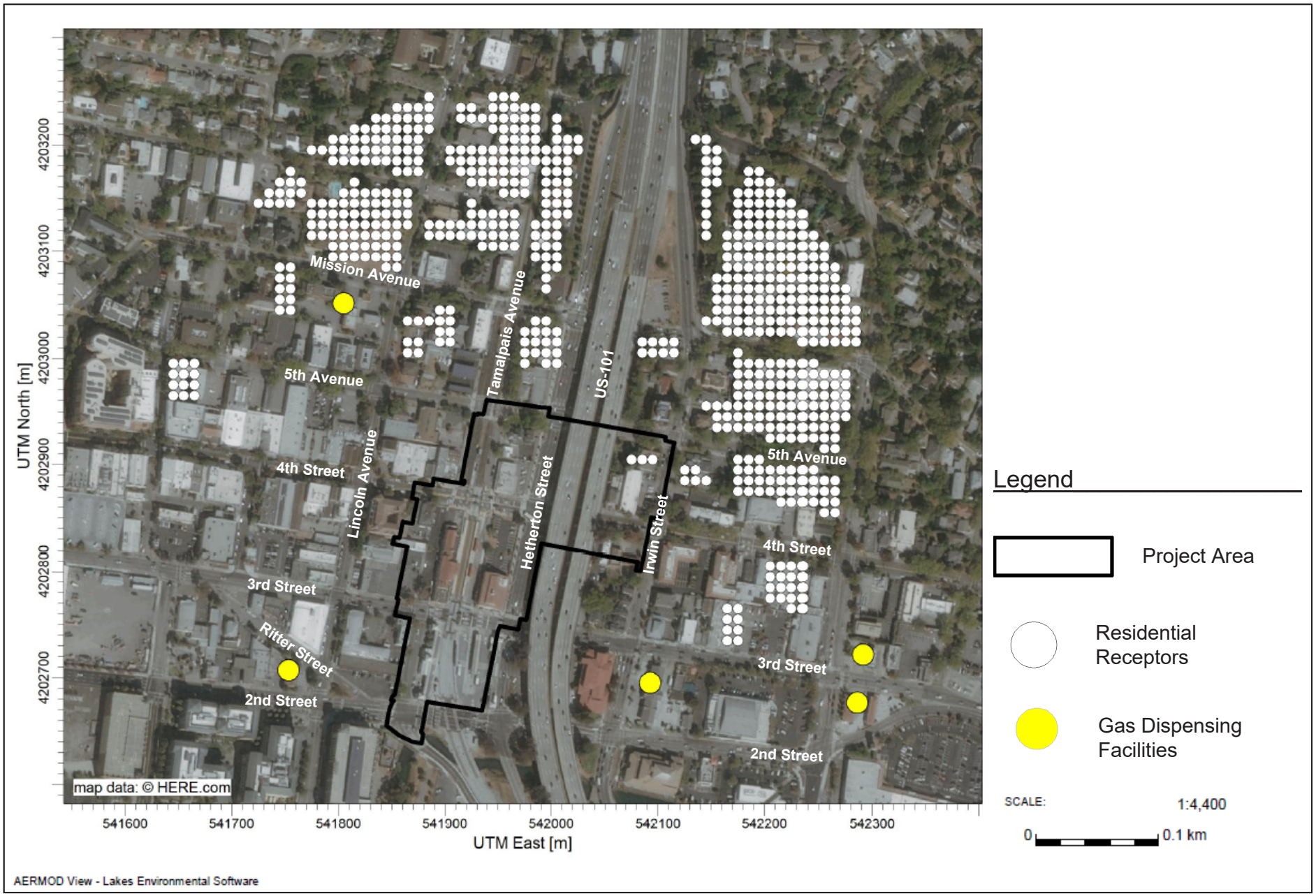


Figure 3.2-1
Existing Air Quality Sensitive Receptors and Emission Sources in the Vicinity of the Project Area

Regional Attainment Status

Local monitoring data are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the ambient air quality standards. The four designations are defined below. Table 3.2-3 summarizes the attainment status of Marin County.

- Nonattainment: assigned to areas where monitored pollutant concentrations consistently violate the standard in question
- Maintenance: assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard
- Attainment: assigned to areas where pollutant concentrations meet the standard in question over a designated period of time
- Unclassified: assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question

Table 3.2-3. Federal and State Attainment Status for Marin County Portion of the SFBAAB

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-hour)	Marginal Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment (P)	Attainment
Particulate Matter (PM_{10})	Attainment	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Attainment	Nonattainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No Federal Standard)	Attainment
Hydrogen Sulfide	(No Federal Standard)	Unclassified
Visibility-Reducing Particles	(No Federal Standard)	Unclassified

Sources: CARB 2020e; EPA 2020c
P = portion of the county

Locations of Sensitive Receptors

Sensitive land uses are defined as locations where human populations, especially children, seniors, and sick persons, are present and where there is reasonable expectation of continuous human exposure according to the averaging period for the air quality standards (i.e., 24-hour, 8-hour, or 1-hour). Per BAAQMD, typical sensitive land uses are residences, hospitals, and schools. Parks and playgrounds, where sensitive receptors (e.g., children and seniors) are present, are also considered sensitive land uses (BAAQMD 2017a).

Places of employment (e.g., commercial/industrial uses) are not considered sensitive land uses because health-sensitive individuals (e.g., children and seniors) are not present. However, there are sensitive receptors, including residential uses, within 1,000 feet of the project area. Figure 3.2-1 illustrates sensitive receptors within 1,000 feet of the project area.

3.2.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Air quality impacts were analyzed for the project area rather than specific build alternatives because the location of each build alternative would experience a nearly equivalent impact for each resource considered here. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.2.2.1 Methodology

Regional Construction Emissions

As described above, the air quality study area is in the Marin County Basin portion of the SFBAAB. It was assumed each build alternative would have the same construction schedule and phasing. The BAAQMD regional thresholds for construction only require evaluation of exhaust emissions; however, the air quality analysis also estimated fugitive dust emissions for the $PM_{2.5}$ analysis. Emissions were estimated using a combination of emission factors and methodologies from the California Emissions Estimator Model (CalEEMod), version 2016.3.2; CARB's EMission FACtor 2017 (EMFAC2017) model (CARB 2017); and EPA's AP-42: Compilation of Air Pollutant Emission Factors (EPA 2006) and relied upon a combination of CalEEMod default data values, as well as project-specific information for each alternative provided by the project sponsor. The largest project site among the preferred alternative and other build alternatives is approximately 3 acres. An off-road equipment fleet for the proposed project was generated using default CalEEMod values for a 3-acre site. Because 3 acres is the maximum affected area of any alternative, this off-road fleet was applied to every alternative. The use of the build alternative with the largest site would provide the maximum impact; therefore, impacts of other alternatives would represent the maximum possible impacts. Quantities for demolition, grading, and paving activities were provided by the project sponsor for each build alternative. Emissions from gasoline-fueled light-duty vehicles (e.g., construction workers' vehicles) were adjusted to account for the impact of the implementation of Part 1 of the SAFE Vehicles Rule. The construction modeling files are provided in Appendix B of this Draft Environmental Impact Report (EIR).

Regional Operational Emissions

Emissions from the proposed project were estimated using CalEEMod. Based on information in Section 3.14, Transportation, all build alternatives primarily represent a shifting of bus activity from one location to another; the proposed project would not change the amount of bus service provided and new vehicle trips are not assumed to be generated by the proposed project. Although the proposed project would improve the efficiency of bus operations and create operational flexibility for bus movements into and out of the transit center, no future expansion of transit service is currently programmed or planned and thus cannot be reasonably forecasted. Therefore, no mobile emissions at the regional scale were evaluated for project operations. The operations modeling files are provided in Appendix B of this Draft EIR.

Health Risk Assessment

Diesel Exhaust Impacts

Given that the proposed project would introduce DPM emissions to an area near existing sensitive receptors, a health risk assessment (HRA) was performed using EPA's most recent dispersion model, AERMOD (version 19191), cancer and chronic risk assessment values presented by OEHHA, and other assumptions for model inputs from the *BAAQMD Health Risk Assessment Modeling Protocol* (BAAQMD 2020). Note that the HRA takes into account OEHHA's most recent guidance and calculation methods from the *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments* (OEHHA 2015).

The HRA analyzes health risks to nearby sensitive receptors from construction and operational activities. The HRA consists of three parts: a DPM inventory, air dispersion modeling, and risk calculations. A description of each of these parts follows.

DPM Inventory

The DPM inventory includes DPM emissions from construction and operations. The construction DPM inventory includes unmitigated and mitigated DPM emissions associated with short-term construction activity and was assumed to be equal to the construction analysis results for diesel $PM_{2.5}$ exhaust per BAAQMD guidance. The construction $PM_{2.5}$ inventory was also assumed to be equal to the construction analysis results for the sum of $PM_{2.5}$ exhaust and fugitive dust.

The operational DPM inventory includes emissions from buses idling in the project area and on-road travel in the project vicinity. Emissions were based on project-specific information provided by the project sponsor, including daily arrivals and departures for each bus route that would serve the proposed project, bus type, and fuel type. Some buses had hybrid or gasoline engines; however, it was conservatively assumed all buses would be diesel powered. For idling emissions, it was assumed a bus would idle for 5 minutes for every arrival and departure.

Air Dispersion Modeling

The HRA uses EPA's AERMOD to model annual average DPM and $PM_{2.5}$ concentrations at nearby receptors. Modeling inputs, including emission rates (in grams of pollutant emitted per second) and source characteristics (e.g., release height, stack diameter, plume width), were based on guidance provided by OEHHA, BAAQMD, and the South Coast Air Quality Management District (SCAQMD). Meteorological data were obtained from CARB for the Gnoss Field Airport location, which is the nearest monitoring station, approximately 13 miles north of the project area.

Onsite construction emissions from off-road equipment and onsite truck travel were characterized as polygon area sources that outlined the footprint of the build alternatives. An emissions release height of 5 meters above the ground represented exhaust emissions and a release height of 0 meters represented onsite fugitive dust emissions (SCAQMD 2008). On-road travel emissions from haul and vendor trucks (as well as worker vehicles for $PM_{2.5}$ analysis) were characterized as line volume sources with release heights of 0.9 meter for fugitive dust emissions and 3.4 meters for exhaust emissions. Emissions from off-road equipment were assumed to be generated throughout the construction footprint. Emissions from offsite trucks were modeled along the road segments adjacent to the construction footprint for each build alternative.

The modeling of emissions from construction activities was based on the construction hours and days (5 days per week and 8 hours per day). To account for plume rise associated with mechanically

generated air turbulence from construction emissions sources for the AERMOD run, the initial vertical dimension of the area source was modeled at 1.4 meters; for the line volume sources it was modeled at 3.16 meters. The urban dispersion option was used based on the project area's characteristics.

Offsite sensitive receptors were placed at individual homes in all directions within 1,000 feet of the construction work areas and haul roads using a 10- by 10-meter receptor grid.

Operational emissions from bus idling were characterized as multiple volume sources that covered the project areas where idling could occur. For on-road bus travel, exhaust emissions were assigned a release height of 3.4 meters and fugitive dust emissions were assigned a release height of 0.9 meter. The modeling of emissions from bus travel activities was based on buses operating in the area for 18 hours per day (5 a.m.–11 p.m.) and 365 days per year. Sensitive receptor locations were placed using the same receptor grid for construction. A complete list of dispersion modeling inputs is provided in Appendix B.

Risk Calculations

The risk calculations incorporate OEHHA's age-specific factors that account for increased sensitivity to carcinogens during early-in-life exposure. The approach for estimating cancer risk from long-term inhalation, with exposure to carcinogens, requires calculating a range of potential doses and multiplying by cancer potency factors in units corresponding to the inverse dose to obtain a range of cancer risks. For cancer risk, the risk for each age group is calculated using the appropriate daily breathing rates, age sensitivity factors, and exposure durations. The cancer risks calculated for individual age groups are summed to estimate the cancer risk for each receptor. Chronic cancer and hazard risks were calculated using from OEHHA's 2015 HRA guidance (OEHAA 2015). In accordance with BAAQMD guidance, residential cancer risks assume a 30-year exposure (BAAQMD 2020). Two cancer risk scenarios were evaluated for each build alternative. Scenario 1 evaluates a receptor beginning in the third trimester of pregnancy being exposed to the full construction duration of 1.5 years and then 28.75 years of operations, for a total exposure duration of 30.25 years. Scenario 2 evaluates a receptor beginning in the third trimester of pregnancy being exposed to 30 years of operations. Table 3.2-4 and Table 3.2-5 provide the residential exposure factors for each HRA Scenario.

Table 3.2-4. Scenario 1 Exposure Factors

	Construction (Age Bins)		Operations (Age Bins)		
Parameter	3rd Tri	0<2	0<2	2<16	16<30
Daily Breathing Rate (mg/kg/day)[a]	361	1,090	1,090	572	261
Inhalation Absorption Factor (unitless)	1.0	1.0	1.0	1.0	1.0
Exposure Frequency (unitless)[b]	0.96	0.96	0.96	0.96	0.96
Conversion Factor (µg to mg, L to m^3)	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Age Sensitivity Factor (unitless)	10	10	10	3	1
Exposure Duration (years)	0.25	1.25	0.75	14	14
Averaging Time for Lifetime (years)	70.0	70.0	70.0	70.0	70.0
Fraction of Time at Home (unitless)	1.0	1.0	1.0	1.0	1.0

	Construction (Age Bins)		Operations (Age Bins)		
Parameter	3rd Tri	0<2	0<2	2<16	16<30
Cancer Conversion Factor (unitless)	1.00E+06	1.00E+06	1.00E+06	1.00E+06	1.00E+06
DPM Cancer Potency Factor $(mg/kg/day)^{-1}$	1.1	1.1	1.1	1.1	1.1

Source: OEHHA 2015
[a] 95th percentile daily breathing rate for third trimester and 0<2; 80th percentile for other age groups.
[b] Exposure frequency based on 350 days per year.
1.00E-6 = 0.000001
1.00E+6 = 1,000,000
Tri = trimester; mg/kg/day = milligrams per kilogram per day; µg = microgram; mg = milligram; L = liter; m^3 = square meter

Table 3.2-5. Scenario 2 Exposure Factors

Parameter	3rd Tri	0<2	2<16	16<30
Daily Breathing Rate (mg/kg/day)[1]	361	1,090	572	261
Inhalation Absorption Factor (unitless)	1.0	1.0	1.0	1.0
Exposure Frequency (unitless)[2]	0.96	0.96	0.96	0.96
Conversion Factor (µg to mg, L to m^3)	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Age Sensitivity Factor (unitless)	10	10	3	1
Exposure Duration (years)	0.25	2.0	14	13.75
Averaging Time for Lifetime (years)	70.0	70.0	70.0	70.0
Fraction of Time at Home (unitless)	1.0	1.0	1.0	1.0
Cancer Conversion Factor (unitless)	1.00E+06	1.00E+06	1.00E+06	1.00E+06
Cancer Potency Factor $(mg/kg/day)^{-1}$	1.1	1.1	1.1	1.1

Source: OEHHA 2015
[1] 95th percentile daily breathing rate for third trimester and 0<2; 80th percentile for other age groups.
[2] Exposure frequency based on 350 days per year.
1.00E-6 = 0.000001
1.00E+6 = 1,000,000
Tri = trimester; mg/kg/day = milligrams per kilogram per day; µg = microgram; mg = milligram; L = liter; m^3 = square meter

Carbon Monoxide Hot-Spots Modeling

The analysis of CO impacts was conducted using BAAQMD's CO screening criteria (BAAQMD 2017a) discussed above.

3.2.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to air quality.

Would the proposed project:

- Conflict with or obstruct implementation of the applicable air quality plan?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?

- Expose sensitive receptors to substantial pollutant concentrations?
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

As discussed above, all pollutants that would be generated by the proposed project are associated with some form of health risk (e.g., asthma, lower respiratory problems). The primary pollutants of concern generated by the proposed project are O_3 precursors (ROG and NO_X), CO, PM, and TACs (including DPM and asbestos). The following sections discuss thresholds and analysis considerations for regional and local project-generated criteria pollutants with respect to their human health implications. Thresholds and guidance for evaluating potential odors associated with the project area also presented.

Regional Project-Generated Criteria Pollutant Emissions (Ozone Precursors and Regional Particulate Matter)

This analysis evaluates the impacts of regional emissions generated by the proposed project using a two-tiered approach that considers guidance recommended by BAAQMD in its *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2017a).

First, this analysis considers whether the proposed project would conflict with the most recent air quality plan (BAAQMD 2017b). The impact analysis evaluates whether the proposed project supports the primary goals of the 2017 Clean Air Plan, including applicable control measures from the 2017 Clean Air Plan, and whether it would disrupt or hinder implementation of any 2017 Clean Air Plan control measures.

Second, calculated regional criteria pollutant emissions are compared to BAAQMD's project-level thresholds. BAAQMD's thresholds are summarized in Table 3.2-6 and are recommended by the air district to evaluate the significance of a project's regional criteria pollutant emissions (BAAQMD 2017a). According to BAAQMD, projects with emissions in excess of the thresholds shown in Table 3.2-6 would be expected to have a significant impact on regional air quality, because an exceedance of the thresholds is anticipated to contribute to CAAQS and NAAQS violations.

Table 3.2-6. BAAQMD Project-Level Regional Criteria Pollutant Emission Thresholds

Analysis	Thresholds
Regional Criteria Pollutants (Construction)	• Reactive Organic Gases: 54 pounds/day • Nitrogen Oxides: 54 pounds/day • Particulate Matter: 82 pounds/day (exhaust only); compliance with best management practices (fugitive dust) • Fine Particulate Matter: 54 pounds/day (exhaust only); compliance with best management practices (fugitive dust)
Regional Criteria Pollutants (Operations)	• Reactive Organic Gases: 54 pounds/day • Nitrogen Oxides: 54 pounds/day • Particulate Matter: 82 pounds/day (exhaust + fugitive dust) • Fine Particulate Matter: 54 pounds/day (exhaust +fugitive dust)

Source: BAAQMD 2017a

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

The California Supreme Court's decision in *Sierra Club v. County of Fresno* (6 Cal. 5th 502) (hereafter referred to as the Friant Ranch Decision) reviewed the long-term, regional air quality analysis contained in the EIR for the proposed Community Plan Update and Friant Ranch Specific Plan. The Friant Ranch Specific Plan project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin, an air basin currently in nonattainment under the NAAQS and CAAQS for O_3 and $PM_{2.5}$. The Court found that the EIR's air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time." The Court's decision clarifies that environmental documents must attempt to connect a project's air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the proposed project (O_3 precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, O_3 precursors (ROG and NO_X) contribute to the formation of ground-level O_3 on a regional scale. Emissions of ROG and NO_X generated in one area may not equate to a specific O_3 concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased O_3 or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. While there are models capable of quantifying O_3 and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project-generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment is not possible with any degree of accuracy.

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the state, including the San Joaquin Valley Air Pollution Control District (SJVAPCD) and SCAQMD, which provided amici curiae briefs for the Friant Ranch legal proceedings.[4] In its brief, SJVAPCD acknowledges that while health risk assessments for localized air toxics, such as DPM, are commonly prepared, "it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task" (SJVAPCD 2015). SJVAPCD further notes that emissions solely from the Friant Ranch Specific Plan project (which equate to less than one-tenth of 1 percent of the total NO_X and VOC in the valley) are not likely to yield valid information, and that any such information should not be "accurate when applied at the local level."

[4] The amicus curiae briefs for Friant Ranch are available at: https://www.courts.ca.gov/41312.htm.

SCAQMD (2015) presents similar information in its brief, stating that "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels."

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, air districts typically consider impacts from projects that generate criteria pollutant and O_3 precursor emissions below these thresholds to be minor in nature and to not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by the proposed project could increase photochemical reactions and the formation of tropospheric O_3 and secondary PM, which, at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with O_3 and particulate pollution, the effects are a result of cumulative and regional emissions. Therefore, the proposed project's incremental contribution cannot be traced to specific health outcomes on a regional scale and a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis. There are no numerical thresholds related to specific health outcomes from regional emissions; however, project-generated emissions are analyzed below.

Localized Project-Generated Criteria Pollutant Emissions (Carbon Monoxide and Particulate Matter) and Air Toxics (Diesel Particulate Matter)

Localized pollutants generated by a project can potentially affect populations near the emissions source. Because these pollutants dissipate with distance, emissions from individual projects can result in direct and material health impacts on adjacent sensitive receptors. The localized pollutants of concern that would be generated by the proposed project are CO, PM, and DPM. The applicable thresholds for each pollutant are described below.

Carbon Monoxide

Heavy traffic congestion can contribute to high levels of CO, and individuals exposed to such hot spots may have a greater likelihood of developing adverse health effects. BAAQMD has adopted screening criteria that provide a conservative indication of whether project-generated traffic would cause a potential CO hot spot. If the screening criteria are not met, a quantitative analysis through site-specific dispersion modeling of project-related CO concentrations would not be necessary, and the proposed project would not cause localized violations of the CAAQS for CO. BAAQMD's CO screening criteria are summarized below (BAAQMD 2017a).

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

BAAQMD does not consider construction-generated CO a significant pollutant of concern because construction activities typically do not generate substantial quantities of this pollutant (BAAQMD 2017a).

Particulate Matter

BAAQMD adopted an incremental $PM_{2.5}$ concentration-based significance threshold in which a "substantial" contribution at the project level for an individual source is defined as total (i.e., exhaust and fugitive) $PM_{2.5}$ concentrations exceeding 0.3 $\mu g/m^3$. In addition, BAAQMD considers projects to have a cumulatively considerate $PM_{2.5}$ impact if sensitive receptors are exposed to $PM_{2.5}$ concentrations from local sources within 1,000 feet, including existing sources, project-related sources, and reasonably foreseeable future sources, that exceed 0.8 $\mu g/m^3$ (BAAQMD 2017a).

BAAQMD has not established PM_{10} thresholds of significance. BAAQMD's $PM_{2.5}$ thresholds apply to both new receptors and new sources. However, BAAQMD considers fugitive PM_{10} from earth-moving activities to be less than significant with application of BAAQMD's Basic Construction Mitigation Measures.

Diesel Particle Matter

DPM has been identified as a TAC and is particularly concerning because long-term exposure can lead to cancer, birth defects, and damage to the brain and nervous systems. BAAQMD has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to single sources of DPM emissions. The "substantial" DPM threshold defined by BAAQMD is exposure of a sensitive receptor to an individual emissions source, resulting in an excess cancer risk level of more than 10 in 1 million or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 (BAAQMD 2017a). The air district also considers projects to have a cumulatively considerable DPM impact if they contribute to DPM emissions that, when combined with cumulative sources within 1,000 feet of sensitive receptors, result in excess cancer risk levels of more than 100 in 1 million or a hazard index greater than 10.0. BAAQMD considers a project to have a significant cumulative impact if it introduces new receptors at a location where the combined exposure of all cumulative sources within 1,000 feet is in excess of cumulative thresholds (BAAQMD 2017a).

Lead and Asbestos

Based on information in Section 3.8, Hazards and Hazardous Materials, many structures within the project area could contain hazardous building materials such as asbestos-containing materials (ACM) and lead-based paint. BAAQMD considers a project to have a significant impact if it does not comply with the applicable regulatory requirements outlined in BAAQMD's Regulation 11, Rules 1 and 2.

Odors

BAAQMD and CARB have identified several types of land uses as being commonly associated with odors, such as landfills, wastewater treatment facilities, and animal processing centers (BAAQMD 2017a; CARB 2005). BAAQMD's *California Environmental Quality Act Air Quality Guidelines* recommend that project analyses identify the location of existing and planned odor sources and include policies to reduce potential odor impacts in the project area.

3.2.2.3 Impacts

This section includes a discussion of each impact as it corresponds to the thresholds of significance discussed above.

Conflict with or Obstruct Implementation of the Applicable Air Quality Plan

All Build Alternatives

The CAA requires that a SIP or an air quality control plan be prepared for areas with air quality violating the NAAQS. The SIP sets forth the strategies and pollution-control measures that states will use to attain the NAAQS. The CCAA requires attainment plans to demonstrate a 5-percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive 3-year period, unless an approved alternative measure of progress is developed. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. The current air quality attainment plan for the SFBAAB is the 2017 Clean Air Plan (BAAQMD 2017b).

According to BAAQMD's *California Environmental Quality Act Air Quality Guidelines*, the determination of 2017 Clean Air Plan consistency should consider the following for plan-level analyses (BAAQMD 2017a).

- Does the plan support the primary goals of the 2017 Clean Air Plan?
- Does the plan include applicable control measures from the 2017 Clean Air Plan?
- Does the plan disrupt or hinder implementation of any 2017 Clean Air Plan control measure?

Each of these questions is addressed below for the proposed project.

Support of 2017 Clean Air Plan Goals

The primary goals of the 2017 Clean Air Plan are to (1) reduce emissions and decrease concentrations of harmful pollutants, (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and (3) reduce GHG emissions and protect the climate. The proposed project would redevelop a transportation center in the City. The proposed project is consistent with the Marin Strategic Vision Plan (Transportation Authority of Marin 2017), the regional transportation plans for the Transportation Authority of Marin, and the *San Rafael Downtown Station Area Plan* (City of San Rafael 2012). The proposed project is one of the major projects included in these documents, which serve as the sustainable communities strategies/ regional transportation plans for the respective areas, integrating transportation and land-use strategies to manage GHG emissions and plan for future population growth. On the state level, the proposed project is consistent with the *California Transportation Plan 2050* (Caltrans 2021), which is the state's blueprint for meeting future mobility needs. One of the main policies identified in the regional and local plans of the jurisdictions where the proposed project would be located is the reduction of vehicle miles traveled on roadways. Operation of the proposed project is not expected to increase vehicle miles traveled and would support the shift from automobiles to public transit. Additionally, the proposed project is a transportation project (specifically a transit-supportive project) and by its nature would encourage the use of public transit to reduce single-occupancy

vehicle trips and associated criteria pollutants such as O_3 precursors (ROG and NO_X), PM_{10}, and $PM_{2.5}$, which would support improving local and regional air quality.

Based on the above analysis, the proposed project would support the primary goals of the 2017 Clean Air Plan.

Support Applicable Control Measures

To meet the primary goals, the 2017 Clean Air Plan recommends specific control measures and actions. These control measures are grouped into various categories and include stationary-source measures, mobile-source measures, and transportation control measures. The 2017 Clean Air Plan recognizes that community design dictates individual travel modes and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and GHGs from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand and people have a range of viable transportation options. To this end, the 2017 Clean Air Plan includes control measures that are aimed at reducing air pollution in the SFBAAB.

The measures most applicable to the proposed project are transportation control measures. These measures include the following:

> **TR3: Local and Regional Bus Service.** Fund local and regional bus projects, including operations and maintenance.
>
> **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.

Operation of the proposed project is not expected to increase vehicle miles traveled and would support the shift from automobiles to public transit. Additionally, the proposed project is a transportation project (specifically a transit-supportive project) and by its nature would encourage the use of public transit to reduce single-occupancy vehicle trips and associated criteria pollutants such as O_3 precursors (ROG and NO_X), PM_{10}, and $PM_{2.5}$, which would support improving local and regional air quality. The proposed project would not reduce or minimize access to any bicycle and pedestrian accessways and is intended to enhance or create new multimodal connectivity to transit-oriented services in the region. Such connectivity reduces the need for single-occupancy vehicle trips.

Based on the above analysis, the proposed project would support the applicable control measures identified in the 2017 Clean Air Plan to meet the plan's primary goals.

Disrupt or Hinder Implementation of 2017 Clean Air Plan Control Measures

As discussed above, operation of the proposed project is not expected to increase vehicle miles traveled and would support the shift from automobiles to public transit. Additionally, the proposed project is a transportation project (specifically a transit-supportive project) and by its nature would encourage the use of public transit to reduce single-occupancy vehicle trips and associated criteria pollutants such as O_3 precursors (ROG and NO_X), PM_{10}, $PM_{2.5}$, and GHG emissions, which would support goals of the 2017 Clean Air Plan. The proposed project would not disrupt, delay, or otherwise hinder implementation of any applicable control measure from the 2017 Clean Air Plan. Rather, the proposed project would support and facilitate their implementation.

Based on the above analysis, the proposed project would support implementation of the 2017 Clean Air Plan. Accordingly, the proposed project would not fundamentally conflict with the 2017 Clean Air Plan and its air quality impacts would be ***less than significant***.

Mitigation Measures

No mitigation is required.

Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region Is a Nonattainment Area for an Applicable Federal or State Ambient Air Quality Standard

Construction

Construction of the proposed project is scheduled to commence in 2023 or 2024, lasting a period of approximately 18 months. Construction associated with each build alternative would generate criteria pollutant emissions from the following activities: demolition, site preparation, grading, construction workers and heavy-duty trucks traveling to and from the project site, fuel combustion by onsite construction equipment, the application of architectural coatings, and paving activities. These construction activities have the potential to temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. The amount of emissions generated on a daily basis would vary depending on the intensity and types of construction activities occurring simultaneously. To provide the most conservative analysis, maximum daily emissions estimates, which are used to assess construction impacts, are based on the day with the greatest intensity of construction activities. The unmitigated criteria air pollutant emissions that would be generated during construction for each alternative are presented in the tables below.

Move Whistlestop Alternative

As shown in Table 3.2-7, construction emissions for the Move Whistlestop Alternative would be below the BAAQMD significance thresholds for all criteria pollutants. Therefore, construction impacts from this alternative would be ***less than significant***. No mitigation is required.

Table 3.2-7. Move Whistlestop Alternative Maximum Daily Construction Emissions: Unmitigated

	Maximum Daily Emissions (lb/day)			
Construction Phase	ROG	NO_X	PM_{10}[a]	$PM_{2.5}$[a]
Utility Relocations/Improvements	1.46	16.47	0.61	0.56
Utility Relocations/Improvements-Paving	1.13	9.39	0.49	0.45
Building Demo & Site Clearing/Grubbing	1.81	18.72	0.86	0.80
Site Grading	1.64	18.00	0.77	0.71
Site Construction	2.22	19.05	0.77	0.74
Site Construction-Paving	1.13	9.39	0.49	0.45
Site Construction-Arch Coating	4.32	1.76	0.09	0.09
Maximum Daily Emissions	**6.54**	**36.72**	**1.63**	**1.51**

	Maximum Daily Emissions (lb/day)			
Construction Phase	ROG	NO_X	PM_{10}[a]	$PM_{2.5}$[a]
BAAQMD Significance Threshold	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Modeling files provided in Appendix B.
[a] BAAQMD construction thresholds for PM_{10} and $PM_{2.5}$ only evaluate exhaust emissions. Dust emissions would be controlled using best management practices.
lb/day = pounds per day

Adapt Whistlestop Alternative

As shown in Table 3.2-8, construction emissions for the Adapt Whistlestop Alternative would be below the BAAQMD significance thresholds for all criteria pollutants. Therefore, construction impacts from this alternative would be ***less than significant***. No mitigation is required.

Table 3.2-8. Adapt Whistlestop Alternative Maximum Daily Construction Emissions: Unmitigated

	Maximum Daily Emissions (lb/day)			
Construction Phase	ROG	NO_X	PM_{10}[a]	$PM_{2.5}$[a]
Utility Relocations/Improvements	1.46	16.47	0.61	0.56
Utility Relocations/Improvements-Paving	1.08	9.39	0.49	0.45
Building Demo & Site Clearing/Grubbing	1.79	18.22	0.85	0.79
Site Grading	1.64	18.00	0.77	0.71
Site Construction	2.20	18.55	0.77	0.74
Site Construction-Paving	1.08	9.39	0.49	0.45
Site Construction-Arch Coating	3.96	1.76	0.09	0.09
Maximum Daily Emissions	**6.15**	**36.22**	**1.62**	**1.50**
BAAQMD Significance Threshold	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Modeling files provided in Appendix B.
[a] BAAQMD construction thresholds for PM_{10} and $PM_{2.5}$ only evaluate exhaust emissions. Dust emissions would be controlled using best management practices.
lb/day = pounds per day

4th Street Gateway Alternative

As shown in Table 3.2-9, construction emissions for the 4th Street Gateway Alternative would be below the BAAQMD significance thresholds for all criteria pollutants. Therefore, construction impacts from this alternative would be ***less than significant***. No mitigation is required.

Table 3.2-9. 4th Street Gateway Alternative Maximum Daily Construction Emissions: Unmitigated

	Maximum Daily Emissions (lb/day)			
Construction Phase	ROG	NO_X	PM_{10}[a]	$PM_{2.5}$[a]
Utility Relocations/Improvements	1.46	16.47	0.61	0.56
Utility Relocations/Improvements-Paving	1.21	9.39	0.49	0.45
Building Demo & Site Clearing/Grubbing	1.79	18.22	0.85	0.79
Site Grading	1.64	18.00	0.77	0.71
Site Construction	2.22	19.05	0.77	0.74

	Maximum Daily Emissions (lb/day)			
Construction Phase	ROG	NO_X	PM_{10}[a]	$PM_{2.5}$[a]
Site Construction-Paving	1.21	9.39	0.49	0.45
Site Construction-Arch Coating	4.86	1.76	0.09	0.09
Maximum Daily Emissions	**7.08**	**36.22**	**1.62**	**1.50**
BAAQMD Significance Threshold	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Modeling files provided in Appendix B.
[a] BAAQMD construction thresholds for PM_{10} and $PM_{2.5}$ only evaluate exhaust emissions. Dust emissions would be controlled using best management practices.
lb/day = pounds per day

Under the Freeway Alternative

As shown in Table 3.2-10, construction emissions for the Under the Freeway Alternative would be below the BAAQMD significance thresholds for all criteria pollutants. Therefore, construction impacts from this alternative would be ***less than significant***. No mitigation is required.

Table 3.2-10. Under the Freeway Alternative Maximum Daily Construction Emissions: Unmitigated

	Maximum Daily Emissions (lb/day)			
Construction Phase	ROG	NO_X	PM_{10}[a]	$PM_{2.5}$[a]
Utility Relocations/Improvements	1.46	16.47	0.61	0.56
Utility Relocations/Improvements-Paving	1.11	9.39	0.49	0.45
Building Demo & Site Clearing/Grubbing	1.81	18.72	0.86	0.80
Site Grading	1.64	18.00	0.77	0.71
Site Construction	2.22	19.05	0.77	0.74
Site Construction-Paving	1.11	9.39	0.49	0.45
Site Construction-Arch Coating	4.14	1.76	0.09	0.09
Maximum Daily Emissions	**6.36**	**36.72**	**1.63**	**1.51**
BAAQMD Significance Threshold	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Modeling files provided in Appendix B.
[a] BAAQMD construction thresholds for PM_{10} and $PM_{2.5}$ only evaluate exhaust emissions. Dust emissions would be controlled using best management practices.
lb/day = pounds per day

Conclusion

As shown in the tables above, construction of each alternative would not generate ROG, NO_X, or exhaust PM emissions in excess of BAAQMD's significance thresholds. Therefore, construction emissions of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard and impacts would be ***less than significant***.

Operations

All Build Alternatives

Criteria pollutant emissions from the proposed project during operations would be nominal. Each build alternative would operate a 3,000-square-foot building, which would include customer service, public restrooms, driver relief facilities, small retail, maintenance, and security. Building emissions would be associated with energy sources (natural gas consumption) and area sources (architectural coatings and consumer products). As discussed previously, all build alternatives primarily represent a shifting of bus activity. The proposed project would not change the amount of bus service to be provided and would not result in an increase of new vehicle trips or vehicle miles traveled. Based on this, project operations would not increase mobile source emissions. As shown in Table 3.2-11, operational emissions would be well below the BAAQMD significance thresholds. Therefore, each build alternative would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard and project impacts would be ***less than significant***.

Table 3.2-11. Maximum Daily Operations Emissions: Unmitigated

	Maximum Daily Emissions (lb/day)			
Source Category	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area	0.07	<0.01	<0.01	<0.01
Energy	<0.01	<0.01	<0.01	<0.01
Total Operational Emissions	**0.07**	**<0.01**	**<0.01**	**<0.01**
BAAQMD Significance Threshold	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Modeling files provided in Appendix B.
lb/day = pounds per day

Mitigation Measures

No mitigation is required.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

All Build Alternatives

Carbon Monoxide Hotspots

All build alternatives primarily represent a shifting of bus activity from one location to another; the proposed project would not change the amount of bus service to be provided and new vehicle trips are not assumed to be generated by the proposed project. Based on intersection volumes from the Transportation Summary Report for the proposed project (see Appendix C: Kimley-Horn 2021), the maximum peak-hour intersection volume would be 4,023 vehicles at Irwin Street and 2nd Street (Appendix C). Given this amount is substantially less than BAAQMD's hourly screening level of 44,000 vehicles per hour, the shifting of bus activity would not result in a CO hotspot and impacts would be ***less than significant***.

Toxic Air Contaminants

The primary TACs of concern associated with the proposed project are asbestos, lead, and DPM.

Asbestos and Lead

Demolition of existing structures in the project area may result in the dispersion of ACM and lead-based paint, should they be present, to adjacent sensitive receptor locations. All demolition activities would be subject to EPA's asbestos NESHAP if asbestos is present at any of the existing structures on site. The asbestos NESHAP regulations protect the public by minimizing the release of asbestos fibers during activities involving the processing, handling, and disposal of ACM. The asbestos NESHAP regulations for demolition and renovation are outlined in BAAQMD Regulation 11, Rule 2. In addition to demolition and renovation measures, BAAQMD Regulation Rule 2 includes measures to address ACM during haul truck transport. More specifically, it includes provisions such as treating ACM with water prior to transport and placing such materials in leak-tight containers for haul truck transport to disposal sites. During construction, best management practices relating to the proper handling of hazardous materials would be implemented as part of the proposed project's Construction General Permit. In the event that construction activities encounter these hazardous materials, the appropriate safety procedures would be followed, and relevant agencies notified (e.g., Certified Unified Program Agency notification through the procedures outlined in the Marin County *Hazardous Materials Area Plan* [Marin County 2008]). Overall, regulatory mechanisms exist that would ensure that impacts from ACM and lead, if present during demolition activities within the project site, would be ***less than significant***.

DPM/$PM_{2.5}$

DPM is a carcinogen emitted by diesel internal combustion engines. Construction activities would generate DPM ($PM_{2.5}$ exhaust)[5] that could expose adjacent receptors and onsite receptors (beginning in 2023 or 2024) to significant health risks. However, DPM concentrations would be dramatically reduced, even at distances of 500 feet. As explained in BAAQMD's *California Environmental Quality Act Air Quality Guidelines*:

> Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet…In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of health risk.

Health impacts from DPM would include cancer risk and chronic non-cancer risk. The HRA results also included evaluation of annual concentrations of $PM_{2.5}$ from exhaust and fugitive dust sources. As discussed previously, cancer risk was evaluated for two scenarios: (1) construction and operations and (2) operations only. The following tables present the unmitigated health risks for the maximum exposed offsite residential receptor within 1,000 feet of each build alternative.

[5] Per BAAQMD guidance, $PM_{2.5}$ exhaust is used as a surrogate for DPM.

Scenario 1: Construction Plus Operations

As shown in Table 3.2-12, all build alternatives would exceed the cancer risk threshold. Additionally, the Under the Freeway Alternative would exceed the annual $PM_{2.5}$ threshold. Therefore, health risk impacts would be **significant** and mitigation is required.

Table 3.2-12. Unmitigated Health Risk Results: Scenario 1

Build Alternative	Cancer Risk (cases per million)[a]	Non-Cancer Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Move Whistlestop	10.6	0.01	0.08
Adapt Whistlestop	10.9	0.01	0.09
4th Street Gateway	28.0	0.02	0.25
Under the Freeway	43.6	0.0	0.44
BAAQMD Significance Threshold	10	1.0	0.3
Exceeds Threshold?	**Yes (all alternatives)**	**No (all alternatives)**	**Yes (Under the Freeway Alternative only)**

[a] Cancer risk scenario evaluated a receptor in the third trimester of pregnancy being exposed to the full construction duration of 1.5 years and then 28.75 years of operations, for a total exposure duration of 30 years.

Table 3.2-13 shows the health risk results for all build alternatives with implementation of Mitigation Measure MM-AQ-CNST-1. As shown in Table 3.2-13, cancer risk and annual $PM_{2.5}$ concentrations would be reduced to levels below BAAQMD health risk thresholds. Therefore, each build alternative would not expose sensitive receptors to substantial pollution concentrations and impacts would be ***less than significant with mitigation***.

Table 3.2-13. Mitigated Health Risk Results: Scenario 1

Build Alternative	Cancer Risk (cases per million)[a]	Non-Cancer Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Move Whistlestop	2.91	0.0005	0.05
Adapt Whistlestop	2.92	0.0005	0.05
4th Street Gateway	4.57	0.001	0.15
Under the Freeway	6.03	0.002	0.27
BAAQMD Significance Threshold	10	1.0	0.3
Exceeds Threshold?	**No (all alternatives)**	**No (all alternatives)**	**No (all alternatives)**

[a] Cancer risk scenario evaluated a receptor in the third trimester of pregnancy being exposed to the full construction duration of 1.5 years and then 28.75 years of operations, for a total exposure duration of 30 years.

Scenario 2: Operations Only

As shown in Table 3.2-14, all build alternatives would be below all BAAQMD health risk thresholds. Therefore, operational emissions of each build alternative would not expose sensitive receptors to substantial pollutant concentrations and impacts would be ***less than significant***.

Table 3.2-14. Unmitigated Health Risk Results: Scenario 2

Build Alternative	Cancer Risk (cases per million)[a]	Non-Cancer Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Move Whistlestop	3.66	0.001	0.13
Adapt Whistlestop	3.66	0.001	0.13
4th Street Gateway	4.65	0.001	0.12
Under the Freeway	5.40	0.001	0.12
BAAQMD Significance Threshold	10	1.0	0.3
Exceeds Threshold?	**No (all alternatives)**	**No (all alternatives)**	**No (all alternatives)**

[a] Cancer risk scenario evaluated a receptor in the third trimester of pregnancy being exposed to 30 years of project operations.

Mitigation Measures

MM-AQ-CNST-1: Use Clean Diesel-Powered Equipment during Construction to Control Construction-Related Emissions

The project sponsor shall ensure that all off-road diesel-powered equipment used during construction is equipped with EPA-approved Tier 4 Final engines to reduce DPM. The construction contractor shall submit evidence of the use of EPA-approved Tier 4 Final engines or cleaner for project construction to the City prior to the commencement of construction activities.

Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People

All Build Alternatives

BAAQMD and CARB have identified the following types of land uses as being commonly associated with odors. Although this list is not exhaustive, it is intended to help lead agencies recognize the types of facilities where more analysis may be warranted.

- Sewage treatment plants
- Coffee roasters
- Asphalt plants
- Metal smelters
- Landfills
- Recycling facilities
- Waste transfer stations
- Petroleum refineries
- Biomass operations

- Auto body shops
- Coating operations
- Fiberglass manufacturers
- Foundries
- Rendering plants
- Livestock operations

There are sensitive receptors within 1,000 feet of the project area. Potential odor emitters during construction activities include diesel exhaust, asphalt paving, and the use of architectural coatings and solvents. Construction-related activities would be temporary, and construction activities would not be likely to result in nuisance odors that would violate BAAQMD Regulation 7. Odors during operation could emanate from vehicle exhaust and the reapplication of architectural coatings. These odors would be limited to areas adjacent to the project area. Although such brief exhaust- and paint-related odors may be considered adverse, they would not affect a substantial number of people.

Additionally, the proposed project is not associated with any of the land uses listed above and would not result in odorous emissions. Odors from diesel exhaust currently exist in the project area. Because each build alternative would not result in an increase in vehicle trips and would only shift the existing buses to another location, the proposed project would not introduce new sources of odors. Given mandatory compliance with BAAQMD regulations, no construction or operational activities proposed would create a level of objectionable odors that would adversely affect a substantial number of people and impacts would be ***less than significant***. No mitigation is required.

Mitigation Measures

No mitigation is required.

Section 3.3
Biological Resources

This section describes the biological resources in the project area and the potential impacts of the San Rafael Transit Center Replacement Project (proposed project) on these resources. This section discusses the federal, state, and local regulatory framework for biological resources; the existing conditions in the project area; and the potential for the proposed project and other build alternatives to affect biological resources. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.3.1 Existing Conditions

3.3.1.1 Regulatory Setting

Federal

Clean Water Act

The Clean Water Act (CWA) serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The CWA operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit; permit review is the CWA's primary regulatory tool. On April 21, 2020, the Navigable Waters Protection Rule was published in the Federal Register, providing a new and more restrictive definition of wetlands and non-wetland waters that are regulated under the CWA. This new rule took effect on June 22, 2020. Aquatic resources (i.e., wetlands, ponds, and streams) are present in the project area and may be regulated under CWA Section 404. Aquatic resources that are no longer regulated as a result of implementing the Navigable Waters Protection Rule will be regulated by the State Water Resources Control Board (SWRCB) based on the recently adopted state wetland definitions and procedures (see Porter-Cologne Water Quality Control Act). The following sections provide additional details on specific sections of the CWA.

Permits for Fill Placement in Waters and Wetlands (Section 404)

Applicants must obtain a Section 404 permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the United States, including adjacent wetlands, before proceeding with a proposed activity. Nationwide permits are preauthorized permits issued to cover particular fill activities. Each nationwide permit specifies conditions that must be met for the nationwide permit to apply to a project. Compliance with CWA Section 404 requires compliance with the National Environmental Policy Act, federal Endangered Species Act (ESA), and National Historic Preservation Act. In addition, USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Permits for Stormwater Discharge (Section 402)

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, which is administered by

the U.S. Environmental Protection Agency. In the project area, the San Francisco Bay Regional Water Quality Control Board (RWQCB) is authorized by the U.S. Environmental Protection Agency to oversee the NPDES program. NPDES permits are required for projects that disturb more than 1 acre of land. The NPDES permitting process requires the applicant to file a public notice of intent to discharge stormwater and to prepare and implement a Stormwater Pollution Prevention Plan, which includes the best management practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources.

Water Quality Certification (Section 401)

All projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

Executive Order 11990: Protection of Wetlands

Executive Order 11990, signed May 24, 1977, requires federal agencies to prepare wetland assessments for proposed actions located in or affecting wetlands. Agencies must avoid undertaking new construction in wetlands unless no practicable alternative is available, and the proposed action includes all practicable measures to minimize harm to wetlands.

Executive Order 13112: Prevention and Control of Invasive Species

Executive Order 13112, signed February 3, 1999, directs all federal agencies to prevent and control the introduction of invasive species in a cost-effective and environmentally sound manner. This executive order established the National Invasive Species Council, which is composed of federal agencies and departments, and a supporting Invasive Species Advisory Committee composed of state, local, and private entities. In 2008, the National Invasive Species Council released an updated national invasive species management plan that recommends objectives and measures to implement the executive order and prevent the introduction and spread of invasive species (National Invasive Species Council 2008). The executive order requires consideration of invasive species in National Environmental Policy Act analyses, including their identification and distribution, their potential effects, and measures to prevent or eradicate them.

State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) is the regulatory framework by which California public agencies identify and mitigate significant environmental effects. A project normally has a significant environmental effect on biological resources if it substantially affects a rare or endangered species or the habitat of that species; substantially interferes with the movement of resident or migratory fish or wildlife; or substantially diminishes habitat for fish, wildlife, or plants. The State CEQA Guidelines define rare, threatened, and endangered species as those listed under the ESA and California Endangered Species Act (CESA) and any other species that meet the criteria of the resource agencies or local agencies (e.g., California Department of Fish and Wildlife [CDFW]-designated species of special concern). The guidelines state that the lead agency preparing an environmental impact report must consult with

and receive written findings from CDFW concerning project effects on species listed as endangered or threatened. The effects of a proposed project on these resources are important in determining whether the project has significant environmental effects under CEQA.

Porter-Cologne Water Quality Control Act

The California Water Code addresses the full range of water issues in the state and includes Division 7, known as the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (California Water Code Sections 13000–16104). Section 13260 requires "any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the State to file a report of discharge (an application for waste discharge requirements)" with the appropriate RWQCB. Under this act, each of the nine RWQCBs must prepare and periodically update Water Quality Control Basin Plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution. Projects that affect waters of the State must meet the waste discharge requirements of the RWQCB. Pursuant to CWA Section 401, an applicant for a Section 404 permit to conduct any activity that may result in discharge into navigable waters must provide a certification from the RWQCB that such discharge will comply with state water quality standards. As part of the permitting process under Section 404, the project proponent would be required to apply for water quality certification from the San Francisco Bay RWQCB.

Section 13050 of the Porter-Cologne Act authorizes the SWRCB and the relevant RWQCB to regulate biological pollutants. The California Water Code generally regulates more substances contained in discharges and defines discharges to receiving waters more broadly than does the CWA. In 2019, the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, which revised and clarified the regulation of state wetlands and procedures for permitting impacts on wetlands. The procedures took effect on May 28, 2020 (SWRCB 2019, 2020).

California Fish and Game Code

Section 1600: Streambed Alteration Agreements

CDFW regulates activities that would interfere with the natural flow—or substantially alter the channel, bed, or bank—of a lake, river, or stream. These activities are regulated under California Fish and Game Code Sections 1600–1616 and require a streambed alteration agreement if they would substantially adversely affect an existing fish or wildlife resource. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. CDFW may require avoidance or minimization of vegetation removal, use of standard erosion-control measures, limitations on the use of heavy equipment, limitations on work periods to avoid impacts on fish and wildlife, and restoration of degraded sites or compensation for permanent habitat losses, among other conditions. Aquatic resources (i.e., Irwin Creek and San Rafael Creek) are present in the project area and vicinity, and a streambed alteration agreement may be required if the proposed project would affect wildlife habitat associated with these resources.

Local

City of San Rafael Tree Ordinance

The City of San Rafael (City) code, Chapter 11.12, Trees, requires approval for pruning, disturbing, or removing any tree along a public street, sidewalk, or walkway within the City. If the tree is removed, the stump and roots must also be removed. Trees that will be avoided require placement of guards to prevent injury.

City of San Rafael General Plan 2020

The following policies for biological resources from *The City of San Rafael General Plan 2020* (City of San Rafael 2016), Conservation Element, are applicable to the proposed project.

CON-1. Protection of Environmental Resources. Protect or enhance environmental resources, such as ridgelines, wetlands, diked baylands, creeks and drainageways, shorelines and habitat for threatened and endangered species.

CON-6. Creek and Drainageway Setbacks. Require development-free setbacks, except for specific access points as approved per policy CON-7 (Public Access to Creeks), from existing creeks and drainageways that will maintain the functions and resulting values of these habitats. Appropriate erosion control and roadway crossings may encroach into the development setback. In the absence of vegetation, promote new growth of natural habitat.

CON-7. Public Access to Creeks. Provide pedestrian access to points along creeks throughout the City where such access will not adversely affect habitat values.

CON-8. Enhancement of Creeks and Drainageways. Explore enhancement of, and support continuous upgrades to, drainageways to serve as wildlife habitat corridors for wildlife movement and to serve as flood control facilities to accommodate storm drainage. Require creek enhancement and associated riparian habitat restoration/creation for projects adjacent to creeks to maintain storm flows, reduce erosion and maintenance and improve habitat values, where feasible.

CON-9. Native and/or Sensitive Habitats. Protect habitats that are sensitive, rare, declining, unique or represent a valuable biological resource.

CON-10. Impacts to Sensitive Habitats. Minimize impacts to sensitive natural habitats through careful planning. Require compliance with applicable laws and regulations.

CON-11. Wildlife Corridors. Preserve and protect areas that function as wildlife corridors, particularly those areas that provide natural connections permitting wildlife movement between designated sensitive habitats.

CON-14. Special Status Species. Preserve and protect special status plants and animals, including candidate species for listing under the state and federal endangered species acts, California species of special concern, California Native Plant Society List 1B plants, and other species protected under provisions of California Fish and Game Code.

CON-15. Invasive Non-Native Plant Species. Remove and control selected undesirable invasive non-native plant species from City-owned open space and road right of ways, and encourage the removal and control of these invasive plant species from non-City owned ecologically-sensitive areas.

CON-16. Landscape with Native Plant Species. Encourage landscaping with native and compatible non-native plant species, especially drought-resistant species.

Draft San Rafael General Plan 2040

The City of San Rafael is currently working on the Draft *San Rafael General Plan 2040*. The following policies for biological resources from the Draft *San Rafael General Plan 2040* (City of San Rafael 2020), Conservation and Climate Change Element, relate to the proposed project.

Policy C-1.6: Creek Protection. Protect and conserve creeks as an important part of San Rafael's identity, natural environment, and green infrastructure. Except for specific access points approved per Policy C-1.7 (Public Access to Creeks), development-free setbacks shall be required along perennial and intermittent creeks (as shown on Figure 6-2) to help maintain their function and habitat value. Appropriate erosion control and habitat restoration measures are encouraged within the setbacks, and roadway crossings are permitted.

Policy C-1.9: Enhancement of Creeks and Drainageways. Conserve or improve the habitat value and hydrologic function of creeks and drainageways so they may serve as wildlife corridors and green infrastructure to improve stormwater management, reduce flooding, and sequester carbon. Require creek enhancement and associated riparian habitat restoration/creation for projects adjacent to creeks to reduce erosion, maintain storm flows, improve water quality, and improve habitat value where feasible.

Policy C-1.11: Wildlife Corridors. Preserve and protect areas that function as wildlife corridors, particularly those areas that provide connections permitting wildlife movement between larger natural areas.

Policy C-1.13: Special Status Species. Conserve and protect special status plants and animals, including those listed by State or federal agencies as threatened and/or endangered, those considered to be candidate species for listing by state and federal agencies, and other species that have been assigned special status by the California Native Plant Society and the California Fish and Game Code.

Policy C-1.14: Control of Invasive Plants. Remove and control undesirable non-native plant species from City-owned open space and road rights-of-way and encourage the removal and control of these species from non-City owned ecologically sensitive or fire-prone areas.

Policy C-1.15: Landscaping with Appropriate Naturalized Plant Species. Encourage landscaping with native and compatible non-native plant species that are appropriate for the dry summer climate of the Bay Area, with an emphasis on species determined to be drought-resistant. Diversity of plant species is a priority for habitat resilience.

Policy C-1.16: Urban Forestry. Protect, maintain, and expand San Rafael's tree canopy. Trees create shade, reduce energy costs, absorb runoff, support wildlife, create natural beauty, and absorb carbon, making them an essential and valued part of the city's landscape and strategy to address global climate change. Tree planting and preservation should be coordinated with programs to reduce fire hazards and ensure public safety, resulting in a community that is both green and fire-safe.

Policy C-1.17: Tree Management. Encourage the preservation of healthy, mature trees when development and/or construction is proposed. Site plans should indicate the location of existing trees and include measures to protect them where feasible.

Marin Countywide Plan

The following policies for biological resources from the *Marin Countywide Plan* (Marin County Community Development Agency 2014) are applicable to the proposed project.

BIO-1.1. Protect Wetlands, Habitat for Special-Status Species, Sensitive Natural Communities, and Important Wildlife Nursery Areas and Movement Corridors. Protect sensitive biological resources, wetlands, migratory species of the Pacific flyway, and wildlife movement corridors through careful environmental review of proposed development applications, including consideration of cumulative impacts, participation in comprehensive habitat management programs

with other local and resource agencies, and continued acquisition and management of open space lands that provide for permanent protection of important natural habitats.

BIO-1.5. Promote Use of Native Plant Species. Encourage use of a variety of native or compatible nonnative, non-invasive plant species indigenous to the site vicinity as part of project landscaping to improve wildlife habitat values.

BIO-1.6. Control Spread of Invasive Exotic Plants. Prohibit use of invasive species in required landscaping as part of the discretionary review of proposed development. Work with landowners, landscapers, the Marin County Open Space District, nurseries, and the multi-agency Weed Management Area to remove and prevent the spread of highly invasive and noxious weeds. Invasive plants are those plants listed in the State's Noxious Weed List, the California Invasive Plant Council's list of "Exotic Pest Plants of Greatest Ecological Concern in California," and other priority species identified by the agricultural commissioner and California Department of Agriculture. Species of particular concern include the following: barbed goatgrass (*Aegilops triuncialis*), giant reed (*Arundo donax*), Italian thistle (*Carduus pycnocephalus*), distaff thistle (*Carthamus lanatus*), purple starthistle (*Centaurea calcitrapa*), yellow starthistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Scotch broom (*Cytisus scoparius*), Cape ivy (*Delairea odorata*), oblong spurge (*Euphorbia oblongata*), fennel (*Foeniculum vulgare*), French broom (*Genista monspessulana*), salt-water cord grass (*Spartina alternifolia*), Spanish broom (*Spartium junceum*), medusahead (*Taeniatherum caput-medusae*), gorse (*Ulex europaeus*), and periwinkle (*Vinca major*), among others.

BIO-2.1. Include Resource Preservation in Environmental Review. Require environmental review pursuant to CEQA of development applications to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildlife nursery areas and movement corridors. Require adequate mitigation measures for ensuring the protection of any sensitive resources and achieving "no net loss" of sensitive habitat acreage, values, and function.

BIO-2.5. Restrict Disturbance in Sensitive Habitat During Nesting Season. Limit construction and other sources of potential disturbance in sensitive riparian corridors, wetlands, and baylands to protect bird nesting activities. Disturbance should generally be set back from sensitive habitat during the nesting season from March 1 through August 1 to protect bird nesting, rearing, and fledging activities. Preconstruction surveys should be conducted by a qualified professional where development is proposed in sensitive habitat areas during the nesting season, and appropriate restrictions should be defined to protect nests in active use and ensure that any young have fledged before construction proceeds.

BIO-2.6. Identify Opportunities for Safe Wildlife Movement. Ensure that existing stream channels and riparian corridors continue to provide for wildlife movement at roadway crossings, preferably through the use of bridges, or through over-sized culverts, while maintaining or restoring a natural channel bottom. Consider the need for wildlife movement in designing and expanding major roadways and other barriers in the county. Of particular concern is the possible widening of Highway 101 north of Novato to the county line, where maintenance of movement opportunities for terrestrial wildlife between the undeveloped habitat on Mount Burdell and the marshlands along the Petaluma River is critical.

BIO-2.a. Require Site Assessments. Require site assessment by a qualified professional for development applications that may adversely affect sensitive biological or wetland resources, including jurisdictional wetlands, occurrences of special-status species, occurrences of sensitive natural communities, and important wildlife nursery areas and movement corridors. The assessment should determine the presence or absence of any sensitive resources that could be affected by development, evaluate the potential impacts, and identify measures for protecting the resource and surrounding habitat. Require the assessment to be conducted by a qualified professional paid for by the applicant. Unless waived, the qualified professional should be hired directly by Marin County.

BIO-4.1. Restrict Land Use in Stream Conservation Areas. A Stream Conservation Area (SCA) is established to protect the active channel, water quality and flood control functions, and associated

fish and wildlife habitat values along streams. Development shall be set back to protect the stream and provide an upland buffer, which is important to protect significant resources that may be present and provides a transitional protection zone. Best management practices shall be adhered to in all designated SCAs. Best management practices are also strongly encouraged in ephemeral streams not defined as SCAs.

Exceptions to full compliance with all SCA criteria and standards may be allowed only if the following is true:

1. A parcel falls entirely within the SCA; or
2. Development on the parcel entirely outside the SCA either is infeasible or would have greater impacts on water quality, wildlife habitat, other sensitive biological resources, or other environmental constraints than development within the SCA.

SCAs consist of the watercourse itself between the tops of the banks and a strip of land extending laterally outward from the top of both banks to the widths defined below (see Figure 2-2). The SCA encompasses any jurisdictional wetland or unvegetated other waters within the stream channel, together with the adjacent uplands, and supersedes setback standards defined for WCAs. Human-made flood control channels under tidal influence are subject to the Bayland Conservation policies.

BIO-4.4 Promote Natural Stream Channel Function. Retain and, where possible, restore the hydraulic capacity and natural functions of stream channels in SCAs. Discourage alteration of the bed or banks of the stream, including filling, grading, excavating, and installation of storm drains and culverts. When feasible, replace impervious surfaces with pervious surfaces. Protect and enhance fish habitat, including through retention of large woody debris, except in cases where removal is essential to protect against property damage or prevent safety hazards. In no case shall alterations that create barriers to fish migration be allowed on streams mapped as historically supporting salmonids. Alteration of natural channels within SCAs for flood control should be designed and constructed in a manner that retains and protects the riparian vegetation, allows for sufficient capacity and natural channel migration, and allows for reestablishment of woody trees and shrubs without compromising the flood flow capacity where avoidance of existing riparian vegetation is not possible.

3.3.1.2 Environmental Setting

The proposed project is within the City of San Rafael in Marin County. The project region is generally an urban area near San Rafael Bay. Urban creeks drain to the Bay.

Although hills surround San Rafael on the north, west, and south sides, the project area is level, with elevations ranging from approximately 10 to 12 feet above sea level. The dominant land use in the project area is commercial development and the existing transit center in Downtown San Rafael. U.S. Highway 101 (US-101) is elevated above the east side of the project area.

Physical Conditions

The project area is in a developed area of office, retail, commercial, restaurant, residential, and parking uses and is partially beneath an elevated part of US-101. Within the project area, Irwin Creek is directly beneath and parallel to the elevated freeway and drains to San Rafael Creek at the southern end of the project area, within the Under the Freeway alternative.

Land Cover Types

A land cover type is defined as the dominant character of the land surface discernible from aerial photographs, as determined by vegetation, water, or human uses. Land cover types are the most

widely used units in analyzing ecosystem function, habitat diversity, natural communities, wetlands and streams, and covered species habitat.

The three land cover types within the project area are described below. Ruderal and developed/ landscaped cover types are not considered sensitive natural communities and are not protected by regulatory agencies. However, the two perennial streams within the project area are non-wetland waters of the United States and waters of the State that would be subject to federal regulation under CWA Sections 401 and 404 and to state regulation under the Porter-Cologne Act and California Fish and Game Code Section 1602.

Perennial Stream

The project area includes approximately 0.5 acre of perennial stream. One perennial stream, Irwin Creek, occurs in the project area. Irwin Creek is channelized beneath US-101 and is crossed by two bridges in the project area, corresponding to 4th Street and 5th Avenue. At time of a site visit by a botanist/wetland ecologist and wildlife biologist in August 2020 (see Section 3.3.2.1, Methodology, for details), water in Irwin Creek was intermittently inundated up to approximately 2 feet deep in the parts of the low-flow channel. This stream has perennial flow due to the surrounding runoff from irrigation of urban landscaping, and storm drains empty into the creek at the 4th Street crossing. The creek is approximately 35 feet wide at the ordinary high-water mark. Approximately 400 feet south of the project area, Irwin Creek flows into San Rafael Creek. The bed of Irwin Creek is primarily gravel and sand, but cemented sandbags on the banks at each bridge crossing have been placed for erosion control. The creek does not support riparian vegetation in the project area, but there were many cut tree stumps on the bank. The creek bed supports patches of herbaceous vegetation. Approximately one block upstream of the project area, there are willows and other riparian trees along the creek banks.

At the southern edge of the project area, San Rafael Creek is parallel to 2nd Street and crosses under US-101 at the confluence with Irwin Creek. It is approximately 50 feet wide at this point. The creek flow was up to the bank edges at the time of the August 2020 survey. Upstream of the project area, San Rafael Creek extends through residential neighborhoods in the western part of San Rafael, and it drains to San Rafael Bay approximately 1.6 miles downstream of the project area.

Ruderal

Ruderal species grow along the fenceline that encloses both sides of Irwin Creek, in pavement cracks, and unmaintained landscape areas.

Developed/Landscaped

Most of the project area is developed and has landscaping associated with commercial and residential properties. Paved park-and-ride lots under US-101 are also included in this land cover type.

Special-Status Species

Special-status species are plants and animals that are legally protected under the ESA, CESA, or other regulations, and species considered sufficiently rare by the scientific community to qualify for such listing. For the purposes of this document, special-status species fall into the following categories.

- Species listed or proposed for listing as threatened or endangered under ESA (50 Code of Federal Regulations, Parts 17.11 [listed animals] and 17.12 [listed plants], and various notices in the Federal Register [proposed species])
- Species that are candidates for possible future listing as threatened or endangered under the ESA (84 Federal Register 54732 October 10, 2019)
- Species listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 CCR Section 670.5)
- Species that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines Section 15380)
- Animals listed as California species of special concern on CDFW's *Special Animals List* (CDFW 2020a)
- Animals that are fully protected in California under the California Fish and Game Code (Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians])
- Bats identified as medium or high priority on the Western Bat Working Group regional priority species matrix (Western Bat Working Group 2017)
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.)
- Plants considered by CDFW and the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Rare Plant Ranks 1B and 2) (CDFW 2020b; CNPS 2020)
- Plants identified by CDFW and CNPS as plants of limited distribution (Rare Plant Rank 3), (CDFW 2020b; CNPS 2020), which may be included as special-status species on the basis of local significance or recent biological information. Rare Plant Rank 4 species were not evaluated, due to the low quality of habitats in the project area.

Special-Status Plants

Based on a review of the U.S. Fish and Wildlife Service (USFWS) (2020) species list, the California Natural Diversity Database (CNDDB) (CDFW 2020b) records search, and CNPS Inventory (CNPS 2020), 38 special-status plant species were identified as having potential to occur in the project area (Appendix D). Due to the level of previous and ongoing disturbance and urban development in the project area, none of the species in Appendix D are considered to have potential habitat in the project area. Blooming-period surveys for special-status plants have not been conducted in the project area but are not considered necessary because of the lack of suitable habitat in the project area, and special-status plants are not discussed further.

Special-Status Animals

Based on the USFWS (2020) species list, CNDDB (CDFW 2020b) records search, and fish resources identified under Section 3.3.2.1, 35 special-status animal species were identified as having potential to occur in the project area. Two species, green sea turtle (*Chelonia mydas*) and short-tailed albatross (*Phoebastria albatrus*), were excluded from consideration because these species only inhabit the open sea (and the albatross does not nest on land in the U.S.). Of the 33 special-status animal species identified, one species (pallid bat [*Antrozous pallidus*]) has moderate potential to

occur in the project area based on its known range and presence of suitable habitat. The remaining 32 special-status animals have low to no potential to occur in the project area and are not discussed further. All 33 special-status animals that were considered are listed in Appendix D, which identifies their regulatory status, distribution, habitat requirements, and a rationale for their potential to occur in the project area. Pallid bat is discussed briefly below.

Pallid Bat and Roosting Colonies of Non-Special-Status Bats

Pallid bat is a California species of concern and is considered a high-priority species in California by the Western Bat Working Group. Pallid bat is found throughout most of California at low to middle elevations (6,000 feet) in a variety of habitats including desert, brushy terrain, coniferous forest, and non-coniferous woodlands. Daytime roost sites include rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are commonly under bridges but are also in caves and mines (Brown and Pierson 1996). Hibernation may occur during late November through March. Pallid bats breed from late October through February (Zeiner et al. 1990b:70) and one or two young are born in May or June (Brown and Pierson 1996).

CDFW requires that substantial roost colonies of non-special-status bats (such as Mexican free-tailed bat [*Tadarida brasiliensis*]) be protected from disturbance, especially during the breeding and hibernation seasons.

During the field survey, the ICF wildlife biologist examined the US-101 bridge structures and buildings within the project area for potential bat roosting habitat and evidence of bat use (i.e., guano piles, urine staining). The southbound US-101 bridge structure does not have crevices or other spaces on the underside of the bridge that could be used by bats. Open seams on the outside of this structure are too exposed and would not provide suitable roosting habitat. The northbound bridge structure contains open seams and wood boxes on the underside of the structure that provide potential bat roosting habitat. No signs of bat use were observed under or around the potential roosting habitat. Only one building in the project area, a dry-cleaning business with a barrel tile roof, contained potential bat roosting habitat (bats could roost under the curved tiles). The biologist walked around a portion of this building and did not see evidence of bat use, but a thorough survey was not conducted. Pallid bat and colonies of non-special-status bats could roost in the northbound US-101 bridge structure or dry-cleaning business in the project area.

Nesting Migratory Birds

Non-special-status migratory birds could nest in trees, shrubs, and ground vegetation in the project area. The breeding season for most birds is generally from February 15 to August 31. The occupied nests and eggs of migratory birds are protected by federal and state laws, including the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3503.5. USFWS is responsible for overseeing compliance with the Migratory Bird Treaty Act, and CDFW is responsible for overseeing compliance with the California Fish and Game Code and making recommendations on nesting bird protection. Migratory birds that are likely to nest in the project area are those that are common and highly adapted to human disturbance such as northern mockingbird (*Mimus polyglottos*) and western scrub jay (*Aphelocoma californica*).

Invasive Plant Species

Invasive plant species are species designated as federal noxious weeds by the U. S. Department of Agriculture, species listed by the California Department of Food and Agriculture, and invasive plants

identified by the California Invasive Plant Council. Invasive plants displace native species, change ecosystem processes, alter plant community structure, and reduce wildlife habitat quality. The plant species observed table in Appendix D lists the invasive plant species identified by the California Department of Food and Agriculture and California Invasive Plant Council that were observed during the botanical survey in the project area (California Department of Food and Agriculture 2021; California Invasive Plant Council 2021). Invasive plant species occur in ruderal and perennial stream land cover types in the project area. The infestation of the project area by these species generally is limited; they occur primarily as scattered individuals.

3.3.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.3.2.1 Methodology

The impact analysis for biological resources was conducted by evaluating the potential effects on special-status species and other biological resources that could result from project implementation. The proposed locations of transit center facilities under the various alternatives in the project area (see Figure 2-2) were evaluated for their potential to affect biological resources during construction and operation. Existing information listed below and information collected during the site visit were used to determine the presence or potential presence of biological resources in the project area. Potential effects on biological resources in the project area were based on the likelihood that construction or operation of the proposed project would directly or indirectly affect these resources. Construction-related impacts could result in temporary or permanent disturbance of biological resources in the project area. In assessing the magnitude of potential impacts, the following assumptions were made regarding construction- and operation-related impacts on biological resources:

- Potential construction-related effects include noise and ground disturbance caused by building demolition and removal, vegetation removal, grading, and transit center construction. All vegetation would be removed in areas that are cleared and graded for transit center facilities. Common animals in these areas would be displaced or destroyed during construction.
- Other than the limited area within and along Irwin Creek, the project area does not contain wildlife corridors. The developed nature of the project surroundings currently limits wildlife movement through the project and surrounding areas.
- Because the proposed project is within a highly developed area, indirect impacts on biological resources from operation of the transit center are not expected.
- Trees and other vegetation in the project area may be trimmed or removed.
- For the Under the Freeway Alternative, construction activities in Irwin Creek would include placement of structures to dewater the creekbed during construction, construction of three double-box culverts, and placement of rock slope protection in the creek.

Review of Existing Information

The sources below were used to develop lists of special-status plant and animal species and to identify other sensitive biological resources (e.g., sensitive natural communities) that could be affected by the proposed project.

- CNPS's online *Inventory of Rare and Endangered Plants of California* records search of the San Rafael U.S. Geological Survey 7.5-minute quadrangle (CNPS 2020)
- CNDDB records search of the San Rafael U.S. Geological Survey 7.5-minute quadrangle (CDFW 2020b)
- Information for Planning and Consultation Resource List (unofficial USFWS list of endangered and threatened species that may occur in the project area or be affected by the proposed project) (USFWS 2020)
- *Fish Species of Special Concern in California* (Moyle et al. 2015), *Inland Fishes of California* (Moyle 2002), and the California Fish Website (University of California, Davis 2021)

Due to the developed nature of the project area, the CNPS inventory and CNDDB records search were limited to the San Rafael U.S. Geological Survey quadrangle rather than obtaining an inventory from and search of additional quadrangles, as is usual practice. The USFWS, CNDDB, and CNPS lists can be found in Appendix E.

Field Survey

An ICF botanist/wetland ecologist and wildlife biologist conducted a survey of the project area on August 5, 2020. The project area encompassed the footprints of all alternatives as shown on Figure 2-2. The biologists walked transects throughout the project area and identified land cover types and potential habitat for special-status species. The wildlife biologist examined the US-101 bridge structures and buildings within the project area, identified potential bat roosting habitat, and looked for evidence of bat use (i.e., guano piles, urine staining). The biologists also walked to as close as possible to the confluence of Irwin and San Rafael Creeks to determine if there were any barriers between Irwin Creek and San Rafael Creek. Lists of plant and animal species observed were recorded and representative photographs of the project area were taken. Lists of plants and animals observed in the project area are provided in Appendix D.

3.3.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to biological resources.

Would the proposed project:

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

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- 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?
- 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?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

3.3.2.3 Impacts

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

Construction

Pallid Bat and Roosting Colonies of Non-Special-Status Bats

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives

Construction of the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would not result in removal or disturbance of suitable roosting habitat for pallid bat or non-special-status bats. Therefore, these alternatives would have ***no impact*** on pallid bat or colonies of non-special-status bats.

Under the Freeway Alternative

Construction of the Under the Freeway Alternative would result in disturbance of potential bat roosting habitat in the northbound US-101 bridge structure when construction activities are conducted under and near the bridge. However, the ambient noise level is high due to road noise above and adjacent to the bridge and construction noise is unlikely to result in effects on bats that may be roosting in the bridge. Construction of the Under the Freeway Alternative would result in the removal of one building that provides potential bat roosting habitat. If pallid bats or a colony of non-special-status bats are using this building for roosting, bats could be injured or killed during demolition. Removal of occupied roost habitat would also displace bats, causing them to relocate to another roost site and potentially compete with other bats for the roost site. Because pallid bat is considered imperiled or is at high risk of imperilment (Western Bat Working Group 2017) and non-special-status bat colonies are rare, the injury or mortality of pallid bat or a colony of non-special-

status bats and the removal of roosting habitat would be considered **a significant** impact. Implementation of Mitigation Measures MM-BIO-CNST-1 and MM-BIO-CNST-2 would reduce this impact to a less-than-significant level. Therefore, the impact would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Operation of the San Rafael Transit Center, under any alternative, is not anticipated to result in impacts on any candidate, sensitive, or special-status species. Therefore, operations from any alternative would have ***no impact*** on pallid bat and roosting colonies of special-status bats.

Mitigation Measures

If the Under the Freeway Alternative is selected and constructed, Mitigation Measures MM-BIO-CNST-1 and MM-BIO-CNST-2 would be implemented to reduce potential impacts on pallid bat and roosting colonies of special-status bats.

MM-BIO-CNST-1: Conduct Environmental Awareness Training for Construction Employees

The project proponent shall retain a qualified biologist to conduct environmental awareness training for construction crews before project implementation. The awareness training shall be provided to all construction personnel and shall brief them on the need to avoid effects on sensitive biological resources (i.e., pallid bat and roosting colonies of bats, Irwin Creek, and active nests of migratory birds) in and adjacent to the construction area. The education program shall include a brief review of pallid bat (including its legal status, life history, habitat requirements, and photographs of the species) and shall identify potential roosting habitats in the project area. The training shall also include information on the locations of any active migratory bird nests in the project area. The biologist shall describe the protective measures that must be adhered to by all construction personnel to reduce or avoid effects on sensitive biological resources during project implementation. This includes the steps to be taken if a sensitive species or an active migratory bird nest is found within the construction area (i.e., notifying the crew foreman, who will call the City's designated biologist).

In addition, construction employees shall be educated about the importance of controlling and preventing the spread of invasive plant infestations. An environmental awareness handout that describes and illustrates sensitive resources to be avoided during project construction and identifies all relevant permit conditions shall be provided to each crew member. The crew foreman shall be responsible for ensuring that crew members adhere to the guidelines and restrictions. Education programs shall be conducted for appropriate new personnel as they are brought on the job during the construction period.

MM-BIO-CNST-2. Conduct Preconstruction Surveys for Bats and Implement Protective Measures

Prior to removal of the dry-cleaning business that provides potential bat roosting habitat, a qualified bat biologist and/or a professional bat removal expert shall conduct an initial daytime survey to look for bats and evidence of bat use and/or presence. The biologist and/or the

professional bat removal expert shall examine both the inside and outside of the building for potential roosting habitat, as well as routes of entry to the structure. If all areas of the building can be examined and no signs of bat use are present, a follow-up preconstruction survey of the interior and exterior of the structure by a qualified biologist shall be conducted within 24 hours of demolition.

If all areas of the building can be examined and bats or signs of bat use are observed, the following measures shall be implemented:

- The qualified bat biologist and/or professional bat removal expert shall exclude bats from using the building as a roost site, such as by sealing off entry points. Prior to installing exclusion measures, the qualified biologist and/or professional bat removal expert shall re-survey the structure to ensure that no bats are present.
- Installation of exclusion devices shall occur before the maternity season and prior to hibernation, generally from March 1 to 30 or September 15 to October 30, to preclude bats from occupying a roost site during demolition. Exclusionary devices shall only be installed by an experienced bat biologist or professional bat removal expert.
- A preconstruction survey of the interior and exterior of the structure shall be conducted within 24 hours of demolition to confirm that no bats are present.

If all areas of the building cannot be examined or if bats or signs of bat use are present and exclusion measures are not or cannot be installed as described above, the following protective measures shall be implemented:

- The qualified biologist shall work with the project proponent and CDFW to develop a plan to discourage or exclude bat use prior to demolition. The plan may include installing exclusion measures or using light or other means to deter bats from using the structure to roost. CDFW may recommend surveys to identify bat species present using night goggles or active acoustic monitoring using full-spectrum bat detectors.
- A preconstruction survey of the interior and exterior of the building shall be conducted within 24 hours of demolition.
- To avoid impacts on maternity colonies or hibernating bats, the structure shall not be demolished while bats are present, generally between April 1 and September 15 (maternity season) and from October 30 to March 1 (hibernation).
- Removal of roosting habitat shall only occur only following the maternity season and prior to hibernation, generally between September 15 and October 30, unless exclusionary devices are first installed.

CDFW may require compensatory mitigation for the loss of roosting habitat depending on the species present and size of the bat roost. Compensation, if required, shall be determined in consultation with the CDFW, and may include the construction, installation, and monitoring of suitable replacement habitat on site or near the project area.

Have a Substantial Adverse Effect on any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

All Build Alternatives

The project area does not support any riparian habitat. The only sensitive natural community is the perennial stream, Irwin Creek. Impacts on this creek are analyzed below. Therefore, there would be ***no impact*** on riparian habitat or non-creek sensitive natural community related to construction or operations.

Mitigation Measures

No mitigation is required.

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

State and federally protected wetlands in the State CEQA Guidelines are intended to also include non-wetland waters. Therefore, this impact includes the potential effects on Irwin Creek in the project area. Irwin Creek is a water of the United States, subject to regulation under CWA Section 404 and under the jurisdiction of USACE, and is a water of the State subject to regulation under the Porter-Cologne Act and under the jurisdiction of the RWQCB.

Construction

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives

San Rafael Creek is outside of the project area. Construction of the proposed project, therefore, would have no impact on San Rafael Creek. Construction of the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would have no effect on Irwin Creek, because the creek is outside of the project footprints for these alternatives. There would be ***no impact***, and no mitigation is required.

Under the Freeway Alternative

Implementation of the Under the Freeway Alternative would result in the placement of up to 0.27 acre of permanent fill in Irwin Creek for construction of double-box culverts with two openings up to 12 feet wide at Platforms A, D, and E. Rock slope protection would also be placed in the creek bed.

A total of up to 0.54 acre of temporary impacts on perennial stream in Irwin Creek would result from temporary structures placed below the ordinary high-water mark to dewater and temporarily reroute the creek during construction for installation of the box culverts.

Additional indirect impacts from project construction on water quality, such as increased turbidity and chemical runoff, could occur in perennial drainage habitat outside the project area. Water quality protection measures to avoid this impact would be required and implementation of construction site BMPs specified in the final Stormwater Pollution Prevention Plan would be

developed for the proposed project, as well as CWA Section 401 permit conditions to minimize introduction of construction-related contaminants and mobilization of sediment in Irwin Creek. Broadly, these BMPs would address soil stabilization, sediment control, wind erosion control, vehicle tracking control, non-stormwater management, and waste management practices. The BMPs would be based on the best conventional and best available technology.

State and federal agencies would require avoidance, minimization, and compensatory mitigation for the loss of perennial streams. The loss of perennial streams would be a **significant** impact because perennial streams provide a variety of important ecological functions and values. Implementation of Mitigation Measures MM-BIO-CNST-3 through MM-BIO-CNST-5 would ensure that the proposed project minimizes effects on perennial streams adjacent to the project construction area and compensates for the loss of perennial streams in the project area. Therefore, the impact would be ***less than significant with mitigation***.

Operations

Operation of the San Rafael Transit Center, under any alternative, would result in ***no impact*** on Irwin Creek or San Rafael Creek.

Mitigation Measures

If the Under the Freeway Alternative is selected and constructed, Mitigation Measures MM-BIO-CNST-1 (discussed above) and MM-BIO-CNST-3, MM-BIO-CNST-4, and MM-BIO-CNST-5 would be implemented to reduce potential impacts on protected wetlands.

MM-BIO-CNST-3: Install Orange Construction Fencing Between the Construction Area and Adjacent Sensitive Biological Resources

The project proponent or their contractor shall install orange construction fencing between the construction area and adjacent sensitive biological resource areas. Sensitive biological resources adjacent to the construction area that could be directly affected by the proposed project include Irwin Creek upstream and downstream of the construction area, active nests of migratory birds, and trees to be retained in the project area.

Barrier fencing around sensitive biological resource areas shall be installed as one of the first orders of work and prior to equipment staging. Before construction begins, the construction contractor shall work with the project engineer and a resource specialist to identify the locations for the orange construction fencing and shall place stakes around the sensitive resource sites to indicate these locations. The protected areas shall be designated as environmentally sensitive areas and clearly identified on the construction plans and described in the specifications. To minimize the potential for snakes and other ground-dwelling animals to be caught in the orange construction fencing, the fencing shall be placed with at least a 1-foot gap between the ground and the bottom of the fencing. The exception to this condition is where construction barrier fencing overlaps with erosion control fencing and must be secured to prevent sediment runoff. Barrier fencing shall be installed before construction activities are initiated, maintained throughout the construction period, and removed after completion of construction.

MM-BIO-CNST-4: Conduct Periodic Biological Monitoring

The project proponent shall retain a qualified biological monitor for the proposed project who shall visit the site periodically and a minimum of once per week during in-water construction work to ensure that fencing around environmentally sensitive areas is intact and that activities are being conducted in accordance with the agreed-upon project schedule and agency conditions of approval. The monitor shall provide the project proponent with a monitoring log for each site visit.

MM-BIO-CNST-5: Compensate for Temporary and Permanent Loss of Perennial Stream

The project proponent shall compensate for both temporary and permanent loss of perennial stream in compliance with the state (Section 401 Water Quality Certification or waste discharge requirements, Lake and Streambed Alteration Agreement) and federal (Section 404 permit) processes for the work that would occur in Irwin Creek. Specifically, the project proponent shall compensate for temporary impacts (impacts occurring during construction) on up to 0.54 acre of non-wetland waters of the United States in Irwin Creek by restoring the creek bed and bank to pre-project contours when construction is complete. Because there is little to no vegetation in the creek, no revegetation is necessary.

The project proponent shall compensate for the permanent fill of up to 0.27 acre of non-wetland waters of the United States in Irwin Creek by purchasing mitigation bank credits, which can be in the form of preservation and/or creation credits using the following minimum ratios:

- A minimum of 2:1 (2 acres of mitigation for each acre filled), for a total of up to 0.54 acre, if credits are for preservation of habitat; or
- A minimum of 1:1 (1 acre of mitigation for each acre filled), for a total of up to 0.27 acre if credits are for creation of habitat.

The actual compensation ratios shall be determined through coordination with the San Francisco Bay RWQCB and CDFW (Section 401 Water Quality Certification or waste discharge requirements, Lake and Streambed Alteration Agreement) and USACE (Section 404 permit) as part of the permitting process. The project proponent shall provide written evidence to the resource agencies that compensation has been established through the purchase of mitigation credits.

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

Construction

Fish and Wildlife Movement

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives

Construction of the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would not interfere with fish or wildlife movement because there are no streams or other natural areas in the footprints of these project sites that provide corridors for fish or wildlife. Therefore, the

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would have ***no impact*** on fish or wildlife movement.

Under the Freeway Alternative

The only semi-natural corridor through the Under the Freeway Alternative project site is Irwin Creek. Large box culverts under the creek road crossings allow fish and wildlife to move relatively unimpeded through this corridor. Common fish, birds, and some mammals could utilize the creek corridor for movement. Installation of cofferdams or other construction activities in Irwin Creek for the new bridges/viaducts for the Under the Freeway Alternative could temporarily interfere with movement through this corridor. This impact would be short term and temporary and would only affect animals that are common in developed areas. As such, this impact would be ***less than significant*** and no mitigation is required.

Native Wildlife Nursery Sites

All Build Alternatives

Native wildlife nursery sites in the project area consist of trees, shrubs, and ground vegetation that provide nesting habitat for migratory birds. Construction of the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would result in the removal or trimming of landscape trees associated with commercial properties. Construction of the Under the Freeway Alternative would result in removal or trimming of landscaped trees and shrubs in residential and commercial properties and ground vegetation along Irwin Creek. Vegetation removal during the nesting season of migratory birds (generally February 15 through August 31) could result in the injury or mortality of nesting birds. Because the proposed project is in an area with high human disturbance, noise, and activity, construction noise and visual disturbance during the nesting season are not anticipated to affect birds nesting in vegetation that is near the project area but would not be removed as a result of the proposed project. Removal or destruction of nests or construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. This impact could be **significant** if it resulted in the reduction of local populations of migratory birds. To ensure that active nests are not disturbed and that the Migratory Bird Treaty Act and California Fish and Game Code are not violated, Mitigation Measures MM-BIO-CNST-1 and MM-BIO-CNST-6 would be implemented. With implementation of these Mitigation Measures, the impact on nesting migratory birds would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Operation of the San Rafael Transit Center, under any alternative, would not interfere with any fish and wildlife movement or native wildlife nursery sites and therefore would have ***no impact*** on fish and wildlife movement or native wildlife nursery sites.

Mitigation Measures

Under any build alternative that is selected and constructed, Mitigation Measures MM-BIO-CNST-1 (discussed above) and BIO-CNST-6 would be implemented to reduce potential impacts on nesting migratory birds.

MM-BIO-CNST-6: Conduct a Preconstruction Survey for Nesting Birds and Implement Protective Buffers Around Active Nests

If work is scheduled to begin during the nesting bird season (February 15 through August 31), a qualified biologist shall conduct a preconstruction survey for nesting birds no more than 14 days before any tree or shrub trimming or removal or clearing of ground vegetation. If vegetation trimming, removal, or clearing does not begin within 14 days of the survey, vegetation to be affected shall be resurveyed for active nests. If an active nest is found in the survey area, the biologist shall determine and establish a no-work buffer around the active nest to limit disturbance until the nest is no longer active. The extent of the buffer shall depend on the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species. The biologist shall periodically monitor the nest to determine when the nest is no longer active and the buffer can be removed. Should an active bird nest be found in the project area during work activities, work in that area shall cease and the biologist shall be contacted to establish an appropriate no-work buffer zone.

Conflict with Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance

All Build Alternatives

Construction

Construction of any of the build alternatives would not conflict with any local general plan policies protecting biological resources. The City of San Rafael tree ordinance requires total removal of tree stumps and roots for removed trees, which would occur under any alternative for any trees in the project area. Construction activities for any alternative could potentially damage trees to be retained in the project area. This would be a potentially **significant** impact. Implementation of Mitigation Measure MM-BIO-CNST-3 would provide a sufficient safeguard against inadvertent damage associated with construction activities and would reduce this potential impact to ***less-than-significant levels with mitigation***.

Operations

Operation of the San Rafael Transit Center, under any alternative, would not conflict with any local policies or ordinances protecting biological resources, and there would be ***no impact***.

Mitigation Measures

Under any alternative that is selected and constructed, Mitigation Measure MM-BIO-CNST-3 (discussed above) would be implemented to reduce potential impacts on trees to be retained in the project area.

Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

All Build Alternatives

Construction

Marin County does not have a habitat conservation plan (HCP) or natural community conservation plan (NCCP) and there are no regionwide HCPs or NCCPs that encompass the project area. Therefore, construction of any of the alternatives would not conflict with any adopted HCP, NCCP, or other approved plan, and there would be ***no impact***.

Operations

Marin County does not have an HCP or NCCP and there are no regionwide HCPs or NCCPs that encompass the project area. Therefore, operation of San Rafael Transit Center under any alternative would not conflict with any adopted HCP, NCCP, or other approved plan, and there would be ***no impact***.

Mitigation Measures

No mitigation measures are required.

Section 3.4
Cultural Resources

The term *cultural resources* refers to sites, objects, buildings, structures, burials, districts, and landscapes. In this section, buildings, structures, districts, and landscapes will be referred to as *built environment resources*, and sites, objects, and burials as *archaeological resources*. Some archaeological sites may also be considered tribal cultural resources. Tribal cultural resources are discussed in Section 3.16. A *historical resource* is defined in California Environmental Quality Act (CEQA) Section 21084.1 and State CEQA Guidelines Section 15064.5 as one that meets at least one of the following criteria:

- A resource listed in, or determined by the State Historical Resources Commission to be eligible for listing in, the California Register of Historical Resources (CRHR) shall be considered to be historically significant (California Public Resources Code [PRC] Section 5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et seq.).
- A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k), or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g) shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1, Title 14 CCR, Section 4852).

A lead agency is allowed to determine that a resource may be a historical resource, as defined in PRC Sections 5020.1(j) or 5024.1, even if it is not listed in, or determined to be eligible for listing in, the CRHR; not included in a local register of historical resources, pursuant to PRC Section 5020.1(k); or identified in a historical resources survey meeting the criteria of PRC Section 5024.1(g).

3.4.1 Existing Conditions

3.4.1.1 Regulatory Setting

Federal

Although the proposed project is not anticipated to require compliance with Section 106 of the National Historic Preservation Act at this time, the National Register of Historic Places (NRHP) and federal guidelines related to the treatment of cultural resources are relevant for the purposes of determining whether cultural resources, as defined under CEQA, are present and guiding the

treatment of such resources. The sections below summarize the relevant federal regulations and guidelines.

National Historic Preservation Act and National Register of Historic Places

Built environment and archaeological resources are protected through the National Historic Preservation Act (16 United States Code [U.S.C.] 470f). The National Historic Preservation Act requires project review for effects on historic properties only when projects involve federal funding or permitting or occur on federal land; therefore, it is not applicable to discretionary actions at the municipal level. However, the National Historic Preservation Act establishes the NRHP, which provides a framework for resource evaluation and informs the process of determining impacts on historical resources under CEQA.

The NRHP is the nation's official comprehensive inventory of historic resources. Administered by the National Park Service, the NRHP includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Typically, a resource that is more than 50 years of age is eligible for listing in the NRHP if it meets any one of the four eligibility criteria and retains sufficient historical integrity. A resource less than 50 years old may be eligible if it can be demonstrated that it is of "exceptional importance" or a contributor to a historic district. NRHP criteria are defined in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*.

Properties that are listed in the NRHP, as well as properties that are formally determined to be eligible for listing in the NRHP, are automatically listed in the CRHR and, therefore, considered historical resources under CEQA.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (16 U.S.C. 470aa et seq.) was enacted in 1979 to provide more effective law enforcement to protect public archaeological sites. The Archaeological Resources Protection Act provides detailed descriptions of the prohibited activities and larger financial and incarceration penalties for convicted violators.

Archaeological and Historic Preservation Act

This act (16 U.S.C. Sections 469–469(c)-2) provides for preserving significant historic or archaeological data that may otherwise be irreparably lost or destroyed by construction of a project by a federal agency or under a federally licensed activity or program. This includes relics and specimens.

State

California Environmental Quality Act

CEQA, as codified in PRC Section 21000 et seq. and implemented by the State CEQA Guidelines (14 CCR Section 15000 et seq.), is the principal statute governing environmental review of projects in California. CEQA defines a historical resource as a property listed in, or eligible for listing in, the CRHR; included in a qualifying local register; or determined by a lead agency to be historically significant. In order to be considered a historical resource, a property must generally be at least 50

years old. Section 21084.1 of the PRC and Section 15064.5 of the State CEQA Guidelines define a historical resource for purposes of CEQA.

CEQA requires lead agencies to determine if a proposed project would have a significant effect on important historical resources or unique archaeological resources. If a resource is neither a unique archaeological resource nor a historical resource, the State CEQA Guidelines note that the effects of the project on that resource shall not be considered a significant effect on the environment (State CEQA Guidelines Section 15064.5(c)(4)). In addition, projects that comply with the secretary's standards benefit from a regulatory presumption under CEQA that they would have a less-than-significant impact on a historical resource (14 CCR 15126.4(b)(1)). Projects that do not comply with the secretary's standards may or may not cause a substantial adverse change in the significance of a historical resource and must be subject to further analysis to assess whether they would result in material impairment of a historical resource's significance.

Under CEQA, a substantial adverse change in the significance of a resource means the 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. Actions that would materially impair the significance of a historical resource are any actions that would demolish or adversely alter the physical characteristics that convey the property's historical significance and qualify it for inclusion in the CRHR, the NRHP, or in a local register or survey that meets the requirements of PRC Sections 5020.1(k) and 5024.1(g).

California Register of Historical Resources

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 indicating which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The CRHR criteria are based on the NRHP criteria (PRC Section 5024.1(b)). Certain resources are determined by CEQA to be automatically included in the CRHR, including California properties formally eligible for or listed in the NRHP. To be eligible for the CRHR as a historical resource, a resource must be significant at the local, state, and/or federal level under one or more of the following evaluative criteria, as defined in PRC Section 5024.1(c):

1. The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. The resource is associated with the lives of persons important in our past.
3. The resource embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
4. The resource has yielded, or may be likely to yield, information important in prehistory or history.

As with the NRHP, a significant historical resource must possess integrity in addition to meeting the significance criteria to be considered eligible for listing in the CRHR. Consideration of integrity for evaluation of CRHR eligibility follows the definitions and criteria from the National Park Service's *National Register Bulletin 15*.

Assembly Bill 52

Tribal cultural resources were originally identified as a distinct CEQA environmental category with the adoption of Assembly Bill (AB) 52 in September 2014. For all projects subject to CEQA that received a notice of preparation, notice of negative declaration, or mitigated negative declaration on or after July 1, 2015, AB 52 requires the lead agency on a proposed project to consult with the geographically affiliated California Native American tribes. The legislation creates a broad new category of environmental resources, "tribal cultural resources," which must be considered under CEQA. AB 52 requires a lead agency to not only consider the resource's scientific and historical value but also whether it is culturally important to a California Native American tribe.

AB 52 defines tribal cultural resources as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are included or determined to be eligible for inclusion in the CRHR; included in a local register of historical resources, as defined in PRC Section 5020.1(k); or determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to the criteria of PRC Section 5024.1(c) (CEQA Section 21074).

AB 52 also sets up an expanded consultation process. For projects initiated after July 1, 2015, lead agencies are required to provide notice of the proposed projects to any tribe that is traditionally and culturally affiliated with the geographic area that requested to be informed by the lead agency, following PRC Section 21018.3.1(b). If, within 30 days, a tribe requests consultation, the consultation process must begin before the lead agency can release a draft environmental document. Consultation with the tribe may include discussion of the type of review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and alternatives and mitigation measures recommended by the tribe. The consultation process will be deemed concluded when either (1) the parties agree to mitigation measures or (2) any party concludes, after a good-faith effort, that an agreement cannot be reached. Any mitigation measures agreed to by the tribe and lead agency must be recommended for inclusion in the environmental document. If a tribe does not request consultation, or to otherwise assist in identifying mitigation measures during the consultation process, a lead agency may still consider mitigation measures if the agency determines that a project will cause a substantial adverse change to a tribal cultural resource.

Assembly Bill 168

AB 168, adopted in September 2020, provides additional protection for tribal cultural resources as defined in AB 52. This bill applies in situations where a developer seeks to streamline approval under Senate Bill (SB) 35 and, in doing so, bypass CEQA requirements. AB 168 rectifies a loophole in SB 35 that allowed developers to apply for fast-tracked approval without notifying Native American tribes affiliated with the project area. Instead, under AB 168 projects would be ineligible for SB 35 and subject to CEQA if (1) the site of the proposed development is a tribal cultural resource that is on a national, state, tribal, or local historic register list, (2) the local government and the California Native American tribe do not agree that no potential tribal cultural resource would be affected by the proposed development, or (3) the local government and California Native American tribe find that a potential tribal cultural resource could be affected by the proposed development and the parties do not document an enforceable agreement regarding the methods, measures, and conditions for treatment of those tribal cultural resources, as provided.

Local

Marin County Ordinance 1589

The Marin County Code of Ordinances includes Ordinance 1589, which outlines procedures related to protecting archaeological resources in the county. Such protection procedures include the following:

- Requirement of a permit to excavate an Indian midden (Section 5.32.020)
- Designation of a liaison agency between institutions of higher learning or an association and the department of public works for the purpose of the study of Indian relics of archaeological significance (Section 5.32.030)
- Requirement of permits to excavate Indian middens to follow formats approved by the director of public works and to note that the excavation is for either archaeological or nonarchaeological purposes (Section 5.32.040)
- Requirement for the director of public works or designee to send the application for excavation to the liaison agency and, within 5 days of receipt, for the liaison agency to inform the director of public works if the midden is of archaeological significance; only non-archaeological midden sites will be issued a permit (Section 5.32.050)
- If the midden requesting permit for excavation is certified to have archaeological significance, allowance for the director of public works to issue a permit with certain conditions (Section 5.32.060)
- Requirement for actions done under an issued permit to follow the permit's terms and conditions (Section 5.32.070)
- Requirement that persons in violation of the chapter's provisions are guilty of a misdemeanor and shall incur punishments as listed under Section 1.04.270; violations that occur on multiple days will each be considered as separate violations per day (Section 5.32.090)

The conditions of Section 5.32.050 are:

A. Prior to nonarchaeological excavation or removal of materials from the middens, the permittee shall not excavate for a period of sixty days in order to allow archaeological excavation of the site.

B. The permittee or owner of the property shall be required to grant a license for the excavation, identification, and classification of artifacts and proper scientific analysis of materials having historical or archaeological significance to recognized institutions of higher learning or associations having as their major purpose the study of Indian relics and other sites having archaeological value. The terms of the license shall be such as are agreed to by the prospective licensee and property owner. (Ord. 1825 § 2, 1971: Ord. 1589 § 6, 1967)

San Rafael Municipal Code

The City of San Rafael's (City's) municipal code outlines the duties of the Planning Commission, which oversees the implementation of two ordinances regarding cultural resources.

Chapter 2.18 of the Municipal Code, Historic Preservation

The San Rafael Municipal Code includes Chapter 2.18, which states the purpose of the City's historic preservation municipal code and reasons for the protection of historic resources. Such protection procedures promote the health, safety, economy and general welfare of the public by: (a) acknowledging that structures, sites, and areas serve as reminders of history including eras, events, and persons important in local, state, and national history; or they serve as substantial representations of architectural styles from the past; are architectural landmarks; are unique city assets; or they provide physical evidence of past generations; (b) requiring maintenance of proper historic settings for said structures, sites, and areas; (c) providing financial incentives such as the maintenance and improvement of property values, neighborhood stabilization, and city tourism; (d) promoting a variety of architectural styles from numerous time periods throughout the city; and (e) providing tax incentives and deductions to owners of designated historic buildings and sites through state and federal laws (Ord. 1191 § 1 (part), 1975).

Chapter 2.18 also specifies that the Planning Commission may identify "structures of historic, architectural or aesthetic merit which have not been designated as landmarks and are not situated in designated historic districts. […] The purpose of this list shall be to recognize and encourage the protection, enhancement, perpetuation and the use of such structures. […] Nothing in this chapter shall be construed to impose any regulations or controls upon such structures of merit included on the said list and neither designated as landmarks nor situated in historic districts" (Ord. 1191 § 1 (part), 1975).

Chapter 2.18 requires Planning Commission review of exterior modifications or demolition of structures designated as landmarks and those within a historic district, as identified in the *San Rafael Historical/Architectural Survey* (described in more detail below). The City Council has the authority to add or eliminate properties or districts to the historical resource inventory produced through the *San Rafael Historical/Architectural Survey*.

Chapter 2.19 of the Municipal Code, Archeological Resources Protection

2.19.010 - Purpose.

Certain lands and geographic areas within the city of San Rafael contain significant archeological resources, which include deposits and remains of the local Native Americans and other early inhabitants. These deposits and remains represent an important part of the early history of San Rafael and the culture of the Native American community. Without proper regulations and monitoring, continued excavation and grading activities within the city council significantly impact these resources.

In recognizing the importance of protecting significant archeological resources, the city of San Rafael has determined to:

(a) Establish a procedure for identifying, when possible, archeological resources and potential impacts to such resources prior to authorizing excavation and grading activities; (b) Provide valuable information and direction to property owners in the community in order to make them aware of these resources; (c) Implement measures that would preserve and protect valuable archeological resources, when there is a potential for encountering such resources; (d) Establish a procedure which would ensure that appropriate advisory agencies and organizations are contacted and consulted, when there is a probability that archeological resources could be encountered during an activity involving grading, excavation, and/or construction; (e) Establish and implement specific protection and preservation measure in the event archeological resources are encountered during grading, excavation and/or construction. (Ord. 1772 § 2 (part), 2001)

2.19.020 - Archeological sensitivity map.

Geographic areas of archeological sensitivity shall be depicted on a citywide map. This map shall be prepared by an archeologist and shall be maintained by and kept on file with the city department of community development. This map shall:

(a) Identify sensitivity level based on the criteria adopted by council resolution; (b) Be used as a reference by the city whenever considering or analyzing projects involving excavation and grading; and (c) Be reviewed and updated periodically as new information becomes available. (Ord. 1772 § 2 (part), 2001)

2.19.030 - Procedures and regulations for archeological resource protection.

Specific procedures and regulations shall be implemented by the city to ensure the protection of archeological resources as adopted by council resolution. (Ord. 1772 § 2 (part), 2001)

The City of San Rafael General Plan 2020 and Draft San Rafael General Plan 2040

In 2004, the City adopted *The City of San Rafael General Plan 2020* to guide future planning efforts and development in the city. *The City of San Rafael General Plan 2020* includes the following goal and policies related to the protection of built environment and archaeological resources (City of San Rafael 2016):

Goal 28, Protected Cultural Heritage: It is the goal for San Rafael to have protected and maintained historic buildings and archaeological resources as part of San Rafael's cultural heritage.

CA-13. Historic Buildings and Areas. Preserve buildings and areas with special and recognized historic, architectural or aesthetic value including but not limited to those on the San Rafael Historical/Architectural Survey. New development and redevelopment should respect architecturally and historically significant buildings and areas.

CA-13a. Inventory Update. Update the City's Historical/Architecture Survey, which is an inventory of buildings of architectural value, historic buildings and/or districts and historic elements such as signs, monuments and gates. Maximize the use of volunteers in updating the survey with professional assistance as needed.

CA-13b. Preservation Ordinance. Continue to implement the City's Historic Preservation Ordinance through the design review process. Update the City's Historic Preservation Ordinance and review the development application review procedures for the various classifications of buildings on the Historical Architecture Survey, including effective ways to review proposed changes to historic properties.

CA-13c. Historic Preservation Advisory Committee. Establish a technical advisory committee or contract with an architectural historian, to provide the Design Review Board and Planning Commission with advice in design matters and policies related to the preservation and/or modification of historic structures.

CA-13d. Public Education. Encourage historic preservation activities and the formation of historic preservation groups in neighborhoods to heighten awareness of historic landmarks and how architecture and landscape define the character of an area. Encourage schools to incorporate units about local history into their school programs. Continue to support efforts to install plaques recognizing historic locations in San Rafael.

CA-13e. Preservation Reference Materials. Maintain at Falkirk a special collection of preservation materials and resources. Enhance public awareness of the collection, and include a photographic record of local preservation efforts.

CA-13f. Public Events. Encourage organizations such as the Marin Historical Society to produce events, publications, and exhibits about the historic resources that exist in San Rafael.

CA-13g. Public Recognition. Through the annual Design Awards program, publicly recognize property owners who have done an exceptional job of preserving an historical property.

CA-14. Reuse of Historic Buildings. Encourage the adaptation and reuse of historic buildings, in order to preserve the historic resources that are a part of San Rafael's heritage.

CA-14a. Historical Building Code. Use the State historical building code to encourage adaptive reuse of historic buildings. Responsibility: Community Development Timeframe: Ongoing Resources: Staff Time CA-14b. Zoning. Investigate possible zoning exemptions to regulations such as on-site parking, signs, and setbacks in order to encourage adaptive reuse.

CA-14c. Incentives. Investigate the use of incentives such as transfer of development rights, easements, and property tax relief to encourage preservation of historic buildings.

CA-15. Protection of Archaeological Resources. Recognize the importance of protecting significant archaeological resources by: identifying, when possible, archaeological resources and potential impacts on such resources; providing information and direction to property owners in order to make them aware of these resources; implementing measures to preserve and protect archaeological resources.

CA-15a. Archeological Resources Ordinance. Continue to implement the existing Archeological Resources Ordinance.

The City is in the process of updating *The City of San Rafael General Plan 2020*. Published in October 2020, the Draft *San Rafael General Plan 2040* includes goals and policies under the Community Design and Preservation Element relating to cultural resources. The plan includes the Goal CDP-5, "Protect and maintain the city's historic and archaeological resources," and the following policies (City of San Rafael 2020a:5-25–5-33):

- Policy CDP-5.1: Preserve buildings and areas recognized in the city's architectural survey
- Policy CDP-5.2: Maintain and update the city's historic resource inventory
- Policy CDP-5.3: Encourage historic or architectural conservation districts
- Policy CDP-5.4: Develop financial incentives for historic resource stewardship and maintenance
- Policy CDP-5.5: Encourage adaptive reuse redevelopment
- Policy CDP-5.6: Ensure integrity protections to historic resources
- Policy CDP-5.7: Maintain historic properties
- Policy CDP-5.8: Encourage local preservation advocacy
- Policy CDP-5.9: Encourage historic preservation education
- Policy CDP-5.10: Utilize historic resources for economic benefits
- Policy CDP-5.11: Acknowledge the sustainability component of historic preservation
- Policy CDP-5.12: Ensure a culturally inclusive approach to historic preservation efforts
- Policy CDP-5.13: Protect archaeological resources
- Policy CDP-5.14: Protect Native American resources through coordination with Native American community ambassadors

Downtown San Rafael Precise Plan

As of March 2021, the City of San Rafael is in the process of preparing the *Downtown San Rafael Precise Plan* (City of San Rafael 2020b). The City released a public review draft of the document in December 2020. The preparation of the plan involved an updated historical resources survey of the Downtown area, which is described in Section 3.4.2.1, Methodology, under "Built Environment Resources in the Plan Area." The *Downtown San Rafael Precise Plan* identifies two new potentially landmark-quality historic districts in the Downtown core (both outside the project area) and provides recommendations regarding updates to the City's historic preservation ordinance. The recommendations include establishing a historic preservation commission or changing the City's project review roles, highlighting preservation incentive opportunities, revising landmark designation criteria, and updating historic district documentation standards. The draft *Downtown San Rafael Precise Plan* also outlines a review matrix for allowable changes to designated historical resources in the Downtown area.

3.4.1.2 Environmental Setting

The environmental setting of the project area consists of the existing conditions and relevant historical conditions of the CEQA study area, which is limited to the footprints of the four alternatives being considered in addition to the entirety of one parcel (Assessor's Parcel Number 011-275-02) partially overlapped by the footprint. This parcel contains a historic-aged building, 709–711 4th Street, that is immediately adjacent to the boundary of the project footprint. The CEQA study area is delineated to consider potential impacts on built environment and archaeological resources as a result of project activities, including ground disturbance, as well as alteration, relocation, or demolition of buildings in the project area. The proposed project could also result in changes to the setting of built environment resources adjacent to the project area. However, the proposed project exists in a developed area at the eastern edge of Downtown San Rafael, which has experienced a continuum of gradual change over the course of more than 100 years that is generally consistent with the degree of change proposed by the proposed project. There appears to be a very low likelihood that any project activities would change significant characteristics in the setting of any built-environment historical resource adjacent to the project area. As such, adjacent built environment resources that the proposed project would not physically change are not included in the CEQA study area.

This section describes the development and general physical attributes of properties within the CEQA study area, provides an overview of the development of Downtown San Rafael as related to cultural resources, and presents a summary of known built environment and archaeological resources evaluations for CRHR eligibility and their status as historical resources pursuant to CEQA, as well as the potential for the project area to contain as-yet undocumented archaeological resources and human remains. Further details on the resources' characteristics and history are available in Appendix G.

Existing Environment

The project area lies within the North Bay Region of the San Francisco Bay area, where warm, dry summers are complemented by cool, wet winters with an abundance of rainfall, averaging 25–50 inches per year. This unique climate is complemented by a diverse topographic landscape bounded on the west by the Pacific Ocean, to the east by low coastal mountains and the Central Valley, and to the south by the southern coast mountain ranges. Accordingly, this region has a rich and diverse

natural environment with lush stands of redwood, pine, and fir trees, as well as grassland, oak, and chaparral zones. Large expanses of these varied vegetation zones form extensive, highly productive interfaces where prehistoric people exploited staples, such as acorns. Moreover, these widespread verdant areas support abundant species of wildlife, also a staple of prehistoric people (Baumhoff 1978).

The ocean and the San Francisco Bay region, including San Pablo Bay, Carquinez Strait, and Suisun Bay, provide a rich habitat that sustained a large breadth of floral and faunal resources that were important to prehistoric lifeways. The abundance of shellfish, salmon, and other sea life along the Pacific shores further supported the densest prehistoric population in this region. Testament to this is seen in the extensive shell mounds dotting the North Coast Region of California (Baumhoff 1978).

The geologic legacy of the San Francisco Bay area also proved important to local prehistoric groups. Rocks and minerals for tool production and other uses were abundant in the area. Sources of obsidian continue to be present at Napa Mountain and Anadel, and Franciscan chert can be found in local streambeds; equally important were deposits of asphaltum in Marin County and hematite and cinnabar in Sonoma County. The geology of the project vicinity is also an important consideration when evaluating factors that affect archaeological site visibility. The CEQA study area extends across a variety of geomorphic environments—including alluvial, colluvial, and estuarine—that actively deposited sediments during the Holocene epoch (Wagner et al. 2002; Rice et al. 2002). A large portion of the CEQA study area is on Holocene estuarine sediments along San Pablo Bay. The CEQA study area has also been subject to anthropogenic geomorphic forces, including widespread filling, during the historic and modern periods (Wagner et al. 2002; Rice et al. 2002). Given this, it is possible that archaeological sites—those that were formed while the CEQA study area was geomorphically active—may be buried below the ground surface.

Prehistory

The prehistoric cultural chronology for the Bay Area was developed over a century of organized archaeological survey, from N. C. Nelson in 1906 to the present. Since the 1950s, archaeological work in Marin, San Francisco, and Contra Costa Counties has led to further refinement of the cultural sequence of the Early Holocene (Lower Archaic), Early Period (Middle Archaic), Lower Middle Period (Initial Upper Archaic), Upper Middle Period (Late Upper Archaic), Initial Late Period (Lower Emergent), and Terminal Late Period (Protohistoric Ambiguities).

The Early Holocene (Lower Archaic, calibrated [cal] 8000–3500 B.C.) is characterized as a mobile forager pattern, with milling slabs, handstones, and a variety of large, wide-stemmed and leaf-shaped projectile points, largely composed of local Franciscan chert dominating the assemblage (Hylkema 2002:235; Milliken et al. 2007:114). During the Early Period (Middle Archaic, cal 3500–500 B.C.), several technological and social developments emerged; new groundstone technology and the first cut shell beads in mortuaries signaled sedentism (living in one place for a period of time), regional symbolic integration, and increased regional trade in the Bay Area (Vellanoweth 2001). The Lower Middle Period (Initial Upper Archaic, cal 500 B.C.–cal A.D. 430) is marked by a "major disruption in symbolic integration systems" (Milliken et al. 2007:115) and new bone tools appeared for the first time, including barbless fish spears, elk femur spatulas, tubes, and whistles, as well as coiled basketry manufacture (Bennyhoff 1986:70; Bieling 1998:218). During the Upper Middle Period (Late Upper Archaic, A.D. cal 430–1050), many sites from the previous period were abandoned, and single-barbed bone fish spears, ear spools, and large mortars were developed (Milliken et al. 2007:116).

Following the Archaic Period, the Initial Late Period (Lower Emergent, A.D. cal 1050–1550) is marked by an increase in sedentism, status ascription, and ceremonial integration in lowland Central California (Fredrickson 1973). Increased social stratification throughout the Bay Area after 1250 A.D. is expressed in mortuary practices through the quality of goods in high-status burials and cremations (Fredrickson 1994). The Terminal Late Period (Protohistoric Ambiguities) is indicated by changes in artifact types and mortuary objects including toggle harpoons, hopper mortars, plain corner-notched arrow-sized projectile points, clamshell disk beads, magnesite tube beads, and secondary cremation in the North Bay (Bennyhoff 1994:54; Wickstrom 1986).

Ethnography

Coast Miwok once inhabited the region that encompasses the project area. Coast Miwok territory encompassed the area along the coast and inland between Duncan's Point north of Bodega Bay southward to San Pablo Bay. Their territory extended as far inland as the Napa River. Near Cotati, three villages existed, one giving Cotati its name. Six villages were south of Cotati to Petaluma. Coast Miwok villages are mainly near watercourses and not necessarily near the coast (Kelly 1978).

Coast Miwok political organization revolved around village life. In larger villages, the chief held a non-hereditary position. The chief was responsible for taking care of the villagers, advising them, and overseeing activities in the mixed dance house. The reigning chief and four elderly women tutored upcoming chiefs (Kelly 1978). Other leaders of the Coast Miwok included the woman chief and maien. The woman chief functioned primarily as a ceremonial leader deeply involved in the Bird Cult that presided over the Acorn Dance and Sunwele Dance. The maien was the head of the female ceremonial house. She directed construction of new dance houses, hauled wood for festivals and events, supervised the preparation of food for special events, sent invitations for dances, and often selected dance performers (Kelly 1978).

Coast Miwok villages were composed of various structures including residential dwellings, sweathouses, and secret society dance houses. Residential dwellings were conical structures framed with willow or driftwood and thatched with bunches of grass, tule reeds, or rushes. Each house held from six to ten individuals and had a central stone hearth and a smoke hole in the roof. Sweathouses were round, semi-subterranean structures recessed into the earth 4 to 5 feet. A framework of poles supported a brush, grass, and earth covering. Secret society dance houses were much like the sweat lodges. One type was built for mixed gender dances, and another was for female secret society dances (Kelly 1978).

Subsistence was reliant on both plant and animal resources exploited along the coast and inland. Fishing and hunting were common, as was gathering plants and marine resources. The Coast Miwok relied on a diet of animals such as salmon, eels, crab, mussels, clams, mudhens, geese, bears, elk, deer, rabbits, squirrels, woodrats, and gophers. Plant resources gathered by the Coast Miwok included buckeye, pepperwood, seeds, greens, acorns, tobacco, and kelp. Acorns, an important staple in their diet, were pulverized into mush and meal for bread.

Historic-Era Development

Between the late 16th century and 18th century, several European explorers visited the region containing the present-day City of San Rafael. In 1579, British pirate Francis Drake landed in Marin County while on a world expedition. During the mid-18th century, while exploring the San Francisco Bay, Spanish Lieutenant Juan Manuel de Ayala entered present-day Marin County. Within a few

years, Spanish missionaries such as Gabriel Moraga (1812–1814), Luis Arguello, Father Blas Ordaz, and John Gilroy (1821) began settling the region now commonly referred to as the Bay Area, establishing missions including Mission San Francisco de Asís in San Francisco and Mission San Rafael Arcángel near present-day San Rafael in 1917 (Beck and Haas 1974:18; Fanning 2007:8–9; Kyle et al. 1990:174–175).

Between the 1830s and 1840s, Marin County land was deeded under Mexican land grants. Twenty-one large land grants were distributed among settlers and military figures, including landowners William Richardson and John Reed on Rancho Sausalito. Other land grants such as Corte Madera Del Presidio and Punta De Quentin encompassed present-day Larkspur (Alley 1972:95; Fanning 2007:8–9, 27).

Marin County remained largely unsettled during the Spanish and Mexican Periods. Mission San Rafael was abandoned in 1844 as Mexico and the United States struggled for territory in the region. In 1848, the United States defeated Mexico in the Mexican-American War and Mexico surrendered its Alta California land through the Treaty of Guadalupe Hidalgo.

Also in 1848, James Wilson Marshall discovered gold in El Dorado County in the Sierra foothills. News of gold discovery brought fortune-seekers from all over the world to California and demand for land in the state began increasing. By 1849 settlers entered the region in search of gold along the Corte Madera Creek. When the state of California was formed in 1850, Marin County was one of its original 27 counties.

Within a few years the abundance of gold declined, and miners turned to logging for land clearance. By the mid-1850s, ranchers and farmers had begun private operations in Marin County. During the 1870s, railroads began laying down tracks in the region in service of the timber and agricultural trade. Small towns such as San Rafael, Larkspur, and Corte Madera were founded in the county as a result of railroad development, which provided access, goods, and employment (Fanning 2007:93; Kyle et al. 1990:xiv–xv, 177).

During the early to mid-20th century, transportation expansion resulted in residential development in Marin County. Although railroads continued to expand throughout the county during the 1910s and 1920s, automobile popularity ultimately led to a decline in railroad use and development in favor of auto-oriented suburban development. Railroad progress ceased after the 1937 opening of the Golden Gate Bridge (U.S. Highway 101 [US-101]), which allowed residents to travel to Marin County from San Francisco via highway. By the late 20th century, Marin County had an established residential community with a population of approximately 250,000 residents (Fanning 2007:93; Marin Economic Commission 2007).

City of San Rafael

Surveyors first laid out the San Rafael town site in 1850; it became the county seat soon after and has remained so since that time. San Rafael grew quickly as it benefited from a flourishing cattle trade and its connectivity to San Francisco and other urban centers via steamboat (Levy 1976:16B). Growth patterns were further accelerated by the completion of the San Rafael & San Quentin Railroad in 1870. This railroad increased access to and from San Francisco and popularized Marin County as a retreat for San Francisco families (GANDA 2004a:11). The rail line was 3.5 miles in length and traversed marshy conditions between San Rafael and Corte Madera Creeks in order to bring passengers to the ferry landing in present-day San Quentin. The line's tracks roughly followed what is now Anderson Drive (Marin History Museum 2020).

A separate regional line called the North Pacific Coast Railroad was founded in 1874 and became the North Shore Railroad in 1902. The North Shore Railroad operated across Marin and Sonoma Counties, transporting both goods and passengers between Sausalito and Cazadero. In 1884, the Santa Fe and North Pacific Railroad built the shed-style San Rafael Union Station west of Tamalpais Avenue at the eastern end of the City's Downtown commercial district (DeGeorgey 2010). Multiple branches served San Rafael, with the tracks aligning along Tamalpais Avenue. In 1884, residences simultaneously developed adjacent to San Rafael's rail depot building and continued to fill nearby lots through the 1890s and early 1900s (ProQuest Digital Sanborn Maps 1894:13, 1907:17).

Under a larger consolidation effort undertaken by the Southern Pacific Railroad and Santa Fe Railway, the North Shore Railroad merged with the San Rafael & San Quentin Railroad in 1907 and became the Northwestern Pacific Railroad (NWP), a regional rail line that served the north coast of California (Pacific Coast Narrow Gauge 2016). NWP facilitated the transport of redwood timber from Northern California to markets in San Francisco and came to be known as the Redwood Empire Route (GANDA 2004a; AECOM 2014). The Southern Pacific Railroad acquired the NWP line in full in 1929, the same year that Sir Francis Drake Boulevard was extended west to Point Reyes Station. Southern Pacific Railroad built several depots along the route and also replaced San Rafael Union Station in 1929 with an updated Mission Revival-style depot building that included expanded indoor waiting areas and a café (ICF International 2013).

The federal government authorized funding in 1925 to establish US-101. The federal highway generally followed existing state and local routes between San Diego, California, and Seattle, Washington; its route passed through Marin County. Construction of the portion of US-101 in Marin County was completed in 1931 with the construction of a bridge over Richardson Bay near Mill Valley. Immediately east of Downtown San Rafael, US-101 followed a route between Tamalpais Avenue and Irwin Street. Construction of the highway required the demolition of residences and commercial properties in its path, including part of the early 1900s lumber yards (ProQuest Digital Sanborn Maps 1924:19, 1950:19). At the same time, the Great Depression led to a substantial decline in passenger use on the NWP and an almost complete halt in freight transportation (AECOM 2014). This, in combination with the rise in personal automobile ownership and the expanding highway system across the region, led to the decommissioning of several branch lines in Marin and Sonoma Counties. By the mid-1930s, the automobile had replaced rail as the preferred mode of travel and the NWP had abandoned over 138 miles of track (AECOM 2014). The construction of the Golden Gate Bridge in 1937 connected Marin to San Francisco via US-101 and solidified the transition in regional transportation from combined rail/ferry to automobiles. Commuter rail service in Marin County was discontinued altogether in 1941 (Landecker 2016).

That same year, the portion of US-101 in San Rafael was elevated via a two-lane viaduct to accommodate the increase in automobile traffic along the highway (Caltrans 1999). World War II brought an increased military presence to southern Marin County: shipyard jobs and the establishment of the United States Army Hamilton Field north of San Rafael resulted in an economic boon to the area (Levy 1976:16B). Following the end of World War II, many of the local wartime workers decided to stay in the Bay Area and settled in Marin County. Sanborn maps reveal that residential construction increased within a few blocks of the San Rafael depot between the 1920s and 1950s (ProQuest Digital Sanborn Maps 1924:19, 1950:19).

Traffic through San Rafael continued to increase in tandem with the local postwar population boom and associated residential development in the 1950s. The Richmond-San Rafael Bridge opened in 1956, which increased congestion in the city. The original raised viaduct was converted to

northbound-only lanes, and a parallel southbound viaduct was built in 1964, encroaching upon the air space near Tamalpais Avenue in San Rafael. The southbound viaduct was widened further in 1971 (Caltrans 1999).

The City's existing Downtown commercial and railroad corridors, both located just off the highway, made them an opportune location for the establishment of service stations and other automobile-related businesses in the 20th century. A Sanborn fire insurance map from 1924 shows two gasoline stations within the area surrounding the original San Rafael Union Station building on Tamalpais Avenue. After commuter rail service was discontinued, Greyhound Lines constructed a bus station adjacent to the current depot building that provided connectivity between San Francisco and NWP's Northern California lines that terminated at San Rafael at that time (Baseline Environmental Consulting 2020). The 1950 Sanborn fire insurance map illustrates a transit hub adjacent to the highway centered around the Greyhound bus station, with eight additional gas stations having been established as well as several car washes and auto sales lots in the area (Baseline Environmental Consulting 2020; ProQuest Digital Sanborn Maps 1950:19).

Residential and commercial development picked up in Downtown San Rafael after 1970 (Baseline Environmental Consulting 2020). The San Rafael depot closed in 1974, when local freight service was discontinued, and NWP halted rail service south of San Rafael altogether in 1981 when the railroad tunnel between San Rafael and Larkspur closed (AECOM 2014). Residents today depend on a combination of bus lines, personal vehicles, and ferry transit to commute to San Francisco. However, some sections of the NWP line remain in use in Marin County. In 2017, renewed interest in passage service led the Sonoma-Marin Area Rail Transit (SMART) agency to begin its operations in San Rafael (City of San Rafael 2020d).

3.4.2 Environmental Impacts

This section describes the impact analysis related to cultural resources for the proposed project. It describes the methods used to determine the project-level impacts and lists the thresholds used to conclude whether an impact would be significant under CEQA. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany the discussion of each identified significant impact, as applicable. Four different build alternatives, the Move Whistlestop Alternative, the Adapt Whistlestop Alternative, the 4th Street Gateway Alternative, and the Under the Freeway Alternative—which are all in Downtown San Rafael within 500 feet of the existing transit center—are being evaluated. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.4.2.1 Methodology

The impact analysis for cultural resources was conducted by evaluating the potential impacts on historical resources meeting the definition presented in PRC Section 21084.1 and State CEQA Guidelines Section 15064.5 (inclusive of built environment resources, archaeological resources, and human remains). The proposed locations of transit center facilities under the various build alternatives were evaluated for their potential to cause impacts on historical resources during construction and operation. As outlined below, a range of methods informed the identification of historical resources that could have the potential to be affected by the construction or operation of the San Rafael Transit Center. Per State CEQA Guidelines Section 15064.5(b)(2), the analysis

considers the potential for proposed project activities to materially impair the significance of a historical resource by causing direct changes to the physical characteristics of that resource as well as by causing changes in its immediate setting. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

Resource Identification Methodology

Several methodologies were employed for the purpose of determining the presence of significant cultural resources within the CEQA study area.

Northwest Information Center Records Search

ICF conducted a record search on May 21, 2020, at the Northwest Information Center (NWIC) in Rohnert Park, California, a part of the California Historic Resource Information System. This review identified 34 cultural resources studies that cover areas within or adjacent to the CEQA study area, as listed in Table 3.4-1.

Table 3.4-1. Previously Conducted Cultural Resources Studies In or Adjacent to the CEQA Study Area

Study Number	Author	Date	Title
S-10760	Terry Jones, Robert Gross, and Denise O'Connor	1989 (May)	*Historic Properties Survey Report for Construction of High Occupancy Vehicle Lanes on Route 101 from Lucky Drive to San Pedro Road and Modifications of Routes 101/580 Interchange, in Cities of San Rafael and Larkspur, Marin County, 4-MRN-101, P.M. 8.4/12.7 04232-115750*
	Terry Jones	1989 (March)	*Archaeological Survey Report for the Marin HOV Gap Closure, City of San Rafael, Marin County, California 4-MRN-101, P.M. 8.4/12.7 04232-115750*
	Denise O'Connor	1988 (Dec)	*Historic Architectural Survey Report for Construction of High Occupancy Vehicle Lanes on Route 101 from Lucky Drive to San Pedro Road and the Upgrading of the Route 101/580 Interchange 4-MRN-101, P.M. 8.4/12.7 04232-115750*
	Stephen Mikesell	1989	*Historical Resources Evaluation Report, Northwestern Pacific Railroad Tracks Within Project APE, 4-MRN-101, P.M. 8.4/12.7 04232-115750*
	California Department of Transportation, District 4	1999	*Historic Property Survey Report for the Marin HOV Gap Closure, City of San Rafael, Marin County, California, 04-MRN-101, PM 8.4/12.7, 04-115750*
	Katherine Dowdall and Nelson Thompson	1999 (Feb)	*First Addendum Positive Archaeological Survey Report for the Marin HOV Gap Closure, City of San Rafael, Marin County, California 04-MRN-101, PM 8.4/12.7 EA 4232-115750*
	Jeffrey Lindley and Daniel Abeyta	1999 (Mar)	*FHWA990311B: Historic Property Survey Report; 04-MRN-101, PM 8.4/12.7. HOV Gap Closure, State Route 101, City of San Rafael, Marin County, California*
	Andrew Hope	1999 (Sep)	*Addendum* (sic) *Historic Property Survey Report, For the Marin-101 HOV Gap Closure Project, in the City of San Rafael, Marin County, 04-Mrn-101, P.M. 8.2/12.7, EA 4232-115750*
S-13217	Thomas Origer	1990 (Nov)	*An Archaeological Survey for the AT&T Fiber Optics Cable, San Francisco to Point Arena, California*
	Thomas Origer	1990 (Dec)	*Archaeological Findings Regarding a Selection of a Route through Novato for the AT&T Fiber Optics Cable (letter report)*
	Thomas Origer	1991 (Apr)	*An Archaeological Study of Revised Portions of the AT&T Route near Santa Rosa and Sausalito (letter report)*
	Thomas Origer	1991 (May)	*Archaeological Study of AT&T Revised Fiber Cable Routes (letter report)*
	Thomas Origer	1992 (Sep)	*Archaeological Survey of Alternative Fiber Optics Cable Routes, Point Arena (letter report)*

Study Number	Author	Date	Title
S-16949	William Roop	1991 (Aug)	*A Cultural Resources Evaluation of a Proposed Reclaimed Water Pipeline in the San Quentin Point, Corte Madera, Larkspur, Kentfield and San Rafael Areas*
S-31737	Carole Denardo and Daniel Hart	2004 (Oct)	*Archaeological Resources Technical Report for the Sonoma Marin Rail Transit (SMART) Project, Sonoma and Marin Counties, California*
	Garcia & Associates	2004 (Oct)	*Historic Architectural Resources Technical Report for the Sonoma Marin Area Rail Transit (SMART) Project*
S-36941	Alex DeGeorgey	2010 (Apr)	*Negative Archaeological Survey Report of the Puerto Suello to Transit Center Connection Project (04-MRN-0-SRF), City of San Rafael, Marin County, California*
S-38714	Neal Kaptain	2012 (Mar)	*Historic Property Survey Report for the Puerto Suello Hill Path to Transit Center Connector Project, Caltrans District04, San Rafael, Marin County, California, Federal-Aid Proj. No.: NMTPL-5043 (023)*
	Neal Kaptain	2012 (Mar)	*Archaeological Survey Report for the Puerto Suello Hill Path to Transit Center Connector Project, Caltrans District 04, City of San Rafael, Marin County, California, Federal ID No.: NMTPL-5043 (023)*
	Neal Kaptain & E. Timothy Jones	2012 (Mar)	*Extended Phase I Report for the Puerto Suello Hill Path to Transit Center Connector Project, Caltrans District 04, City of San Rafael, Marin County, California, Federal ID No.: NMTPL-5043 (023)*
S-44351	Emily Darko	2014 (Jan)	*Archaeological Survey Report for the Proposed Freeway Performance Initiative Project, Marin County, California, 04-MRN-101, PM 0.0/27.6, 04-MRN-580, PM 2.4/4.5, EA 151600*
	Emily Darko	2013 (Nov)	*Extended Phase I Archaeological Testing at CA-MRN-157 (P-21-000182) and CA-MRN-4 (P-21-000035) for the Proposed Freeway Performance Initiative Project, Hwy 101 and 580, Marin County, 04-MRN-101, PM 0.0/27.6, 04-MRN-580, PM 2.4/4.5, EA 151600*

Study Number	Author	Date	Title
S-46535	Daniel Shoup	2015 (Mar)	*Historic Property Survey Report for San Rafael Regional Transportation System Enhancements Project, Marin County,04-MRN CML 5043(036)*
	Daniel Shoup	2014 (Jun)	*Archaeological Survey Report, San Rafael Transportation System Enhancements, City of San Rafael, Marin County, California, Caltrans District 04, Federal Project No. CML 5043(036)*
	Daniel Shoup	2014 (Dec)	*Extended Phase I Archaeological Survey Report, San Rafael Regional Transportation System Enhancement, City of San Rafael, Marin County, California, 04-MRN CML 5043(036)*
	Daniel Shoup	2015 (Mar)	*Finding of No Adverse Effect for San Rafael Regional Transportation System Enhancements, Marin County, 04-MRNCML 5043(036)*
	Daniel Shoup and Suzanne Baker	2014 (Aug)	*Extended Phase I Study Proposal, Regional Transportation System Enhancements Project, City of San Rafael, Marin County, California, Caltrans District 04, Federal Project No. CML 5043(036)*
	Daniel Shoup	2015 (Mar)	*Environmentally Sensitive Areas Action Plan, San Rafael Regional Transportation System Enhancements, Marin County, 04-MRN-CML 5043(036)*
	Daniel Shoup	2015 (Mar)	*Archaeological Discovery Plan, San Rafael Regional Transportation System Enhancements, City of San Rafael, Marin County, California, Caltrans District 04, Federal Project No. CML 5043(036)*
	Daniel Shoup	2016 (Apr)	*Archaeological Monitoring Report, Regional Transportation System Enhancements Project, San Rafael, CA*
S-48525	Madeline Bowen	2014 (Apr)	*Historic Architectural Survey Report for the Sonoma-Marin Area Rail Transit (SMART) Rail Corridor, San Rafael to Larkspur Project, Marin County, California*
S-48626	Scantlebury et al.	2013 (Apr)	*Cultural Resources Inventory & Evaluation Report for Sonoma-Marin Area Rail Transit (SMART): Downtown San Rafael, Marin County to Petaluma, Sonoma County (MP17-MP 37.02)*
	Scantlebury et al.	2014 (Feb)	*Archaeological Monitoring Plan For Sonoma-Marin Area Rail Transit (SMART): Downtown San Rafael, Marin County To Petaluma, Sonoma County (MP 17-MP 37.02)*
	Julianne Polanco and Jane Hicks	2014 (Oct)	*COE_2013_0628_001, Section 106 Consultation for the Sonoma Marin Area Rail Transit (SMART) Railroad Initial Operating Segment-1 South Project*

Archaeological Resources in the Project Area

Based on information gathered using the resource identification methodologies described above, three previously recorded archaeological resources were identified within the CEQA study area. All three resources (P-21-000113/CA-MRN-84, P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H) are prehistoric shell middens that have been leveled down to the ground surface. Some historical artifacts have been observed in two of the sites (P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H). These are described in Table 3.4-2.

Table 3.4-2. Previously Recorded Archaeological Resources within the CEQA Study Area

P-Number	Trinomial	Description
P-21-000113	CA-MRN-84	Originally recorded by N.C. Nelson in 1907 as the site of a "quite large" shellmound that "exists no longer." At the time, Richard Thompson remembered unearthing mortars, pestles, charmstones, and bone needles (Baker and Shoup 2014). 2014 shovel test and augur survey observed black shell midden-type soil at the northwest corner of 3rd and Irwin Streets; however, subsequent testing was restricted and inconclusive (Kaptain and Jones 2012; Shoup 2014).
P-21-000114	CA-MRN-85	Originally recorded by Nelson in 1907; he took ethnographic accounts of the mound, now covered by a house on a perceptible rise of shell material, that was said to have been 20 feet high and rich in artifacts and human remains. A survey in 2008 noted dark gray midden, shell, and no human remains. Testing in 2008 and 2014 found 40–60 centimeters of shell midden containing prehistoric artifacts (Shoup and Baker 2014a). Historic-era artifacts were also recorded mixed into some trenches. The extent of the buried midden is better understood to the east and west; north and south areas are on private property (Kaptain and Jones 2012; Roop 1991; Shoup 2014).
P-21-002833	CA-MRN-711/H	Testing in 2011 and 2014 discovered a highly disturbed prehistoric deposit along Hetherton Street consisting of chert debitage and cores, an obsidian biface fragment (circa 614 years before present), patches of disturbed shell midden, human bone, and historic artifacts. A small lens of an intact shell midden was discovered near the eastern side of 5th Avenue and Hetherton Street. Likely redeposited elements or sparse scatters related to less-intense prehistoric uses (Shoup and Baker 2014b). 2014 monitoring along Tamalpais Avenue was negative, suggesting that the site does not extend this far west (Shoup 2014).

The NWIC record search results are included in Appendix G.

Native American Consultation

To determine sensitivity for Native American resources within the project area, consultation with the Native American Heritage Commission (NAHC) and local Native American groups was conducted.

NAHC was contacted on October 16, 2018, with a request for the following information:

- CEQA Tribal Consultation List (AB 52)
- Identification by NAHC of any Native American resources within the subject lands that are listed in the Sacred Lands File

A response from NAHC was received on October 29, 2018, and stated that a search of the Sacred Lands File did not identify any sites; however, the letter specified that the area is sensitive for potential tribal resources.

The response from NAHC included the following individuals and tribal representatives who might have an interest in the proposed project:

- Gene Buvelot, Federated Indians of Graton Rancheria
- Greg Sarris, Chairperson, Federated Indians of Graton Rancheria

These individuals were contacted to initiate consultation under AB 52 if desired. Certified letters were mailed via priority mail on November 7, 2018. No responses were received from any of the contacts.

Review of City of San Rafael Planning Division and San Rafael Heritage Files

Between August 2018 and January 2021, ICF architectural historians consulted with staff members from the City of San Rafael Planning Division as well as members of San Rafael Heritage regarding past built-environment resource surveys and evaluation efforts that have occurred in the CEQA study area. City of San Rafael staff provided ICF with records from the 1976–1978 *San Rafael Historical/Architectural Survey* (City of San Rafael 1986), as well as additional evaluations of the Whistlestop building at 930 Tamalpais Avenue that are not held by NWIC. San Rafael Heritage provided materials prepared in 2020 to support a local landmark designation application for the NWP Railroad Depot at 930 Tamalpais Avenue. These materials informed the built-environment resource evaluation efforts that ICF conducted in support of the Draft Environmental Impact Report (EIR).

Historic Map Review

Historic aerials, topographic maps, and geologic maps were consulted to determine potential sensitivity with respect to encountering buried historic-era archaeological resources within the project site.

The town of San Rafael was incorporated in 1874, 57 years after the founding of Mission San Rafael Arcángel. An 1850 map shows a cluster of eight buildings labeled the “Mission de San Rafael” to the south of San Rafael Creek (Ringgold and Stuart 1852). By 1873, the San Quentin and San Rafael Railroad and the San Rafael Turnpike extended to San Rafael and continued north to Novato (Austin and Whitney 1873). The North Pacific Coast Railroad had a terminus in San Rafael, near the San Quentin and San Rafael Railroad, but the two do not appear to be connected. At that time there were a number of streets within the town, which began to the west of the farthest extent of the swamp surrounding San Rafael Creek. The railroad and turnpike appear to have maintained their positions over the years, with the project area crossing that alignment. By the turn of the century, San Rafael’s city center had a well-developed street grid with over 100 buildings and San Rafael Creek had been channeled away from the town (USGS 1897). Throughout the 20th century, the creek and surrounding swamp continued to be channeled and drained to make room for additional development as San Rafael expanded to the southeast (USCGS 1926; USGS 1941). Mid-20th century

aerial photos show that most of the town was residential in character (Aerial Archives 2020). There were some government buildings to the west of the turnpike and industrial areas in the southeastern quarter near the railroad, turnpike, and water. There were several open lots in areas around the creek that were reclaimed by the swamp. The presence of historic-era development suggests an increased potential to encounter previously unrecorded historic-era archaeological resources during project-related ground disturbance.

Built Environment Resources in the Project Area

The following section presents details regarding the built environment resources in the project area that qualify as historical resources under CEQA. As described in the introduction to this section, a property is considered a historical resource under CEQA if it is listed in or formally determined eligible for listing in the CRHR; is included in an adopted local register; is identified as significant in a qualifying historical resource survey; or is otherwise determined by the CEQA lead agency to be historically significant. This overview of built environment resources first describes the historical resource identification efforts that occurred prior to the preparation of this Draft EIR, and then presents information on the supplemental survey that ICF conducted to support the assessment of potential impacts in the Draft EIR.

San Rafael Historical/Architectural Survey

Between 1976 and 1978, the City of San Rafael and consultant Charles Hall Page & Associates undertook a built environment survey of select properties in San Rafael; this effort is known as the San Rafael Historical/Architectural Survey. Investigators recorded resources on Historical/ Architectural Survey Forms and Department of Parks and Recreation (DPR) Historic Resource Inventory forms and assigned ratings of "Good," "Excellent," and "Exceptional" to all surveyed resources.

The *San Rafael Historical/Architectural Survey* included five properties in the CEQA study area, to which investigators assigned ratings of "Good" or "Excellent":

- 633 5th Avenue
- 637 5th Avenue
- 927 Tamalpais Avenue (Barrel House)
- 930 Tamalpais (NWP Depot)
- 709–711 4th Street (Tavern on Fourth)[1]

The City selected 16 individual resources and three historic districts identified in the survey to be added to the local register of historical resources. None of the resources in the CEQA study area is among the locally listed resources. The City administratively updated the survey in 1986 but did not revise any of the survey forms completed in the 1970s. The remaining properties on the list that were not designated as landmarks are considered "potential historic resources" (City of San Rafael 1986, 2020c:1-1).

[1] Note that the CEQA study area includes 709–711 4th Street because a portion of its parcel overlaps the project footprint. However, the project does not propose to physically alter the building at 709–711 4th Street.

The City of San Rafael Planning Division's environmental review procedures specify that any resource recorded in the *San Rafael Historical/Architectural Survey* "must be presumed a significant [historical] resource, unless evidence to the contrary is provided" (City of San Rafael 2015).

2019–2020 Downtown San Rafael Precise Plan Historic Resources Survey

During 2019 and 2020, the City conducted a built environment survey to inform the preparation of the *Downtown San Rafael Precise Plan*. Building upon the findings of the 1970s *San Rafael Historical/ Architectural Survey*, the *Downtown San Rafael Precise Plan Historic Resources Survey* reviewed past survey evaluations of built-environment resources in the *Downtown San Rafael Precise Plan* area. This area encompasses the entirety of the CEQA study area established for the current investigation. The 2019–2020 survey involved a review of 572 parcels in the plan area and identified two landmark register-worthy historic districts: the West Downtown Core Historic District and East Downtown Core Historic District. (Neither of these eligible districts overlaps with the CEQA study area.) Approximately 160 properties in the plan area received one of the following five preliminary ratings:

- A: Eligible for consideration as local landmarks
- B: Likely not eligible individually but could be considered eligible as contributing resources in a historic district
- C: Require additional research
- D: Likely ineligible
- E: Ineligible as local landmarks

The preliminary ratings are not final and are intended to inform further investigation rather than determine CEQA historical resource status. Several buildings in the CEQA study area received preliminary ratings of A through E, which are presented below in Table 3.4-3.

Following this preliminary review, the City selected approximately 40 built-environment resources for intensive-level survey and evaluation. For each of the selected built-environment resources, investigators completed a DPR 523-series form set that documents a new evaluation of the resource for eligibility for listing in the NRHP and CRHR. One building in the CEQA study area, the residence at 1011 Irwin Street, was documented on a DPR form set as part of the 2019–2020 survey. The City found the residence to qualify for listing in the NRHP and CRHR and assigned it a California Historical Resource Status (CHRS) code of 3S, "Appears eligible for the NRHP as an individual property through survey evaluation." Therefore, 1011 Irwin Street meets the definition of a CEQA historical resource (City of San Rafael 2020c; Morgan and Brunzell 2020).

Additional Previous Evaluations

In addition to the built-environment surveys described above, various past investigations have recorded and evaluated the following built-environment resources within the project area:

- 703–705 4th Street: Garcia and Associates recorded this two-story commercial building in 2004 as part of the SMART Historic Architectural Resources Inventory and Evaluation and assigned it a CHRS code of 6Z: found ineligible for NRHP, CRHR, or local designation through survey evaluation. The 2004 evaluation found the building not to be a historical resource for the purposes of CEQA (GANDA 2004b).

- Northwestern Pacific Railroad: The alignment of the NWP generally follows Tamalpais Avenue through Downtown San Rafael and the project area. Historically, this rail alignment entered Marin County north of Novato and continued south through San Rafael to terminate at Point Tiburon. To support past cultural resource studies, numerous investigators have evaluated segments of the NWP in Marin, Sonoma, Mendocino, and Humboldt Counties. In Marin County, investigators recorded and evaluated segments of the rail alignment and associated features (such as trestles and tunnels) under the primary number P-21-002618. In 2014, Patricia Ambacher of AECOM recorded the 1-mile-long segment of the NWP between Anderson Drive and 4th Street in San Rafael, which includes the portion of the rail alignment in the project area. AECOM's 2014 evaluation found the recorded segment ineligible for listing in the NRHP and the CRHR, and assigned the rail alignment a CHRS code of 6Z (AECOM 2014). With regard to the current investigation, the rail alignment does not meet the definition of a CEQA historical resource.
- Northwestern Pacific Railroad Depot: Surveyors recorded the NWP Railroad Depot at 730 Tamalpais Avenue (also known as the Whistlestop, after its current tenant) during the *San Rafael Historical/Architectural Survey* and assigned the building a rating of "Good" (City of San Rafael 1986). However, the property owner substantially altered the NWP Railroad Depot after its initial recordation in the 1970s, and subsequent evaluations have reassessed the significance and integrity of the building. JRP Historical Consulting recorded the NWP Railroad Depot in 2012 and presented an assessment of the building's CEQA historical resource status, as defined in the CEQA statute (PRC Section 5024.1) and the State CEQA Guidelines. The 2012 JRP evaluation ultimately concluded that the NWP Railroad Depot does not qualify as a historical resource under CEQA (JRP Historical Consulting 2012). ICF International subsequently evaluated the building in 2013 as ineligible for listing in the NRHP and CRHR but incorrectly stated the building is listed in the local historic register, which would qualify it as a CEQA historical resource (ICF International 2013). Various additional investigators have commented upon the past evaluations of the NWP Railroad Depot. It received a preliminary rating of "E" (ineligible for landmark status) in the 2019–2020 *Downtown San Rafael Precise Plan Historic Resources Survey*. Furthermore, San Rafael Heritage prepared a site record for the NWP Railroad Depot in 2020 that found the building eligible for listing in the CRHR under Criterion 1 (Events) (San Rafael Heritage 2020). In order to clarify the record regarding the historical resource status of the depot building, ICF has prepared an updated evaluation of this building for the San Rafael Transit Center Replacement Project Survey, which is included in Appendix F. In consideration of the record of past evaluations, ICF found the building not to be eligible for listing in the CRHR due to diminished integrity, and not to qualify as a CEQA historical resource.
- San Rafael Viaduct: The California Department of Transportation (Caltrans) State and Local Bridge Survey (1989 and updates) revealed that two bridges that cross through the project area were previously evaluated through the Caltrans historic bridge inventory and identified as Category 5 bridges (not eligible for listing in the NRHP). These bridges comprise the northbound and southbound structures of the San Rafael Viaduct (Caltrans Bridge Nos. 27 0035R and 27 0035L, respectively), which carries US-101 along the eastern edge of Downtown San Rafael. In addition to the Category 5 rating recorded in the Caltrans State and Local Bridge Survey, Caltrans evaluated the 1941-built northbound viaduct structure in 1999 for the Marin-101 High-Occupancy Vehicle Gap Closure Project and determined that it does not meet the definition of a historical resource under CEQA. The 1999 Caltrans evaluation assigned the northbound San Rafael Viaduct structure a CHRS code of 6Z (Caltrans 1999, 2018).

San Rafael Transit Center Replacement Project Survey

In 2020 and 2021, ICF conducted a supplemental survey of built-environment resources to develop a comprehensive historical resource inventory of all built properties within the CEQA study area, in support of the current investigation. ICF reviewed the findings of the *San Rafael Historical/ Architectural Survey*, 2019–2020 *Downtown San Rafael Precise Plan Historic Resources Survey*, and additional past evaluation efforts. Several of the historic-aged properties (more than 45 years old) in the CEQA study area have a valid historical resource status under CEQA based on past surveys and evaluations. However, six historic-aged properties had never previously been recorded in a built-environment survey or otherwise evaluated for listing in the NRHP or CRHR.

ICF surveyed all six previously unrecorded built-environment resources in the project area and documented CRHR evaluations for each one on a DPR 523A (Primary Record) and 523B (Building, Structure, Object Record) form set:

- 638 4th Street
- 610 4th Street
- 1001 Irwin Street
- 1015 Irwin Street
- 915–917 Irwin Street
- 615 4th Street

ICF also documented a new CRHR evaluation of the building at 927 Tamalpais Avenue; this building received a rating of "Good" in the *San Rafael Historical/Architectural Survey*, but it has undergone alterations since its original recordation. 927 Tamalpais Avenue received a preliminary rating of "B" in the *Downtown San Rafael Precise Plan Historic Resources Survey* (does not appear individually eligible as a landmark but could be considered a district contributor) but did not receive an individual updated CRHR evaluation in that effort. Despite that the building received a rating of "Good" in the San Rafael Historical/Architectural Survey during the late 1970s, ICF's updated evaluation of 927 Tamalpais Avenue found it has been altered since its construction, lacks direct association with events of historical significance, and does not meet the eligibility requirements of the CRHR.

Furthermore, ICF completed a DPR Update form for the NWP Depot at 930 Tamalpais Avenue, which has undergone substantial alterations since its original recordation in 1976. The building received a rating of "Good" in the San Rafael Historical/Architectural Survey, but due to its alterations it has elicited a range of eligibility findings from previous investigators. ICF's updated evaluation of 930 Tamalpais Avenue considered the building's past evaluations and history of alterations and found it not to meet the eligibility requirements of the CRHR. The DPR form sets ICF completed for the current survey are included in Appendix F.

In summary, ICF evaluated each of the eight resources recorded or updated in the San Rafael Transit Center Replacement Project Survey as ineligible for listing in the CRHR.

Three resources in the CEQA study area were evaluated as "Excellent" or "Good" in the *San Rafael Historical/Architectural Survey* and also received preliminary "A" ratings in the *Downtown San Rafael Precise Plan Historic Resources Survey*: 633 5th Avenue, 637 5th Avenue, and 709–711 4th Street (whose parcel partially overlaps the project footprint). Because these resources have existing

survey evaluations that establish their significant historic/architectural character and do not appear to have been altered substantially since their previous recordation, ICF did not complete updated DPR forms for these three resources for the current investigation. These resources, rather, qualify as CEQA historical resources and are presumed significant for their associations with the early development of central San Rafael (CRHR Criterion 1, Events) and as good remaining examples of late-19th-century residential and commercial architecture (CRHR Criterion 3, Architecture/Design).

Summary of Built-Environment Resources in the CEQA Study Area

Based on previous historical resource evaluations as well as updated evaluations prepared for this Draft EIR, the CEQA study area contains four built-environment resources that qualify as historical resources for the purposes of CEQA review: 1011 Irwin Street, 709–711 4th Street, 633 5th Avenue, and 637 5th Avenue. The remaining historic-aged resources in the project area are not eligible for CRHR listing and do not meet any of the additional qualifying criteria outlined in Section 15064.5(a) of the State CEQA Guidelines. The historic-aged built-environment resources in the CEQA study area are listed in Table 3.4-3, which presents each property's address, Assessor's Parcel Number(s), previous designation or evaluation (as applicable), and status as a CEQA historical resource.

Table 3.4-3. Built Environment Resources in the CEQA Study Area

Address; Resource Name	Assessor's Parcel Number	Construction Date	Primary Number	1976–1978 San Rafael Survey Rating	2019–2020 Downtown Precise Plan Survey Preliminary Rating and Historic Register Evaluation	2020–2021 San Rafael Transit Center Replacement Project Survey Evaluation	Current CHRS Code	CEQA Historical Resource?
709–711 4th Street; Tavern on Fourth	011-275-02	circa 1889	P-21-000833	Excellent	A; No updated historic register evaluation	N/A	N/A	**Yes**
703–705 4th Street	011-275-03	1898	P-21-002612	N/A	E; No updated historic register evaluation	N/A	6Z	No
927 Tamalpais Avenue; Barrel House	011-275-04	1927	P-21-001014	Good	B; No updated historic register evaluation	Not eligible for CRHR listing	6Z	No
930 Tamalpais Avenue; Northwestern Pacific Railroad Depot/ Whistlestop	011-277-01	1929	P-21-001015	Good	E; No updated historic register evaluation	Not eligible for CRHR listing	6Z	No
633 5th Avenue	014-084-02	1898	P-21-000811	Good	A; No updated historic register evaluation	N/A	N/A	**Yes**
637 5th Avenue	014-084-13	1892–1894	P-21-000812	Good	A; No updated historic register evaluation	N/A	N/A	**Yes**
638 4th Street	014-084-14	1956	N/A	N/A	N/A	Not eligible for CRHR listing	6Z	No
610 4th Street	014-085-07	circa 1924	N/A	N/A	N/A	Not eligible for CRHR listing	6Z	No
1001 Irwin Street	014-085-09	1971	N/A	N/A	N/A	Not eligible for CRHR listing	6Z	No
1011 Irwin Street	014-085-10	1907	N/A	N/A	B; Evaluated as eligible for listing in the NRHP and CRHR	N/A	3S	**Yes**
1015 Irwin Street	014-085-11	circa 1907	N/A	N/A	E; No updated historic register evaluation	Not eligible for CRHR listing	6Z	No

Address; Resource Name	Assessor's Parcel Number	Construction Date	Primary Number	1976–1978 San Rafael Survey Rating	2019–2020 Downtown Precise Plan Survey Preliminary Rating and Historic Register Evaluation	2020–2021 San Rafael Transit Center Replacement Project Survey Evaluation	Current CHRS Code	CEQA Historical Resource?
915–917 Irwin Street	Multiple	circa 1970	N/A	N/A	N/A	Not eligible for CRHR listing	6Z	No
615 4th Street	014-122-13	circa 1946	N/A	N/A	N/A	Not eligible for CRHR listing	6Z	No
Northwestern Pacific Railroad	Multiple	1912–1913	P-21-002618	N/A	N/A	N/A	6Z	No
San Rafael Viaduct, northbound (27 0035R)	Multiple	1941	P-21-002513	N/A	N/A	N/A	6Z	No
San Rafael Viaduct, southbound (27 0035L)	Multiple	1965	N/A	N/A	N/A	N/A	N/A (Cate-gory 5 bridge)	No

Notes:
CHRS code 3S = Appears eligible for the NRHP as an individual property through survey evaluation.
CHRS code 6Z = Found ineligible for NRHP, CRHR, or local designation through survey evaluation.
"A" preliminary survey rating = Eligible as individual landmark.
"B" preliminary survey rating = Likely ineligible individually; potentially eligible as district contributor.
"E" preliminary survey rating = Ineligible as district contributor or individual landmark.

3.4.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to cultural resources.

Would the proposed project:

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?
- Disturb any human remains, including those interred outside of dedicated cemeteries?

Section 15064.5(b)(1) of the State CEQA Guidelines defines "substantial adverse change to a historical resource" as "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." Material impairment of a historical resource, as defined in State CEQA Guidelines Section 15064.5(b)(2), occurs when a project "demolishes or materially alters in an adverse manner" those physical characteristics of the resource that express its significance and justify its inclusion in, or eligibility for listing in, the CRHR or a qualified local register of historical resources or evaluation as historically significant in a qualified local survey.

3.4.2.3 Impacts

Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5

Construction Impacts

Construction of each of the four alternatives would involve varying degrees of physical change (i.e., material alteration or demolition) and proximity change (i.e., alterations in setting) to different identified built-environment historical resources. The following analysis provides a discussion of potential construction-caused impacts on these resources, organized by alternative.

Move Whistlestop Alternative

Relative to built-environment historical resources, the Move Whistlestop Alternative would involve the demolition of two historic-aged buildings: 703–705 4th Street and 927 Tamalpais Avenue (Barrel House). As described in Section 3.4.2.1, Methodology, neither of the historic-aged buildings proposed for demolition under this alternative qualifies as a historical resource under CEQA. The Move Whistlestop Alternative also proposes to relocate the Whistlestop building at 930 Tamalpais Avenue to the west side of Tamalpais Avenue, which is the current location of 703–705 4th Street and 927 Tamalpais Avenue. The relocated Whistlestop building would be in the vicinity of the historical resource at 709–711 4th Street, a circa 1889 commercial building. As described in Section 3.4.2.1, Methodology, none of the historic-aged buildings proposed for demolition or relocation under this alternative qualifies as a historical resource under CEQA. The Move Whistlestop

Alternative would utilize the existing alley that leads adjacent to the east façade of 709–711 4th Street as a vehicular circulation path.

Regarding 709–711 4th Street, project activities would not result in a substantial adverse change in the significance of this resource as described below. The building is presumed to have significance under NRHP/CRHR Criteria A/1 (Events) and C/3 (Architecture), as the building is an early and ornate example of commercial architecture in Downtown San Rafael that conveys both the City's 19th-century urban development and the characteristics of the Italianate architectural style as applied to a commercial building.

Project activities would change the setting of the historical resource at 709–711 4th Street to an extent, as the demolition of 703–705 4th Street (constructed in 1898) would remove a building from the immediate setting of 709–711 4th Street that is roughly its historical contemporary. Relocation of the Whistlestop building to the west side of Tamalpais Avenue would bring it within closer proximity of 709–711 4th Street, which would further alter features within the historic setting of 709–711 4th Street. However, the setting of 709–711 4th Street has changed substantially since its construction and early use in the late 19th century: the exterior of 703–705 4th Street itself has been changed to the degree that it no longer represents the historic character of Downtown San Rafael, and the majority of surrounding parcels contain buildings that appear altered or much more recently constructed. As a result, the resource at 709–711 4th Street does not rely upon an intact historical setting to convey its significance; rather, it expresses its significance most directly through its intact footprint, massing, false-front parapet, boxed bay, cladding materials, and decorative elements, none of which would be altered by this alternative. The demolition of 703–705 4th Street, use of the adjacent existing alley for vehicular traffic, and relocation of the Whistlestop building to a location immediately east of this alley, as proposed under the Move Whistlestop Alternative, would be broadly consistent with previous changes that have occurred to the building's setting and would not damage or destroy the features that qualify 709–711 4th Street as a CEQA historical resource.

The potential for construction-caused groundborne vibration to damage the historical resource at 709–711 4th Street is addressed in Section 3.11, Noise.

As a result, construction of the Move Whistlestop Alternative would have a ***less-than-significant impact*** on built-environment historical resources. No mitigation is required.

Adapt Whistlestop Alternative

The Adapt Whistlestop Alternative would involve similar project activities as the Move Whistlestop Alternative, as described above. However, the Adapt Whistlestop Alternative proposes to retain the Whistlestop building at 930 Tamalpais Avenue in its current location east of Tamalpais Avenue. As under the Move Whistlestop Alternative, the Adapt Whistlestop Alternative would also demolish 703–705 4th Street and 927 Tamalpais Avenue, neither of which qualifies as a CEQA historical resource. Instead of relocating the Whistlestop building, this alternative would introduce public plazas, customer service, bicycle parking, and/or other transit facilities west of Tamalpais Avenue, including on the parcels where 703–705 4th Street and 927 Tamalpais Avenue now stand. This alternative would also utilize the alley adjacent to 709–711 4th Street for vehicular circulation.

The types and intensity of project activities under this alternative would be similar to those analyzed above under the Move Whistlestop Alternative. The Adapt Whistlestop Alternative would not alter the physical features that allow 709–711 4th Street to convey its historical significance. As described above, an intact historic setting for 709–711 4th Street is not a requisite for the building

to convey its historical and architectural significance, which qualifies it as a CEQA historical resource. Changes in the resource's setting to the degree proposed under the Adapt Whistlestop Alternative would not cause a substantial adverse change in its significance. Furthermore, this alternative would not involve project activities affecting the character-defining features or significant aspects of setting of any other CEQA historical resource. As a result, construction of the Adapt Whistlestop Alternative would have a ***less-than-significant impact*** on built-environment historical resources. No mitigation is required.

4th Street Gateway Alternative

The footprint of the 4th Street Gateway Alternative encompasses two buildings that qualify as CEQA historical resources: 633 5th Avenue and 637 5th Avenue. These buildings face north onto 5th Avenue within the block between Hetherton Street and East Tamalpais Avenue, occupying a location where transportation facilities are proposed under this alternative. The alternative intends to relocate the buildings at 633 5th Avenue and 637 5th Avenue prior to or during construction to accommodate the proposed transportation facilities. However, there is currently no identified receiving site for either building, and the methods for conveying the buildings to their new locations have not yet been determined.

In general terms, the relocation of built-environment historical resources has the potential to cause an adverse change in their significance in two respects. Firstly, the act of moving a building or structure to a new location may potentially require disassembly prior to relocation and reassembly at its receiving site, if necessitated by its size or structural system; relocation could also inadvertently damage or destroy physical characteristics that contribute to the resource's significance. Secondly, relocation of a built-environment historical resource would remove the resource from its existing location and may move it to a location with a new setting (i.e., immediate physical context) that is incompatible with the resource's historic setting. Both location and setting are aspects of a resource's historical integrity, which, if intact, assist the resource in conveying its historical significance. Therefore, diminishing a resource's integrity of location and setting has the potential to contribute to material impairment of the resource's significance.

As information is not currently available regarding measures that would be undertaken to protect or rehabilitate character-defining features, relocation of the buildings at 633 5th Avenue and 637 5th Avenue has the potential to cause inadvertent damage to their materials and decorative elements. Without appropriate protective measures in place, it is possible that racking, vibration, or additional harmful conditions would be present during relocation that may cause structural or ornamental damage to the buildings, which may then further damage significant architectural elements and spaces and diminish the resources' integrity of materials, workmanship, design, feeling, and association. Furthermore, there is currently no receiving site for either 633 5th Avenue or 637 5th Avenue, and it cannot be guaranteed that suitable receiving sites would be identified that are generally compatible with the resources' historic setting (a residential neighborhood on the edge of San Rafael's Downtown commercial district).

The construction of new transportation facilities under this alternative would involve changes to the eastern end of Downtown San Rafael, adjacent to the viaduct carrying US-101. This area currently accommodates commercial and transportation-related uses, and construction of the alternative appears to be generally consistent with the continuum of change that has already occurred to this edge of the Downtown district over the past century or more. Consequently, it does not appear that the significance of any nearby historical resource is dependent upon the current conditions of the

site (including the residences at 633 5th Avenue and 637 5th Avenue standing in their historic locations). It is not anticipated that construction of the alternative would lead to changes in the setting of any nearby historical resource that would diminish that resource's ability to convey its historical or architectural significance.

However, as a result of the potential for inadvertent damage to 633 5th Avenue and 637 5th Avenue during relocation of the residences, as well as the current lack of receiving sites that would ensure successful relocation, the proposed project has the potential to materially alter physical characteristics and aspects of setting that qualify the two buildings as CEQA historical resources. Therefore, construction of the 4th Street Gateway Alternative would result in a **significant** impact on built-environment historical resources. Mitigation Measures MM-CULT-CNST-1, MM-CULT-CNST-2, and MM-CULT-CNST-3 are presented below to reduce the level of the identified impact. Even with the implementation of Mitigation Measure MM-CULT-CNST-1, the proposed project could not ensure that appropriate receiving sites would be available for the buildings proposed for relocation under the 4th Street Gateway Alternative. Depending on the outcome of efforts to identify receiving sites and further investigations on the feasibility of building relocation, Mitigation Measures MM-CULT-CNST-2 and MM-CULT-CNST-3 may also be required to document the current conditions of affected historical resources and to commemorate their historical significance for the public. The Under the Freeway Alternative would also require implementation of Mitigation Measures MM-CULT-CNST-2 and MM-CULT-CNST-3 to compensate for the loss of the residence at 1011 Irwin Street. However, these measures would not be enough to avoid, rectify, reduce, or compensate for the potential loss of the historical resources. Because loss of the resources could still occur, the impact of construction of the 4th Street Gateway Alternative and Under the Freeway Alternative on built environment historical resources would remain ***significant and unavoidable*** after the application of mitigation.

Under the Freeway Alternative

One CEQA historical resource is within the footprint of the Under the Freeway Alternative: the residence at 1011 Irwin Street. The City has evaluated the residence as eligible for listing in the NRHP and CRHR under Criteria C/3 (Architecture/Design) as an excellent example of a hipped-roof cottage. This alternative would demolish this historical resource, thus destroying all the characteristics that qualify it for inclusion in the NRHP and CRHR. The demolition of 1011 Irwin Street would therefore be considered a substantial adverse change in the significance of the historical resource.

Construction of the Under the Freeway Alternative would introduce transportation facilities underneath and east of the US-101 viaduct, where such facilities do not currently exist. The alternative would entail the removal of three buildings historically used as residences (610 4th Street, 1011 Irwin Street, and 1015 Irwin Street) in addition to commercial establishments on Irwin Street and 4th Street. This would represent a relatively minor change in the setting of nearby historical resources, including the French Quarter Historic District at the intersection of Irwin Street and 3rd Street. Construction of transportation facilities under this alternative is not anticipated to change the setting of any built-environment historical resources in the vicinity to the extent that the significance of those resources would be materially impaired.

Due to the proposed demolition of 1011 Irwin Street, however, construction of the Under the Freeway Alternative would result in a ***significant and unavoidable*** impact on built-environment historical resources. Mitigation Measures MM-CULT-CNST-1, MM-CULT-CNST-2, and MM-CULT-

CNST-3 are presented below to reduce the level of the identified impact but would not be able to reduce impacts to a less-than-significant level.

Operations Impacts

All Build Alternatives

Under all alternatives, operations of the San Rafael Transit Center would occur in the vicinity of historical resources near the eastern edge of Downtown San Rafael. Operations would not involve physical changes to any historical resources beyond those required for the construction of the four alternatives but would introduce new visual, audible, and atmospheric elements in the vicinity of those resources. Hypothetically speaking, circumstances could exist in which visual, audible, and atmospheric elements lead to the diminishment of a historical resource's integrity. For instance, it is possible that long-term, intermittent increases in noise and vibration resulting from the operations of a transportation facility might compel individuals to abandon a historical resource (such as a residence or commercial building). Such an act would constitute an indirect impact if it were to result in neglect of a resource's physical features that convey significance, which over time could diminish integrity of design, materials, workmanship, feeling, and association.

As described in Section 3.11, Noise, increases in operations-caused noise and vibration would not be substantive, and the intensity of transportation activities would not be substantially different from current conditions. As such, it is not anticipated that abandonment and neglect of historical resources would reasonably occur as an effect of project operation. Furthermore, no historical resources identified for the current investigation appear to rely upon a quiet setting to convey their significance. The negligible degree of change in the audible and atmospheric conditions of historical resources in Downtown San Rafael is not anticipated to diminish the historical integrity of any identified built-environment historical resource and would not constitute material impairment of its significance.

Therefore, operations of the proposed project would have ***no impact*** on built-environment historical resources under all four alternatives. No mitigation is required.

Mitigation Measures

MM-CULT-CNST-1: Prepare and Implement Relocation Plans

The Golden Gate Bridge, Highway and Transportation District (District) shall retain a qualified historical architect who meets the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, Part 61) to prepare a relocation plan for any historical resource that the selected alternative could move in order to avoid demolition of the resource. The documentation shall be reviewed and approved by the District prior to the issuance of any demolition, site, or building permit for the resource proposed for relocation.

The relocation plan shall be reviewed and approved by the District and Planning Division to ensure that character-defining features of the buildings will be retained. This review shall occur prior to the commencement of any construction activities at the site. The relocation plan shall include required qualifications for the building relocation company to ensure that relocation is undertaken by a company that is experienced in moving historic buildings of a similar size and/or structural system as the subject buildings. The relocation plan shall ensure that the resource will be moved without irreparable damage to its character-defining historic fabric, and

will specify protective measures for vulnerable character-defining features. The District will incorporate into construction specifications for the proposed project a requirement that the construction contractor(s) use all feasible means to avoid damage to historical resources during relocation including, but not limited to, relocation methods and relocation activity routes, closures, and timing.

By requiring protective measures during the relocation of a built-environment historical resource, implementation of Mitigation Measure MM-CULT-CNST-1 would prevent inadvertent damage to the resource and would therefore avert further potential impacts on its integrity of design, materials, workmanship, feeling, and association. Implementation of Mitigation Measure MM-CULT-CNST-1 would ensure that historical resources retain their extant character-defining features following relocation, such that relocation could be implemented as described to preserve significant architectural qualities that justify the resources' status as CEQA historical resources. However, implementation of Mitigation Measure MM-CULT-CNST-1 would not reduce potential impacts from relocation to a less-than-significant level because the relocation plan could not guarantee that an appropriate receiving site would be identified and acquired prior to project construction. It therefore remains possible that, if no relocation site is secured, the proposed project would require the demolition of historical resources, which would represent a substantial adverse change in their significance.

Should the relocation of any historical resource prove to be infeasible due to structural issues or lack of receiving site, the current analysis assumes the resource would be demolished to accommodate project construction. The following additional two measures would be applicable for each historical resource to be demolished:

MM-CULT-CNST-2: Prepare and Submit Historical Documentation

The District shall retain a professional who meets the Secretary of the Interior's Qualification Standards for Architectural Historian or Historian (36 Code of Federal Regulations Part 61) and a photographer with demonstrated experience in Historic American Buildings Survey (HABS) photography to prepare written and photographic documentation for the historical resource proposed for demolition. The HABS documentation package for the resource shall be reviewed and approved by the staff of the Planning Division, or professionally qualified Architectural Historian or Historian hired by the City, prior to the issuance of any demolition, site, or construction permit for the proposed project. Documentation may be used in the interpretive display or signage described in Mitigation Measure MM-CULT-CNST-3.

The documentation shall consist of the following:

- *Historic American Buildings Survey–level Photographs*: HABS standard high-resolution digital photography shall be undertaken to document each historical resource and its surrounding context. Large-format negatives are not required. The scope and number of photographs shall be reviewed and approved by the staff of the Planning Division or their professionally qualified contractor prior to documentation, and all photography shall be conducted according to the current National Park Service HABS standards.
    - The photograph set shall include the following: distant views to capture the extent and context of the resource, contextual views of each façade of the building, façade details showing the character-defining exterior features of the building, and general interior views documenting current interior conditions.

  - All views shall be referenced on a key map of the resource that includes a photograph number with an arrow to indicate the direction of the view.
  - The draft photograph contact sheets and key map shall be provided to the Planning Division or its professionally qualified contractor for review and approval to determine the final number of photographs and views for inclusion in the final dataset.

- *Written Historic American Buildings Survey Narrative Report*: A written historical narrative shall be prepared in accordance with HABS Historical Report Guidelines. The level of documentation will be subject to approval of the Planning Division or its professionally qualified contractor. Historic photographs identified in previous studies and updated research shall also be collected, scanned as high-resolution digital files, and reproduced in the dataset.

Format of Final Dataset:

- The project sponsor shall contact San Rafael Heritage, Marin History Museum, Anne T. Kent California Room of the Marin County Free Library, and NWIC to inquire as to whether the repository or organization would like to receive a hard or digital copy of the final dataset. Labeled hard copies and/or digital copies of the final photograph sets and narrative report shall be provided to these repositories in their preferred format.

MM-CULT-CNST-3: Develop and Implement an Interpretive Program

For each historical resource to be demolished, the District shall also install and maintain a permanent onsite interpretive display commemorating the historical significance of the demolished building. The interpretive program must, at a minimum, include one display board containing narrative and visual materials to interpret the history of the building. The display board shall contain historical photos of the building, if available, and a description of its historical significance in a publicly accessible location on the project site. The interpretive display can also feature interactive or dynamic media, such as video. Development of the interpretive display shall be overseen by a qualified professional who meets the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations Part 61) for Historian or Architectural Historian.

Cause a Substantial Adverse Change in the Significance of an Archaeological Resource Pursuant to Section 15064.5

Construction

Construction of any of the four build alternatives would likely affect archaeological resources. Two pre-contact archaeological sites (P-21-000113/CA-MRN-84 and P-21-000114/CA-MRN-85) are to the east of the freeway and one pre-contact archaeological site is just west of the freeway (P-21-002833/CA-MRN-711/H). The presence of these sites suggests that ground disturbance associated with project construction has the potential to encounter as-yet-undocumented archaeological resources, which would result in potentially significant impacts. These impacts would be reduced to a less-than-significant level with the implementation of the mitigation measures outlined below.

All build alternatives would involve the removal of existing storm drain infrastructure and the installation of new inlets, manholes, and bioretention facilities. Utilities, including traffic signal poles, streetlights, and fire hydrants, would need to be relocated and/or removed.

Move Whistlestop Alternative/Adapt Whistlestop Alternative/4th Street Gateway Alternative

Project activities near the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would occur within the site boundary of P-21-002833/CA-MRN-711/H. These alternatives extend along Hetherton Street and would affect site P-21-002833/CA-MRN-711/H, a pre-contact midden containing human bone and Native American artifacts; historical artifacts were also found at the site during testing (Shoup and Baker 2014b). Subsurface testing at P-21-002833/CA-MRN-711/H identified a buried component including a small lens of an intact shell midden and patches of disturbed shell midden from 0–60 centimeters below surface (Shoup and Baker 2014b). The site has not been clearly demarcated, although its western border is believed to lie between Hetherton Street and Tamalpais Avenue (Shoup 2014).

Construction of these build alternatives would include ground disturbance within the resource boundary of P-21-002833/CA-MRN-711/H, a pre-contact midden deposit. This impact would be **significant**. However, implementation of Mitigation Measures MM-CULT-CNST-4, MM-CULT-CNST-5, and MM-CULT-CNST-6, described below, would ensure that impacts related to archaeological resources would be ***less than significant with mitigation***.

Under the Freeway Alternative

The footprint of the Under the Freeway Alternative extends from Hetherton Street on the west side of the freeway to Irwin Street on the east side and overlaps archaeological sites P-21-000113/CA-MRN-84, P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H.

Site P-21-000113/CA-MRN-84, a pre-contact shellmound, was originally large but by the early 1900s was nonexistent, according to N.C. Nelson. Early explorations into the mound recovered various pre-contact artifacts including mortars, pestles, charmstones, and bone needles, but no human remains were noted (Baker and Shoup 2014). Historical artifacts were also observed during testing. Survey and testing in 2014 observed small amounts of shallow, black shell midden-type soil at the northwest corner of 3rd and Irwin Streets (Kaptain and Jones 2012; Shoup 2014).

Site P-21-000114/CA-MRN-85, another pre-contact shellmound, is located along Irwin Street near 5th Avenue and contained artifacts and human remains. The mound is reported to have stood 20 feet tall, although recent testing found 16 to 24 inches (40 to 60 centimeters) of midden containing pre-contact artifacts (Shoup and Baker 2014a). Historic-era artifacts were also recorded mixed into some trenches. The midden is well defined along its eastern and western sides, while the northern and southern ends are on private property and have not been fully delineated (Kaptain and Jones 2012; Shoup 2014). A 1989 visual survey found shell in flowerbeds along Irwin Street (Roop 1991).

The Under the Freeway Alternative extends along Hetherton Street and would affect site P-21-002833/CA-MRN-711/H, a pre-contact midden containing human bone and Native American artifacts; historical artifacts were also found at the site during testing (Shoup and Baker 2014b). Subsurface testing at P-21-002833/CA-MRN-711/H identified a buried component including a small lens of an intact shell midden and patches of disturbed shell midden from 0–60 centimeters below surface (Shoup and Baker 2014b). The site has not been clearly demarcated, although its western border is believed to lie between Hetherton Street and Tamalpais Avenue (Shoup 2014).

Construction of the Under the Freeway Alternative would include ground disturbance within the resource boundaries of P-21-000113/CA-MRN-84, P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H, pre-contact midden deposits. This impact would be **significant**. However, implementation of Mitigation Measures MM-CULT-CNST-4, MM-CULT-CNST-5, and MM-CULT-CNST-

6 would ensure that impacts related to archaeological resources would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Operation of the San Rafael Transit Center under any alternative would not include ground disturbance and therefore would result in ***no impact*** on any archaeological resources.

Mitigation Measures

MM-CULT-CNST-4: Develop and Implement an Archaeological Testing Plan

Due to the presence of known archaeological resources in the proposed work area, archaeological testing should occur prior to construction to determine the extent of the resource as well as its significance under CEQA. An Archaeological Testing Plan should be prepared by a qualified archaeologist and include the following items:

- Background and anticipated resource types
- Research questions that can be addressed by the collection of data from the defined resource types
- Field methods and procedures
- Cataloging and laboratory analysis
- Findings and interpretation

The Archaeological Testing Plan shall be implemented to determine the extent of archaeological resources within any area where there will be ground disturbance. The results of the study shall be summarized into a technical document that shall determine whether further study is necessary. The technical document shall also determine whether additional mitigation will be needed, and can lead to additional studies and, if needed, even further mitigation.

MM-CULT-CNST-5: Conduct Cultural Resource Awareness Training Prior to Project-Related Ground Disturbance and Stop Work if Archaeological Deposits Are Encountered During Ground-Disturbing Activities

Prior to any project-related ground disturbance, the District shall ensure that all construction workers receive training overseen by a qualified professional archaeologist who is experienced in teaching non-specialists to ensure that contractors can recognize archaeological resources in the event that any are discovered during construction.

If tribal cultural or archaeological deposits are encountered during project-related ground disturbance, work in the area (100-foot radius) shall stop immediately. The onsite Native American monitor and onsite qualified archaeologist shall assess and determine the path forward. Tribal cultural and archaeological deposits include, but are not limited to, flaked stone or groundstone, midden and shell deposits, historic-era refuse, and/or structure foundations.

If any human remains are discovered during ground-disturbing activities, an evaluation shall be performed to assess likely age and provenance in a manner that is respectful of the disturbed

remains. If determined to be, or likely to be, Native American, the District shall comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of NAHC (PRC Section 5097). If human remains are discovered or recognized 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 human remains until:

1. The county coroner has been informed by the District and has determined whether investigation of the cause of death is required
2. If the remains are of Native American origin:
    a. The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98; or
    b. NAHC was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.
    c. NAHC recommends a Most Likely Descendant to make a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that excavation be stopped in the vicinity of the discovered human remains until the coroner can determine whether the remains are those of a Native American.

MM-CULT-CNST-6: Develop and Implement a Tribal Cultural and Archaeological Monitoring Plan

Given the reasonable potential for tribal cultural and archaeological resources to be present within the proposed work area, the following measures shall be undertaken to avoid any significant impacts on these potential resources. A Tribal Cultural and Archaeological Monitoring Plan shall be developed by a qualified archaeologist in consultation with local tribes prior to any project-related ground disturbance to determine specific areas of archaeological sensitivity within proposed work areas. The Tribal Cultural and Archaeological Monitoring Plan will determine whether an onsite Native American and qualified archaeological monitor are required during project-related ground disturbance. The plan shall include protocol that outlines tribal cultural and archaeological monitoring best practices, anticipated resource types, and an Unanticipated Discovery Protocol. The Unanticipated Discovery Protocol shall describe steps to follow if unanticipated archaeological discoveries are made during project work and a chain of contact.

Disturb Any Human Remains, Including those Interred Outside of Formal Cemeteries

Construction

All Build Alternatives

Archaeological site P-21-000114/CA-MRN-85, Native American shellmound, lies about 30 feet east of the Under the Freeway Alternative along Irwin Street near 5th Avenue and contained artifacts and human remains, although no remains have been found during testing there in the past 12 years. Site P-21-000113/CA-MRN-84, near the intersection of Irwin Street and 4th Street and adjacent to the Under the Freeway Alternative, is also a Native American shellmound that contained various artifacts. No human remains were noted, but as these are frequently found within shellmounds, it is possible that they could be encountered if this site is affected by the proposed project.

Construction of all the build alternatives would include ground disturbance within the resource boundaries of P-21-000113/CA-MRN-84, P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H, pre-contact midden deposits. This impact would be **significant**. However, implementation of Mitigation Measures MM-CULT-CNST-4, MM-CULT-CNST-5, MM-CULT-CNST-6, and MM-CULT-CNST-7 (described below) would ensure that impacts related to human remains would be ***less than significant with mitigation***.

Operations

All Build Alternatives

No ground disturbance is anticipated in association with project-level operations and maintenance for any build alternative. While site access and vegetation removal have the potential to affect surface archaeological deposit, human remains tend to be located within subsurface deposits. No excavation is associated with operation and maintenance; therefore, these activities are unlikely to affect human remains. However, due to the sensitive nature of the area, there is the potential to encounter human remains, and this impact would be **significant**. Implementation of Mitigation Measures MM-CULT-CNST-4 and MM-CULT-CNST-5 would ensure the impacts are ***less than significant with mitigation***.

Mitigation Measures

In addition to protocols laid out in Mitigation Measures MM-CULT-CNST-4, MM-CULT-CNST-5, and MM-CULT-CNST-6, Mitigation Measure MM-CULT-CNST-7 will be followed.

MM-CULT-CNST-7: Comply with State Laws Relating to Human Remains

As stated above, any human remains and related items discovered during the implementation of this project shall be treated in accordance with the requirements of Section 7050.5(b) of the California Health and Safety Code. If, pursuant to Section 7050.5(c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are or may be of Native American origin, then the discovery shall be treated in accordance with the provisions of Section 5097.98(a)-(d) of the PRC. The District shall ensure that the remains are not damaged or disturbed further until all stipulations in Section 7050.5 and Section 5097.98 have been met.

Section 3.5
Energy

This section describes the environmental and regulatory setting for energy. It also describes impacts associated with energy that would result from implementation of the proposed San Rafael Transit Center Replacement Project (proposed project) and other build alternatives and mitigation for significant impacts, where feasible and appropriate. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.5.1 Existing Conditions

3.5.1.1 Regulatory Setting

Federal

As discussed in Sections 3.2, Air Quality, and 3.7, Greenhouse Gas Emissions, of this Draft Environmental Impact Report (EIR), the National Highway Traffic Safety Administration sets the Corporate Average Fuel Economy standards to improve average fuel economy (i.e., reduce fuel consumption) and reduce greenhouse gas (GHG) emissions generated by cars and light-duty trucks. The National Highway Traffic Safety Administration and the U.S. Environmental Protection Agency have proposed amendments to the current fuel efficiency standards for passenger cars and light-duty trucks and new standards for model years 2021 through 2026. Under the Safer Affordable Fuel-Efficient Vehicles Rule, current 2020 standards would be maintained through 2026. California, 22 other states, the District of Columbia, and two cities filed suit against the proposed action on September 20, 2019 (*California et al. v. United States Department of Transportation et al.,* 1:19-cv-02826, U.S. District Court for the District of Columbia). The lawsuit requests a "permanent injunction prohibiting defendants from implementing or relying on the preemption regulation" but does not stay its implementation during legal deliberations. Part 1 of the Safer Affordable Fuel-Efficient Vehicles Rule went into effect on November 26, 2019. Part 2 of the rule was finalized on March 30, 2020. The rule will decrease the stringency of the Corporate Average Fuel Economy standards 1.5 percent each year through model year 2026; the standards issued in 2012 would have required annual fuel efficiency increases of about 5 percent. California, 22 other states, and the District of Columbia filed a petition for review of the final rule on May 27, 2020.

State

California has adopted statewide legislation to address various aspects of climate change and GHGs, which often pertain directly or indirectly to energy resources and uses. This section is focused on state legislation that specifically mentions energy use or resources. For other state legislation mainly focused on GHG reduction and climate change, refer to Section 3.7, Greenhouse Gas Emissions, of this Draft EIR.

Assembly Bill 1493, Pavley Rules (2002, Amendments 2009)/Advanced Clean Cars (2011)

Known as Pavley I, Assembly Bill (AB) 1493 provided the nation's first GHG standards for automobiles. AB 1493 required the California Air Resources Board to adopt vehicle standards to lower GHG emissions from automobiles and light-duty trucks to the maximum extent feasible beginning in 2009. In 2012, strengthening of the Pavley standards (referred to previously as Pavley II but now referred to as the Advanced Clean Cars measures) was adopted for vehicle model years 2017 through 2025. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025. The increase in fuel economy will help lower the demand for fossil fuels.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—California Green Building Standards Code (2011), Title 24 Updates

The California Green Building Standards Code (Part 11, Title 24), or CALGreen, was adopted as part of the California Building Standards Code (24 California Code of Regulations). CALGreen applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires energy- and water-efficient indoor infrastructure to be installed at all new projects beginning January 1, 2011. CALGreen also requires newly constructed building to develop a waste management plan and divert at least 50 percent of the construction materials generated during project construction.

The current 2019 Building Energy Efficiency Standards were adopted in 2019 and took effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy than homes constructed under the 2016 standards, while nonresidential buildings will use about 30 percent less energy. Later standards are expected to require zero net energy for new commercial buildings.

Executive Order B-16-12 (2012)

Executive Order (EO) B-16-12 orders state entities under the direction of the governor, including the California Air Resources Board, California Energy Commission, and California Public Utilities Commission (CPUC), to support rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Senate Bill 350, Chapter 547, Clean Energy and Pollution Reduction Act of 2015

Senate Bill (SB) 350 (DeLeon), also known as the Clean Energy and Pollution Reduction Act of 2015, was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions require the following by 2030: (1) a Renewables Portfolio Standard (RPS)[1] of 50 percent and (2) doubling of the statewide energy efficiency savings related to natural gas and electricity end uses (CEC 2020). In order to meet these provisions, the bill requires large utilities to develop and submit integrated resource plans that detail how the utilities will reduce GHG emissions and increase the use of clean energy resources while meeting customers' needs.

[1] The RPS is one of California's key programs for promoting renewable energy use within the state. The program sets forth continuous procurement of renewable energy for load-serving entities within California (CEC 2020).

Senate Bill 100—The 100 Percent Clean Energy Act of 2018 (2018)

SB 100 builds on SB 350, the Clean Energy and Pollution Reduction Act of 2015. SB 100 increases the 2030 RPS target set in SB 350 to 60 percent and requires an RPS of 100 percent by 2045.

Local

Pacific Gas and Electric Integrated Resource Plan

Pacific Gas and Electric Company (PG&E) adopted the 2018 Integrated Resource Plan (IRP) on August 1, 2018, to provide guidance for serving the electricity and natural gas needs of residents and businesses within its service area while fulfilling regulatory requirements (PG&E 2018). The IRP contains the following objectives that are relevant to the proposed project:

- **Clean Energy**: In 2017, PG&E delivered nearly 80 percent of its electricity from GHG-free resources and 33 percent of its electricity from RPS-eligible renewable resources, such as solar, wind, geothermal, biomass, and small hydro.
- **Reliability**: PG&E's IRP analysis includes PG&E's contribution to system and local reliability, in compliance with CPUC's resource adequacy requirements.
- **Affordability**: PG&E's IRP analysis selects resources to meet the state's clean energy and reliability goals and provides a system average rate forecast in compliance with CPUC's requirements for investor-owned utilities.

Marin Clean Energy Integrated Resource Plan

Marin Clean Energy (MCE) adopted the 2020 IRP on October 3, 2019, to provide near-term, mid-term, and long-term guidance for serving the electricity and natural gas needs of its customers within its service area while fulfilling regulatory requirements (MCE 2019). The IRP contains the following planning policies that are relevant to the proposed project:

- Reduce GHG emissions and other pollutants associated with the electric power sector through increased use of renewable, GHG-free, and low-GHG energy sources.
- Maintain competitive electric rates and increase control over energy costs through management of a diversified resource portfolio.
- Benefit the local economy by offering competitive electricity rates and customer programs and investing in infrastructure, energy, and workforce development programs within MCE's service area.
- Help customers reduce energy consumption and electric bills by supporting and administering enhanced customer energy efficiency, cost-effective distributed generation, and other demand-side programs.
- Enhance system reliability through investments in supply- and demand-side resources.

City of San Rafael General Plan 2020

The City of San Rafael General Plan 2020 (City of San Rafael 2016) provides a vision for long-range physical and economic development of the City of San Rafael (City), provides strategies and specific implementing actions, and establishes a basis for judging whether specific development proposals

and public projects are consistent with the City's plans and policy standards. *The City of San Rafael General Plan 2020* contains a Circulation Element and a Sustainability Element, which include policies related to energy resources. The following policies are applicable to energy:

Circulation Element

C-10. Alternative Transportation Mode Projects. Encourage and support projects, such as the Highway 101 High Occupancy Vehicle Gap Closure Project, that benefit alternatives to the single occupant automobile.

C-11. Alternative Transportation Mode Users. Encourage and promote individuals to use alternative modes of transportation, such as regional and local transit, carpooling, bicycling, walking and use of low-impact alternative vehicles. Support development of programs that provide incentives for individuals to choose alternative modes.

Goal 25. It is the goal of San Rafael to have a sustainable community; one that balances the needs of the environment, economy, and a diverse society.

Sustainability Element

SU-3. Alternative Fuel and Fuel Efficient Vehicles. Promote the use of alternative fuel and fuel efficient vehicles.

SU-4. Renewable Energy. Increase the supply of renewable energy sources. Promote and encourage residences to be resource, energy and water efficient by creating incentives and removing obstacles to promote their use.

SU-5. Reduce Use of Non-Renewable Resources. Reduce dependency on non-renewable resources.

SU-6. Resource Efficiency in Site Development. Encourage site planning and development practices that reduce energy demand, support transportation alternatives and incorporate resource- and energy-efficient infrastructure.

Goal 26. It is the goal of San Rafael to have municipal operations that are highly resource efficient and anticipate the effects of climate change.

Draft San Rafael General Plan 2040

The City is in the process of updating the *City of San Rafael General Plan 2020* with the *San Rafael General Plan 2040.* The following goals and policies are included in the Conservation and Climate Change and Mobility Elements of the *San Rafael General Plan 2040* (City of San Rafael 2020).

Goal C-4: Sustainable Energy Management. Use energy in a way that protects the environment, addresses climate change, and conserves natural resources.

- **Policy C-4.1: Renewable Energy.** Support increased use of renewable energy and remove obstacles to its use.
- **Policy C-4.2: Energy Conservation.** Support construction methods, building materials, and home improvements that improve energy efficiency in existing and new construction.
- **Policy C-4.3: Managing Energy Demand.** Reduce peak demands on the electric power grid through development of local sources, use of battery storage, deployment of "smart" energy and grid systems that use technology to manage energy more efficiently, and public education.
- **Policy C-4.4: Sustainable Building Materials.** Encourage the use of building materials that reduce environmental impacts and the consumption of non-renewable resources.
- **Policy C-4.5: Resource Efficiency in Site Development.** Encourage site planning and development practices that reduce energy demand and incorporate resource- and energy-efficient infrastructure.

Goal M-3: Cleaner Transportation. Coordinate transportation, land use, community design, and economic decisions in a way that reduces greenhouse gas emissions, air and water pollution, noise, and other environmental impacts related to transportation.

- **Policy M-3.5: Alternative Transportation Modes.** Support efforts to create convenient, cost-effective alternatives to single passenger auto travel. Ensure that public health, sanitation, and suer safety is addressed in the design and operation of alternative travel modes.

San Rafael Climate Change Action Plan 2030

The *San Rafael Climate Change Action Plan 2030* (CCAP 2030), adopted in 2019, includes goals, policies, and strategies to reduce the City's GHG emissions, in compliance with AB 32 and SB 375. CCAP 2030 was adopted with the purpose of reducing GHGs community-wide to achieve a reduction target of 40 percent below 1990 emission levels by 2030. The City has identified GHG reduction measures in the transportation, energy, waste, water and wastewater, and land use sectors, coupled with state and exiting local actions, to reduce GHG emissions (City of San Rafael 2019). GHG emissions largely involve energy consumption (i.e., fossil-fuel usage); therefore, a reduction in GHG emissions would also equate to a reduction in energy consumption.

The following GHG reduction measures are applicable to energy:

LCT-C5. Public Transit. Support and promote public transit by taking the following actions:

- Work Marin Transit and Golden Gate Transit to maximize ridership through expansion and/or improvement of transit routes and schedules.
- Work with SMART, TAM, employers and others to provide first and last mile programs to maximize utilization of the train, including shuttle buses.
- Support the development of an attractive and efficient multi-modal transit center and provide safe routes to the transit center that encourage bicycle and pedestrian connections.
- Support a "yellow school bus" program and student use of regular transit to reduce school traffic.
- Encourage transit providers, including school buses, to use renewable diesel as a transition fuel and to purchase electric buses whenever replacing existing buses.

EE-M3. Energy Conservation. Reduce energy consumption through behavioral and operational changes.

- Establish energy efficiency protocols for building custodial and cleaning services and other employees, including efficient use of facilities, such as turning off lights and computers, thermostat use, etc.
- Incorporate energy management software, electricity monitors, or other methods to monitor energy use in municipal buildings.
- Investigate 9/80 work schedule for City facilities where feasible and where facilities can be shut down entirely.

RE-C2. GHG-Free Electricity. Encourage residents and businesses to switch to 100 percent renewable electricity (MCE Deep Green, MCE Local Sol, and PG&E Solar Choice) through engagement campaigns and partner agency incentives and work with MCE Clean Energy to assure that it reaches its goal to provide electricity that is 100 percent GHG-free by 2025.

RE-C3. Building and Appliance Electrification. Promote electrification of building systems and appliances that currently use natural gas, including heating systems, hot water heaters, stoves, and clothes dryers.

3.5.1.2 Environmental Setting

Energy resources in California include natural gas, electricity, water, wind, oil, coal, solar, geothermal, and nuclear resources. Energy production and energy use both result in the depletion of nonrenewable resources, such as oil, natural gas, and coal, and emissions of pollutants.

State Energy Resources and Use

California's diverse portfolio of energy resources produced 2,408.2 trillion British thermal units (BTUs)[2] in 2018 (U.S. Energy Information Administration 2020a). Excluding offshore areas, the state ranked seventh in the nation in crude oil production in 2018 (the most recent year for which data are available), producing the equivalent of 965.3 trillion BTUs (U.S. Energy Information Administration 2020b). Other energy sources in the state include natural gas (228.9 trillion BTUs), nuclear (190.4 trillion BTUs), and biofuel (35.5 trillion BTUs) (U.S. Energy Information Administration 2020a, 2020b).[3] In addition, because of the mild Mediterranean climate and strict conservation requirements for energy efficiency, California has lower energy consumption rates than most parts of the United States. According to the U.S. Energy Information Administration, California consumed approximately 7,966.6 trillion BTUs of energy in 2018 (U.S. Energy Information Administration 2020c). California's per-capita energy consumption of 201.9 million BTUs is one of the lowest in the country and ranked 48th in the nation as of 2018 (U.S. Energy Information Administration 2020d).

In 2018, natural gas accounted for the majority of energy consumption (2,207.4 trillion BTUs, or 28 percent), followed by gasoline (1,716.3 trillion BTUs or 21 percent); renewable energy, including nuclear electric power, hydroelectric power, biomass, and other renewables (1,344.9 trillion BTUs, or 17 percent); distillates and jet fuel (1,260.5 trillion BTUs, or 16 percent); and interstate electricity (865.7 trillion BTUs, or 11 percent), with the remaining 7 percent coming from a variety of other sources (U.S. Energy Information Administration 2020e). Of the natural gas consumed, commercial uses consumed approximately 12 percent, followed by residential uses (20 percent) and industrial uses (36 percent), among many other uses (U.S. Energy Information Administration 2020f).

The transportation sector consumed the greatest quantity of energy (3,170.0 trillion BTUs, or 40 percent), followed by the industrial (1,848.2 trillion BTUs, or 23 percent), commercial (1,509.2 trillion BTUs, or 19 percent), and residential (1,439.2 trillion BTUs, or 18 percent) sectors (U.S. Energy Information Administration 2020c).

Per-capita energy consumption, in general, is declining because of improvements in energy efficiency and designs. However, despite this reduction in per-capita energy use, the state's total overall energy consumption (i.e., non-per-capita energy consumption) is expected to grow over the next several decades as a result of increases in population, jobs, and vehicle miles traveled (VMT).

Regional Energy Resources and Use

PG&E provides natural gas and electricity services to the vast majority of Northern California, including the City of San Rafael and the project area. PG&E's service extends north to south from

[2] One BTU is the amount of energy required to heat 1 pound of water by 1 degree Fahrenheit at sea level. BTU is a standard unit of energy that is used in the United States and is on the English system of units (foot-pound-second system).
[3] No coal production occurs in California.

Eureka to Bakersfield and east to west from the Sierra Nevada to the Pacific Ocean. PG&E purchases gas and power from a variety of sources, including other utility companies. PG&E also obtains energy supplies from power plants and natural gas fields in Northern California. PG&E operates a grid distribution system that channels all power produced at the various generation sources into one large energy pool for distribution throughout the service territory. PG&E provides all of the natural gas and electric infrastructure in south San Francisco. PG&E has two plan options, known as Solar Choice options, in addition to its base plan, which gives customers the option to purchase energy from solar resources. The first Solar Choice option provides up to 50 percent of a customer's energy from solar resources, while the other option provides up to 100 percent of customer's energy from solar resources.

MCE is Marin County's official electricity provider. MCE's power comes from a mix of various sources, including solar, wind, geothermal, biomass and biowaste, and hydroelectric generation resources. MCE delivers power to its customers via existing PG&E utility infrastructure.[4] MCE allows customers to choose between three different electricity product operations: Light Green (60 percent renewable resources as electricity sources), Deep Green (100 percent renewable resources from solar and wind power as renewable electricity sources) and Local Sol (100 percent renewable resources from solar power as electricity sources) (MCE 2020).

In Marin County, a total of 68.6 million therms of natural gas were consumed in 2018 (the most recent year for which data are available). In 2018, natural gas in Marin County was consumed primarily by the residential sector (72 percent), followed by the non-residential sector (28 percent) (CEC n.d.). In 2018, Marin County consumed a total of 1,329.2 million kilowatts of electricity. In Marin County, electricity was consumed primarily by the non-residential sector (51 percent), followed by the residential sector (49 percent) (CEC n.d.). Electricity usage for different land uses varies substantially by the type of uses in a building, the types of construction materials used, and the efficiency of the electricity-consuming devices. However, energy consumption in the City of San Rafael has generally decreased over recent years despite a growing population, as shown in the 2013–2018 data in Table 3.5-2 (the most recent years for which data are available) (Marin Climate and Energy Partnership 2020).

Table 3.5-1 outlines PG&E's and MCE's power mix in 2018, compared to the power mix for the state, and Table 3.5-2 outlines the City of San Rafael's per-capita and household energy consumption, including electricity and natural gas consumption, from 2013 to 2018.

[4] MCE charges each of its customers an electric delivery charge for maintenance of PG&E's wires and infrastructure, and delivery of electricity to customers.

Table 3.5-1. PG&E, MCE, and the State of California Power Mix in 2018

	PG&E Options			MCE Options			California Power Mix 2018
Energy Resources	Base Plan	50% Solar Choice	100% Solar Choice	Light Green	Deep Green	Local Sol	
Eligible Renewable:	39%	69%	100%	61%	100%	100%	31%
Biomass and Waste	4%	2%	0%	4%	0%	0%	2%
Geothermal	4%	2%	0%	3%	0%	0%	5%
Small Hydroelectric	3%	1%	0%	2%	0%	0%	2%
Solar	18%	59%	100%	11%	50%	100%	11%
Wind	10%	5%	0%	39%	50%	0%	11%
Coal	0%	0%	0%	0%	0%	0%	3%
Large Hydroelectric	13%	6%	0%	13%	0%	0%	11%
Natural Gas	15%	7%	0%	0%	0%	0%	35%
Nuclear	34%	17%	0%	0%	0%	0%	9%
Other	0%	0%	0%	13%	0%	0%	< 1%
Unspecified[a]	0%	0%	0%	13%	0%	0%	11%
Total	100%	100%	100%	100%	100%	100%	100%

Sources: PG&E 2019; MCE 2019

[a] Electricity from transactions that are not traceable to specific generation sources are classified as unspecified sources of power.

Table 3.5-2. Electricity and Natural Gas Consumption in the City of San Rafael, 2013–2018

Year	Household Energy Consumption (MBTU)	Per-Capita Energy Consumption (MBTU)	Total (MBTU)
2013	48	66	114
2014	43	57	100
2015	43	58	101
2016	44	59	103
2017	45	61	106
2018	44	60	104

Source: Marin Climate and Energy Partnership 2020
MBTU = million British thermal units

Project Site Energy Resources and Use

The existing transit center is in Downtown San Rafael between 2nd Street, 3rd Street, Tamalpais Avenue, and Hetherton Street. The building is approximately 2,300 square feet. As explained in Chapter 2, Project Description, four build alternatives are being considered for this proposed project: Move Whistlestop Alternative, Adapt Whistlestop Alternative, 4th Street Gateway Alternative, and Under the Freeway Alternative. All of the build alternatives are within Downtown San Rafael and within 500 feet of the existing transit center. As stated previously, PG&E and MCE provide natural gas and electricity to the City, and therefore the existing transit center and four proposed project sites, through right-of-way electric and natural gas lines. The transit center and four proposed alternatives are served by existing natural gas and electric infrastructure provided by PG&E.

3.5.2 Environmental Impacts

Impacts were analyzed for the project area rather than specific build alternatives because the location of each build alternative would experience a nearly equivalent impact for each resource considered here. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.5.2.1 Methodology

As the proposed transit center would be in the City of San Rafael, the study area for the impact analysis is the City of San Rafael. Energy impacts associated with construction and operation of the proposed project were assessed and quantified where applicable using standard and accepted software tools and techniques. A summary of the methodology for calculating the proposed project's energy use is provided below.

Appendix F of the California Environmental Quality Act (CEQA) Guidelines provides guidance on determining whether a project would result in the wasteful, inefficient, or unnecessary consumption of energy resources. As stated in Appendix F, the goal of conserving energy implies the wise and efficient use of energy. The means for achieving this goal include:

- Decreasing overall per capita energy consumption

- Decreasing reliance on fossil fuels such as coal, natural gas, and oil
- Increasing reliance on renewable energy sources

Based on Appendix F, environmental considerations in the assessment of energy consumption impacts may include the following:

- The project's energy requirements and its energy efficiency by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and requirements for additional capacity
- The effects of the project on peak- and base-period demands for electricity and other forms of energy
- The degree to which the project complies with existing energy standards
- The effects of the project on energy resources
- The project's forecast transportation energy use requirements and its overall use of efficient transportation alternatives

Project Construction

Construction of the proposed project under all build alternatives would require energy usage, such as electricity for mobile offices and fuel for off-road equipment, haul trucks, vendor trips, and workers' trips. The construction schedule, equipment operating details, trip numbers and lengths, and material quantities were provided by the project sponsor, in addition to information regarding total electricity usage during project construction. Fuel usage was quantified using the construction emissions profile generated by the California Emissions Estimator Model (CalEEMod), version 2016.3.2. The number of metric tons of carbon dioxide equivalent associated with each construction activity (e.g., off-road equipment usage, worker trips) was converted to gallons of diesel or gasoline and summed accordingly, assuming all off-road activities, hauling, and vendor activities would be carried out with use of diesel equipment and vehicles and that all workers would use gasoline vehicles while traveling to and from the project area. For ease of comparison across all energy consumption amounts, gallons of diesel and gasoline were converted to BTUs, assuming an energy intensity of 124,000 BTUs per gallon of gasoline and 139,000 BTU per gallon of diesel (Environment and Ecology 2020), and megawatt-hours (MWh) of energy converted assuming an energy intensity of 3,412,141 BTU per MWh of electricity (Convert Units 2021). The CalEEMod output files and fuel-use calculations are provided in Appendix B of this Draft EIR.

Project Operation

Energy consumption associated with the project area includes the combustion of natural gas and electricity usage, including the electricity used to convey water to the project site. Anticipated water consumption for the new transit center was provided by the project sponsor. A detailed discussion of existing and proposed water consumption is provided in Section 3.17, Utilities, of this draft EIR. Annual energy consumption at the transit center under the four build alternatives was estimated using CalEEMod under future (2025) conditions. Energy associated with water conveyance was estimated using CalEEMod and added to the energy usage of the respective components. The 2025

modeling reflects implementation of state measures to reduce energy use and resulting GHG emissions (e.g., SB 100, Pavley). Quantifiable features, consistent with the proposed project, were incorporated into CalEEMod. The CalEEMod output files are provided in Appendix B of this Draft EIR. Additional electrical requirements and infrastructure may be needed for onsite charging of future battery electric buses at the transit center bus bays. However, because the preferred technology for fleetwide rollout of zero-emission buses has not yet been determined, these utility needs would be incorporated in a future project. Fleetwide rollout of zero-emission buses, along with related infrastructure to support the zero-emission fleet, is a separate planning initiative that is outside the scope of the proposed project. The Golden Gate Bridge, Highway and Transportation District would implement the fleetwide rollout in a manner that is consistent with CEQA and any additional energy and utility needs for the fleetwide rollout would be addressed as part of that initiative.

For ease of comparison across all energy consumption amounts, MWh of energy was converted assuming an energy intensity of 3,412,141 BTU per MWh of electricity (Convert Units 2021).

Based on information in Section 3.14, Transportation, all build alternatives primarily represent a shifting of bus activity from location to another; the proposed project would not change the amount of bus service to be provided and new vehicle trips are not assumed to be generated by the proposed project. Although the proposed project would improve the efficiency of bus operations and create operational flexibility for bus movements into and out of the transit center, no future expansion of transit service was planned at the time of this EIR's preparation and therefore cannot be reasonably forecasted. Therefore, additional attendant energy consumption in the form of gasoline or diesel fuel is not anticipated. Therefore, mobile energy consumption was not evaluated for project operations. The operations modeling files are provided in Appendix B of this Draft EIR.

3.5.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to energy.

Would the proposed project:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

3.5.2.3 Impacts

Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction Or Operation

Construction

Move Whistlestop Alternative

Construction activities for the proposed project would include mobilization, demolition, tree removal, utility work, civil and vertical structures work, and vertical structures finishing and

inspection. Construction-related energy usage would include the electricity needed to power electric construction equipment or deliver water to the construction site, the gasoline and diesel fuel used for transporting workers and materials to and from the construction site, and the fuel used for the operation of off-road equipment. Construction-related energy usage and consumption would vary throughout the course of project buildout and depend on the level of activity, length of the construction period, specific construction operations, types of equipment, and number of personnel, which would amount to a **potentially significant** energy impact. The estimated construction-related energy consumption for the proposed project is provided in Table 3.5-3. As shown, project construction would consume approximately 8,600 million BTUs over the approximately 18-month construction period under the Move Whistlestop Alternative.

Table 3.5-3. Estimated Construction Energy Consumption from the Proposed Project (Million BTUs)

Build Alternative	Electricity	Gasoline	Diesel	Total
Move Whistlestop	300	575	7,725	8,600
Adapt Whistlestop	300	575	7,620	8,495
4th Street Gateway	300	575	7,651	8,526
Under the Freeway	300	575	7,730	8,605

Source: See Appendix B of this Draft EIR for CalEEMod outputs and construction energy calculations.

Mitigation Measure MM-GHG-CNST-1 would be implemented to reduce the amount of fossil fuel consumed during construction activities, such as ensuring that 15 percent of the construction vehicles/equipment fleet utilize alternative fuel (e.g., biodiesel or electricity). It would also reduce the energy intensity associated with new building materials and discarded construction and demolition waste by requiring construction contractors to implement the Bay Area Air Quality Management District's recommended best management practices—specifically, those associated with alternative fuel and recycling. Consequently, project construction would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and this impact would be ***less than significant with mitigation***.

Adapt Whistlestop Alternative

The Adapt Whistlestop Alternative construction activities would consume slightly less energy than the Move Whistlestop Alternative, as it may require fewer truck hauling trips (i.e., less energy consumed in the form of diesel or gasoline) to remove debris depending on the site characteristics; however, overall construction impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant with mitigation***.

4th Street Gateway Alternative

The 4th Street Gateway Alternative construction activities would consume slightly less energy than the Move Whistlestop Alternative; however, overall construction impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would *be* ***less than significant with mitigation***.

Under the Freeway Alternative

The Under the Freeway Alternative construction activities would consume slightly more energy than the Move Whistlestop Alternative; however, overall construction impacts would be the same as

those of the Move Whistlestop Alternative outlined above. Therefore, the impacts would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Operation of the proposed project would result in the consumption of electricity and natural gas (e.g., for heating, and cooling) for the proposed 3,000-square-foot transit center building, which would include customer service uses, public restrooms, driver relief facilities, and small retail uses, as well as maintenance and security space. Operational energy consumption was evaluated under buildout-year (2025) conditions. The analysis considers implementation of quantifiable measures to reduce energy usage (e.g., SB 100) as well as the benefits achieved through quantifiable sustainability measures, including the use of green consumer products, which are incorporated into the project design.

As previously discussed, all build alternatives primarily represent a shifting of bus activity from location to another; the proposed project would not change the amount of bus service to be provided and new vehicle trips are not assumed to be generated by the proposed project. Although the proposed project would improve the efficiency of bus operations and create operational flexibility for bus movements into and out of the transit center, no future expansion of transit service was planned at the time of this EIR's preparation and therefore cannot be reasonably forecasted. Therefore, additional attendant energy consumption in the form of gasoline or diesel fuel is not anticipated. Consequently, mobile-energy consumption was not evaluated for project operations.

Buildout of the proposed project would result in operational energy consumption of approximately 121 million BTUs, or the consumption of 106 BTUs of electricity and 14 BTUs of gas.

The proposed project would qualify for the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) Gold certification at a minimum. Attaining LEED Gold certification would ensure that the building would be energy efficient and would incorporate features such as low-flow fixtures or water-efficient landscaping into the design of the building to reduce energy consumption. The proposed project would also include the installation of solar panels on site, which would offset some of the facility's energy consumption. The proposed project would also meet San Rafael Municipal Code and CALGreen building requirements. In addition, the proposed project would comply with all applicable City and state water conservation (indoor and outdoor) measures, including Title 24, Part 6, of the California Energy Code, which would reduce water consumption. Furthermore, as stated previously, operation of the proposed project would not increase energy consumption in the form of mobile diesel and gasoline usage, and would support the shift from automobiles to public transit. Specifically, because the proposed project is a transportation project (specifically a transit-supportive project), by nature it would encourage the use of public transit to reduce single-occupancy vehicle trips and associated mobile energy consumption.

Based on the above analysis, operation of the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and this impact would be ***less than significant***. No mitigation is required.

Mitigation Measures

Implement MM-GHG-CNST-1, as described in Section 3.7, Greenhouse Gas Emissions.

Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

All Build Alternatives

State and local renewable energy and energy efficiency plans applicable to the proposed project are discussed above under Section 3.5.1.1, Regulatory Setting. State plans include the AB 1493 Pavley Rules, California Title 24 energy efficiency standards, EO B-16-12, SB 350, and SB 100. Each of these contain required standards related to energy efficiency and renewable energy development. Local plans that address energy efficiency and are designed to achieve the state's RPS mandates include PG&E's 2018 IRP, MCE's 2020 IRP, and the City's CCAP 2030. *The City of San Rafael General Plan 2020* also includes goals and policies related to energy use and energy reductions.

As discussed above, the proposed project would incorporate sustainability and transportation features. Furthermore, the proposed project would qualify for LEED Gold certification at a minimum.

The proposed project would be required to comply with state and local renewable energy and energy-efficiency plans. As a result, it would benefit from renewable energy development and increases in energy efficiency. Energy usage from increases in VMT and the number of average daily trips in the area is expected to become more efficient under regulations included in Pavley and EO B-16-12, which address average fuel economy and commercialization of zero-emission vehicles, respectively. Building energy efficiency is also expected to increase as a result of compliance with Title 24 building codes, which are expected to move toward zero net energy for new construction and 100 percent renewable energy under SB 350 and SB 100 regulations. With implementation of the proposed project, PG&E and MCE would continue to pursue the procurement of renewable energy sources to meet their RPS goals and comply with state regulations. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and the impact would be ***less than significant***. No mitigation is required.

Mitigation Measures

No mitigation is required.

Section 3.6
Geology and Soils

This section addresses potential impacts related to geology, soils, and seismicity and impacts on paleontological resources that may result from implementation of the proposed San Rafael Transit Center Replacement Project (proposed project) and other build alternatives. The following discussion addresses existing geology, soils, seismicity, and paleontological conditions of the project area and surroundings, considers applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project implementation, as applicable. Information in this section is based on the Preliminary Geotechnical Design Recommendations (Geotechnical Recommendation) (see Appendix H) prepared for the proposed project, unless otherwise noted (Parikh 2020). Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.6.1 Existing Conditions

3.6.1.1 Regulatory Setting

Federal

Earthquake Hazard Reduction Act of 1977

Federal laws codified in United States Code Title 42, Chapter 86, were enacted to reduce risks to life and property from earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. Implementation of these requirements is regulated, monitored, and enforced at the state and local levels.

State

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (Alquist-Priolo Act)

The Alquist-Priolo Act (Public Resources Code Section 2621 et seq.) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location and construction of most types of structures intended for human occupancy[1] over active fault traces and strictly regulates construction in the corridors along active faults. The state geologist has established regulatory zones along active faults,[2] called "Earthquake Fault Zones," and published maps that identify areas where surface traces of active faults are present (California Geological Survey 2020a).

[1] According to the Alquist-Priolo Act, a structure for human occupancy is defined as one "used or intended for supporting or sheltering any use or occupancy that is expected to have human occupancy rate of more than 2,000 person-hours per year" (California Code of Regulations, title 14, division 2, section 3601(e)).

[2] An active fault, for the purposes of the Alquist-Priolo Act, is one that has ruptured in the past 11,000 years.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690–2699.6) directs the California Geological Survey to identify and map areas prone to the liquefaction and landslides resulting from seismic events. The act mandates that project sponsors have a site-specific geotechnical investigation performed to identify potential seismic hazards and formulate mitigation measures prior to the permitting of most developments within specific zoned areas.

California Building Standards Code

The California Building Standards Code, or state building code, is codified in Title 24 of the California Code of Regulations. The state building code provides standards that must be met to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within the state. The state building code generally applies to all occupancies in California, with modifications adopted in some instances by state agencies or local governing bodies. The current state building code incorporates, by adoption, the 2018 edition of the International Building Code of the International Code Council, with the California amendments. These amendments include building design and construction criteria that have been tailored for California earthquake conditions.

Chapter 16 of the state building code deals with structural design requirements governing seismically resistant construction (Section 1604) including, but not limited to, factors and coefficients used to establish a seismic site class and seismic occupancy category appropriate for the soil/rock at the building location and the proposed building design (Sections 1613.5 through 1613.7). Chapter 18 includes, but is not limited to, the requirements for foundation and soil investigations (Section 1803); excavation, grading, and fill (Section 1804); allowable load-bearing values of soils (Section 1806); foundation and retaining walls (Section 1807); and foundation support systems (Sections 1808 through 1810). Chapter 33 includes, but is not limited to, requirements for safeguards at work sites to ensure stable excavations and cut-and-fill slopes (Section 3304) as well as the protection of adjacent properties, including requirements for noticing (Section 3307). Appendix J of the state building code includes, but is not limited to, grading requirements for the design of excavation and fill (Sections J106 and J107), specifying maximum limits on the slope of cut-and-fill surfaces and other criteria, required setbacks and slope protection for cut-and-fill slopes (Section J108), and erosion control through the provision of drainage facilities and terracing (Sections J109 and J110).

California Division of Occupational Safety and Health Regulations

Construction activities are subject to occupational safety standards for excavation, shoring, and trenching, as specified in California Division of Occupational Safety and Health regulations (Title 8).

State Historic Significance Criteria

Section 4.7.5.2, Significance Criteria, Appendix G of the California Environmental Quality Act (CEQA) Guidelines includes the following question: “Would the project directly or indirectly destroy a unique paleontological resource or site?” Although CEQA does not define what constitutes “a unique paleontological resource or site,” Section 21083.2 defines *unique archaeological resources* as

any archaeological 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:

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

This definition is equally applicable to recognizing a unique paleontological resource or site. CEQA Section 15064.5(a)(3)(D) provides additional guidance, indicating that, generally, a resource is considered historically significant if it has yielded, or may be likely to yield, information important in history before or after European contact.

The CEQA lead agency having jurisdiction over a project is responsible for ensuring that paleontological resources are protected in compliance with CEQA and other applicable statutes. California Public Resources Code Section 21081.6 requires the CEQA lead agency to demonstrate project compliance with the mitigation measures developed during the environmental impact review process.

Local

San Rafael Municipal Code

Section 12.12.010 of the San Rafael Municipal Code adopts the 2016 California Building Code, consisting of Volume 1 and Volume 2, in its entirety, except that only the following appendices are adopted: Appendices C, H, and I.

12.100.010 - Adopted codes. The San Rafael Municipal Code adopts the following recognized codes together with the supplements, listed changes, additions and deletions as noted: 2019 Edition, California Building Code ("CBC"), chapters 2 through 28, 30, 31, 32, 33, 35 and Appendices C, H, I, and N.; 4. 2019 Edition, California Existing Building Code ("CEBC"), chapters 2 through 16 and Appendices.

14.16.170 - Geotechnical review. Development applications require geotechnical reports consistent with the geotechnical matrix in the general plan appendices to assess such hazards as potential seismic hazards, liquefaction, landsliding, mudsliding, erosion, sedimentation and settlement and hazardous soils conditions to determine the optimum location for structures, to advise of special structural requirements and to evaluate the feasibility and desirability of a proposed facility in a specific location.

9.30.150 - Erosion and sediment control plan requirements. When required by the Phase II Stormwater Permit or by the agency, a project shall have an Erosion and Sediment Control Plan (ESCP) which addresses erosion and sediment control and pollution prevention during the construction phase as well as final stabilization control measures.

The San Rafael Municipal Code does not reference paleontological resources.

City of San Rafael General Plan 2020

The City of San Rafael General Plan 2020 (City of San Rafael 2016) contains goals, policies, and programs describing the community's vision for economic viability, livable neighborhoods, and environmental protection. *The City of San Rafael General Plan 2020* includes the following policies

associated with geology and soils. No policies associated with paleontological resources are presented in this document.

S-4. Geotechnical Review. Continue to require geotechnical investigations for development proposals as set forth in the City's Geotechnical Review Matrix (Appendix F). Such studies should determine the actual extent of geotechnical hazards, optimum design for structures, the advisability of special structural requirements, and the feasibility and desirability of a proposed facility in a specified location.

S-4a: Geotechnical Review of Proposed Development. Require soils and geologic peer review of development proposals in accordance with the Geotechnical Review Matrix to assess such hazards as potential seismic hazards, liquefaction, landsliding, mudsliding, erosion, sedimentation and settlement in order to determine if these hazards can be adequately mitigated. Levels of exposure to seismic risk for land uses and structures are also outlined in the Geotechnical Review Matrix, which shall be considered in conjunction with development review.

S-4b. Geotechnical Review Matrix. Periodically review and update the Geotechnical Review Matrix, which describes procedures for site-specific investigations for projects being reviewed according to proposed occupancy, type and hazard zone(s) within which the site is located.

S-5. Minimize Potential Effects of Geological Hazards. Development proposed within areas of potential geological hazards shall not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties. Development in areas subject to soils and geologic hazards shall incorporate adequate mitigation measures. The City will only approve new development in areas of identified hazard if such hazard can be appropriately mitigated.

S-6. Seismic Safety of New Buildings. Design and construct all new buildings to resist stresses produced by earthquakes. The minimum level of seismic design shall be in accordance with the most recently adopted building code as required by State law.

S-6a: Seismic Design. The minimum seismic design of structures should be in accordance with the building code, as adopted in accordance with State law

S-7. Minimize Potential Effects of Landslides. Development proposed in areas with existing landslides or with the potential for landslides (as identified by a registered engineering geologist or geotechnical engineer) shall not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties. Development in areas subject to landslide hazards shall incorporate adequate mitigation measures that have a design factor of safety of at least 1.5 for static conditions and 1.0 for pseudo-static (earthquake) conditions. The landslide mitigation should consider multiple options in order to reduce the secondary impacts (loss of vegetation, site grading, traffic, visual) associated with landslide mitigation. The City will only approve new development in areas of identified landslide hazard if such hazard can be appropriately mitigated.

S-8. Seismic Safety of Existing Buildings. Encourage the rehabilitation or elimination of structures susceptible to collapse or failure in an earthquake. Historic buildings shall be treated in accordance with the Historic Preservation Ordinance.

S-8a: Seismic Safety Building Reinforcement. Enforce State and local requirements for reinforcement of existing buildings.

S-9. Post Earthquake Inspections. Require post-earthquake building inspections of critical facilities, and restrict entry into compromised structures. Inspections shall be conducted when the earthquake intensity is VII or higher per the Modified Mercalli Intensity Scale. Require inspections as necessary in conjunction with other non-city public agencies and private parties for structural integrity of water storage facilities, storm drainage structures,

electrical transmission lines, major roadways, bridges, elevated freeways, levees, canal banks, and other important utilities and essential facilities.

S-9a: Inspection List. Identify a list of facilities that would be inspected after a major earthquake. The list shall identify City-owned essential or hazardous facilities as defined by Category 1 and 2 of Table 16-K of the Uniform Building Code, and shall prioritize the list for inspection scheduling purposes in case of an earthquake.

S-22. Erosion. Require appropriate control measures in areas susceptible to erosion, in conjunction with proposed development. Erosion control measures and management practices should conform to the most recent editions of the Regional Water Quality Control Board's Erosion and Sediment Control Field Manual and the Association of Bay Area Governments' Manual of Standards for Erosion and Sediment Control or equivalent.

S-22a: Erosion Control Programs. Review and approve erosion control programs for projects involving grading one acre or more or 5,000 square feet of built surface as required by Standard Urban Stormwater Management Plans (SUSUMP). Evaluate smaller projects on a case-by-case basis.

Draft City of San Rafael General Plan 2040

The City is currently working on the Draft *San Rafael General Plan 2040* (City of San Rafael 2020a), which contains goals, policies, and programs describing the community's vision for economic viability, livable neighborhoods, and environmental protection. The Draft *San Rafael General Plan 2040* includes the following policies associated with geology and soils. No policies associated with paleontological resources are presented in this document.

Policy S-2.1: Seismic Safety of New Buildings. Design and construct all new buildings to resist stresses produced by earthquakes. The minimum level of seismic design shall be in accordance with the most recently adopted building code as required by State law.

Program S-2.1A: Seismic Design. Adopt and enforce State building codes which ensure that new or altered structures meet the minimum seismic standards set by State law. State codes may be amended as needed to reflect local conditions.

Program S-2.1B: Geotechnical Review. Continue to require geotechnical studies and peer review for proposed development as set forth in the City's Geotechnical Review Matrix (See Appendix F and text box at right). Such studies should determine the extent of geotechnical hazards, optimum design for structures and the suitability of proposed development for its location, the need for special structural requirements, and measures to mitigate any identified hazards. Review and update the Matrix to ensure that it supports and implements the Local Hazard Mitigation Plan, reflects current practices and is internally consistent, and potentially remove the procedures from the General Plan and instead adopt them as part of the Zoning Ordinance or through a separate resolution.

Program S-2.1C: Earthquake Hazard Study. As recommended by the Local Hazard Mitigation Plan, complete an Earthquake Hazard Study that examines geologic hazards in the city.

Policy S-2.2: Minimize the Potential Effects of Landslides. Development proposed in areas with existing or potential landslides (as identified by a registered geologist or geotechnical engineer) shall not be endangered by, or contribute to, hazardous conditions on a site or adjoining properties. The City will only approve new development in areas of identified landslide hazard if the hazard can be appropriately mitigated, including erosion control and replacement of vegetation

Program S-2.2A: Landslide Mitigation and Repair Projects. Undertake landslide hazard mitigation and repair projects, as outlined in the [Local Hazard Mitigation Plan]. These

projects include a landslide identification and management program, repair of the Fairhills Drive landslide, and repair of the Bret Harte sewer easement.

Policy S-2.3: Seismic Safety of Existing Buildings. Encourage the rehabilitation or elimination of structures susceptible to collapse or failure in an earthquake. Historic buildings shall be treated in accordance with the Historic Preservation Ordinance and Historic Building Code (see also Program CDP-5.5A).

Program S-2.3A: Seismic Safety Building Reinforcement. Enforce State and local requirements for reinforcement of existing buildings, including the City's remaining unreinforced masonry (URM) buildings.

Program S-2.3B: Soft-Story Building Mitigation Plan. Complete a citywide assessment of soft-story buildings and develop a mitigation strategy and cost-benefit analysis to modify these structures to reduce their potential to collapse during an earthquake.

Policy S-2.4: Post-Earthquake Inspections. Require post-earthquake inspections of critical facilities and other impacted buildings and restrict entry into compromised structures as appropriate. Following a major earthquake, inspections shall be conducted as necessary in conjunction with other non-city public agencies and private parties to ensure the structural integrity of water storage facilities, storm drainage structures, sewer lines and treatment facilities, transmission and telecommunication facilities, major roadways, bridges, elevated freeways, levees, canal banks, and other important utilities and essential facilities.

Program S-2.4A: Inspection List. Develop and maintain a list of facilities that would be inspected after a major earthquake, including City-owned essential or hazardous facilities. Facilities on the list should be prioritized for inspection-scheduling purposes.

Policy S-2.5: Erosion Control. Require appropriate control measures in areas susceptible to erosion, in conjunction with proposed development. Erosion control measures should incorporate best management practices (BMPs) and should be coordinated with requirements for on-site water retention, water quality improvements, and runoff control.

Program S-2.5A: Erosion and Sediment Control Plans. Require Erosion and Sediment Control Plans (ESCPs) for projects meeting the criteria defined by the Marin County Stormwater Pollution Prevention Program, including those requiring grading permits and those with the potential for significant erosion and sediment discharges. Projects that disturb more than one acre of soil must prepare a Stormwater Pollution Prevention Plan, pursuant to State law.

Program S-2.5B: Grading During the Wet Season. Avoid grading during the wet season due to soil instability and sedimentation risks. Require that development projects implement erosion and/or sediment control measures and runoff discharge measures based on their potential to impact storm drains, drainageways, and creeks.

Program S-2.5C: Sediment Use. Explore the use of sediment from human activities such as dredging and natural processes such as erosion for wetlands restoration and shoreline resiliency projects.

Draft City of San Rafael Downtown Precise Plan

The Draft *Downtown San Rafael Precise Plan* (City of San Rafael 2020b) contains goals, policies, and programs describing the community's vision for economic viability, livable neighborhoods, and environmental protection. The *Downtown San Rafael Precise Plan* includes no policies associated with geology and soils or paleontological resources.

3.6.1.2 Environmental Setting

Physiography

The project area is in a depression within the Coast Ranges geomorphic province. The Coast Ranges are northwest-trending mountain ranges (2,000 to 4,000 and occasionally up to 6,000 feet elevation above sea level) and valleys, composed of thick Mesozoic and Cenozoic sedimentary strata. The northern and southern ranges are separated by a depression containing the San Francisco Bay. The northern Coast Ranges are dominated by irregular, knobby, landslide-topography of the Franciscan Complex. The eastern border is characterized by strike-ridges and valleys in Upper Mesozoic strata. In several areas, Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma, and Clear Lake volcanic fields. The Coast Ranges are subparallel to the active San Andreas fault. The San Andreas fault is more than 600 miles long, extending from Point Arena to the Gulf of California. West of the San Andreas fault is the Salinian Block, a granitic core extending from the southern extremity of the Coast Ranges to the north of the Farallon Islands (California Geological Survey n.d.).

Subsurface Conditions

The bedrock unit in the vicinity of the project area consists of Franciscan Complex mélange. The mélange is composed of a tectonic mixture of variably sheared shale and sandstone, high-grade metamorphic rocks, serpentinite, and variably resistant blocks of Greywacke sandstone, greenstone, and serpentinite. Geologic mapping shows alluvial stream deposits consisting of unconsolidated clay, silt, sand, and gravel in the project area.

Seismicity and Seismic Hazards

Primary Seismic Hazards

Surface Fault Rupture

The project area is not within an Alquist-Priolo earthquake fault zone, and no known fault or potentially active fault exists on the project area (California Geological Survey 2020b). The Geotechnical Recommendation found no active faults passing through the project area. Therefore, likelihood of surface fault rupture within the project area is considered to be low. However, the project area is between two active fault zones: the Hayward Fault Zone, approximately 10 miles east of the project area, and the San Andreas Fault Zone, approximately 10 miles west of the project area (United States Geological Survey 2020). In a seismically active area such as the San Francisco Bay Area, the possibility of future surface fault rupture occurring in areas where faults have not been mapped is small, but the possibility exists.

Seismic Ground Shaking

Ground shaking is the most widespread hazardous phenomenon associated with seismic activity. The project area is between two active faults. There is a 52 percent combined chance of a major (6.7 or greater magnitude) earthquake occurring on one of these faults between now and 2036 (ABAG

2020a). The project area could experience "Very Strong"[3] ground shaking (Modified Mercalli Intensity Shaking Severity Level 8) during a seismic event (ABAG 2020b).

Secondary Seismic Hazards

Liquefaction

Liquefaction occurs when saturated soils lose cohesion, strength, and stiffness with applied shaking, such as that from an earthquake. The lack of cohesion causes solid soil to behave like a liquid, resulting in ground failure. When a load such as a structure is placed on ground that is subject to liquefaction, ground failure can result in the structure sinking and soil being displaced. Ground failure can take on many forms, including flow failures, lateral spreading, lowering of the ground surface, ground settlement, loss of bearing strength, ground fissures, and sand boils. Liquefaction within subsurface layers, which can occur during ground shaking associated with an earthquake, can also result in ground settlement.

The project area has not been evaluated for liquefaction by the California Geological Survey (California Geological Survey 2020b). However, portions of Marin County are underlain with Bay mud and Marshland, which is susceptible to liquefaction (ABAG 2020b). The *Marin Countywide Plan* identifies the project area as an area susceptible to high to very light levels of liquefaction (Marin County Community Development Agency 2007).

The Geotechnical Recommendation prepared for the proposed project reviewed relevant as-built geotechnical data including soil samples and identified underlying soils consisting predominantly of stiff to very stiff, clayey soils with low liquefaction potential. The risk of liquefaction in the project area west of U.S. Highway 101 (US-101) is considered low. However, soil samples closer to Irwin Creek/US-101, outside of but near the project area, revealed loose granular material that could potentially liquefy during a seismic event. Therefore, the potential for liquefaction could exist at the southern portion of the project area.

Lateral Spreading

Lateral spreading is a phenomenon in which a surficial soil displaces along a shear zone that formed within an underlying liquefied layer. The surficial blocks are transported downslope or in the direction of a free face, such as a bay or creek, by earthquake and gravitational forces. Lateral spreading is generally the most pervasive and damaging type of liquefaction-induced ground failure generated by earthquakes. The *Marin Countywide Plan* identifies the project area as susceptible to high to very high levels of liquefaction (Marin County Community Development Agency 2007). The southern portion of the project area is close to Irwin Creek and San Rafael Creek, which could provide a free face toward which liquefiable soils could displace. The Geotechnical Recommendation noted that the risk of liquefaction is low in soils underlying much of the project area, with groundwater in the project area varying between 22 to 32 feet below the current ground surface. However, borings outside of but near the southern portion of the project area have recorded groundwater levels of 6 to 8 feet below the ground surface. In addition, borings made by the California Department of Transportation (Caltrans) in the 1960s along the San Rafael Viaduct encountered groundwater between 4 and 6 feet below ground surface. Groundwater levels in

[3] A "very strong" earthquake is defined on the Modified Mercalli Intensity Scale as an VIII, which could result in extensive damage to unreinforced masonry buildings (e.g., masonry walls falling, wood-frame houses moving off their foundations, loose partition walls being thrown out of alignment) (ABAG 2020c).

combination with the loose, granular nature of soils in the area along Irwin Creek, south of the project area, indicate that risk of liquefaction could exist in this area, and therefore the potential risk of lateral spreading exists in the southern part of the project area. The water table measurements near the southern portion of the project area and the water table measurements along the viaduct do not affect the conclusion that the risk of liquefaction in the majority of the project area is low.

Expansive Soils and Weak Soils

Expansive soils are characterized by their ability to undergo substantial volume changes (i.e., shrink and swell) due to variation in moisture content. Expansive soils are typically very fine grained and have a high to very high percentage of clay. They can damage structures and buried utilities and increase maintenance requirements. The presence of expansive soils is typically associated with high clay content. Generally, projects in areas with expansive soils may require special building foundations or grade preparation, such as the removal of problematic soils and replacement with engineered soils. However, the relative strength or weakness of alluvial soils also depends on the combination of clay and sand.

The Geotechnical Recommendation reviewed existing as-built borehole data and identified subsurface conditions in the project area.[4] The project area is underlain with 1.5 to 5 feet of fill, generally consisting of clayey sand with gravel and stiff, sandy clay of low to medium plasticity. Fill consisting of medium-stiff silt at depths of 1 to 3 feet was encountered near the southernmost portion of the project area, near San Rafael Creek. Below the fill, the borings show predominantly native alluvial soil consisting of very stiff, sandy clay of low plasticity extending to depths of 32 feet or more. Bedrock is on the order of 50 to 60 feet below the area between 3rd Street and 5th Avenue. Therefore, as the underlying fill has been noted as demonstrating low plasticity, the risk of expansion is considered low to moderate.

Weak soils can compress or collapse under the weight of buildings and fill, causing settlement relative to the thickness of the weak soil. Usually the thickness of weak soil varies, and differential settlement will occur. Some weak soils, specifically unconsolidated settlements, can amplify shaking during an earthquake, and when saturated can be susceptible to liquefaction. According to *The City of San Rafael General Plan 2020*, the San Francisco Bay mud that underlies the eastern portion of San Rafael can be weak, result in substantial settlement of the ground surface (City of San Rafael 2017). The Geotechnical Recommendation reviewed as-built borehole data and identified subsurface conditions in the project area. As-built data west of US-101 revealed underlying soils consisting of stiff to very stiff, clayey soils. However, as-built borehole data along Irwin Creek/US-101 (but outside the project area) revealed loose fills over layers of soft Bay mud. Therefore, while soils underlying the project area are generally stiff and pose a low risk for compression or collapse, there exists the possibility of loose fill in the southern portion of the project area.

Landslides

Landslides occur when the stability of a slope changes from a stable to an unstable condition. The stability of a slope is affected by the following primary factors: inclination, material type, moisture content, orientation of layering, and vegetative cover. In general, steeper slopes are less stable than

[4] No site-specific borings were for performed for the Geotechnical Recommendation. The Geotechnical Recommendation reviewed data from borings completed for previous projects by Miller Pacific Engineering Group, Parikh Consultants Inc., and the California Department of Transportation.

more gently inclined ones. The California Geological Survey Landslide Inventory shows no reported landslides in the immediate vicinity (California Geological Survey 2020c) and the project area is described as flat land posing little landslide risk on the Metropolitan Transportation Commission/Association of Bay Area Governments Hazard View Map (MTC/ABAG 2020). *The City of San Rafael General Plan 2020* shows the project area is not in an area of landslide deposits (City of San Rafael 2017). Therefore, the likelihood of a landslide in the project area is low.

Paleontological Resources

Fossils preserve information about ancient animals and plants (University of California Museum of Paleontology n.d.). There are two types of fossils: body fossils (remains of an organism) and trace fossils (e.g., footprints, burrows, trails). Fossils can add to the scientific record by providing information about the anatomy of an organism and clues to its life processes, successive evolutional development of organisms, and successive colonization of habitats. Fossils are a nonrenewable resource; that is, once destroyed, a fossil cannot be replaced. Fossils represent irreplaceable evidence of past life on the planet (National Park Service n.d.).

Fossils occur within geologic units. A geologic unit is a volume of rock or sediments of identifiable origin with an age range defined by distinctive and dominant features. The geologic units exposed at and near ground surface in the project area are Holocene alluvium (Q), Holocene intertidal deposits (i.e., peaty mud), and Jurassic and Cretaceous Franciscan Formation (KJf) (Wagner et al. 1991). Geologic units from the Holocene are considered too young to contain fossils (Society of Vertebrate Paleontology 2010). While the Franciscan Formation has yielded vertebrate fossils (University of California Museum of Paleontology 2020), such fossils are rare. Vertebrate fossils recorded from the Franciscan Formation include *Ichthyosaurus franciscanus* and *Plesiosaurus hesternus*, both species of reptile.

3.6.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Geology, soils, seismicity, and paleontological impacts were analyzed for the project area rather than specific build alternatives because the location of each build alternative would experience a nearly equivalent impact for each resource considered here. Impacts for the build alternatives are presented together unless they differ substantially among alternatives. Information in this section is based on the Geotechnical Recommendation prepared for the proposed project, unless otherwise noted (Parikh 2020).

3.6.2.1 Methodology

The study area for geology and soils consists of the area that comprises all four build alternatives, extending from Lincoln Avenue on the west to Irwin Street on the east, and from 5th Avenue in the north to 2nd Street in the south. For paleontology, the study area consists of the area of disturbance to the maximum depth of excavation.

Geology, Soils, and Seismicity

Evaluation of the proposed project is based on the Geotechnical Recommendation prepared for the proposed project, unless otherwise noted. The Geotechnical Recommendation reviewed data from

borings completed for previous projects by Miller Pacific Engineering Group, Parikh Consultants Inc., and Caltrans. The Geotechnical Recommendation was prepared to assist the design team in the alternative selection process and concluded that the proposed project is feasible from a geotechnical standpoint; however, the Geotechnical Recommendation noted that a site-specific geotechnical investigation will need to be performed when an alternative is chosen.

In the *California Building Industry Association v. Bay Area Air Quality Management District* case, decided in 2015,[5] the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might affect a project, except where the project would significantly exacerbate an existing environmental condition. Accordingly, placing new development in an existing or future seismic hazard area or an area with unstable soils is not considered an impact under CEQA unless the project would significantly exacerbate a seismic hazard or unstable soil conditions. Therefore, the analysis below evaluates whether the proposed project would exacerbate existing or future seismic hazards or unstable soils in the project area and result in potentially significant environmental impacts or a substantial risk of loss, injury, or death.

Paleontological Resources

The *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (Procedures) of the Impact Mitigation Guidelines Revision Committee of the Society of Vertebrate Paleontology include procedures for the investigation, collection, preservation, and cataloging of fossil-bearing sites. This includes the designation of paleontological sensitivity. The Procedures are widely accepted among paleontologists and followed by most investigators. The Procedures identify two key phases of paleontological resource protection: (1) assessment and (2) implementation. Assessment involves identifying the potential for a project site or area to contain significant, nonrenewable paleontological resources that could be damaged or destroyed by project excavation or construction. Implementation involves formulating and applying measures to reduce such adverse effects. *Paleontological potential* refers to the potential for yielding abundant fossils, a few significant fossils, or recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data.

For the assessment phase, the Society of Vertebrate Paleontology uses one of four sensitivity categories for sedimentary rocks (i.e., high, undetermined, low, no potential) to define the level of potential.

- **High Potential.** Assigned to geologic units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered as well as sedimentary rock units suitable for the preservation of fossils (e.g., middle Holocene and older fine-grained fluvial sandstones, fine-grained marine sandstones).
- **Undetermined Potential.** Assigned to geologic units for which little information is available concerning their paleontological content, geologic age, and depositional environment. In cases where no subsurface data already exist, paleontological potential can sometimes be assessed by subsurface site investigations.

[5] *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369. Opinion filed December 17, 2015. Available: https://caselaw.findlaw.com/ca-supreme-court/1721100.html. Accessed: March 13, 2020.

- **Low Potential.** Field surveys or paleontological research may determine that a geologic unit has low potential for yielding significant fossils (e.g., basalt flows). Mitigation is generally not required to protect fossils.
- **No Potential.** Some geologic units have no potential to contain significant paleontological resources (e.g., high-grade metamorphic rocks [gneisses and schists] and plutonic igneous rocks [granites and diorites]). Mitigation is not required.

3.6.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to geology and soils.

Would the proposed project:

- 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? (Refer to Division of Mines and Geology Special Publication 42.)
    - Strong seismic ground shaking?
    - Seismic-related ground failure, including liquefaction?
    - Landslides?
- Result in substantial soil erosion or the loss of topsoil?
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?
- 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?
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

3.6.2.3 Impacts

Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Rupture of a Known Earthquake Fault, Strong Seismic Ground Shaking, Seismic-Related Ground Failure (Including Liquefaction), or Landslides

Fault Rupture

All Build Alternatives

Construction and operation of the proposed project would not exacerbate the risk of fault rupture. As discussed above under Seismicity and Seismic Hazards, the project area is not within an Alquist-Priolo earthquake fault zone, and no known potentially active fault exists in the vicinity of the project area. The Geotechnical Recommendation found no active faults passing through the project area and concluded that the risk of surface fault rupture from previously unknown faults is very low. Therefore, construction and operation of the proposed project would not exacerbate the risk of surface fault rupture and this impact would be ***less than significant***. No mitigation is required.

Ground Shaking

All Build Alternatives

Construction and operation of the proposed project would not exacerbate the risk of ground shaking. As discussed above under Seismicity and Seismic Hazards, the project area is in a seismically active area between two active faults. Consequently, the project area could experience ground shaking (Modified Mercalli Intensity Shaking Severity Level 8) during a seismic event. However, the proposed project would comply with the California Buildings Standard Code, Marin County policies, and San Rafael Municipal Code seismic requirements, which would ensure the design of the proposed project would reduce risks to life from damage to the newly constructed project due to seismic hazards. Therefore, the proposed project would not exacerbate the risk of ground shaking resulting from a seismic event and this impact would be ***less than significant***. No mitigation is required.

Soil Liquefaction

Move Whistlestop Alternative

Construction and operation of the Move Whistlestop Alternative could potentially result in impacts related to soil liquefaction. As discussed above under Seismicity and Seismic Hazards, portions of Marin County are underlain with liquefiable Bay mud and the project area is in an area identified by the Marin Countywide Plan as being susceptible to liquefaction. The Geotechnical Recommendation found a low risk of liquefaction in soils west of US-101, because as-built borehole data found very stiff, sandy clay to a depth of 32 feet or more. Therefore, the potential for liquefaction in the majority of the project area is low. Additionally, as noted in Section 3.6.1.2, Environmental Setting, the Geotechnical Recommendation reviewed data from borings completed for previous projects by Miller Pacific Engineering Group, Parikh Consultants Inc., and Caltrans. The preliminary analysis in the Geotechnical Recommendation provides substantial evidence that it is highly unlikely for liquefaction to occur at the majority of the project site.

However, a portion of the Move Whistlestop Alternative site extends south toward 2nd Street, where the presence of Bay mud beneath fill was confirmed in boring data, resulting in a higher risk of liquefaction in this portion of the alternative. The Geotechnical Recommendation recommends excavation to approximately 2 feet and reworking of the subgrade (either proof-rolled, ripped, or moisture-conditioned). It is anticipated that most of the onsite soil would meet the requirements for engineered fill, but if the subgrade is soft or wet, the Geotechnical Recommendation suggests it be excavated and replaced with engineered fill. Although the Geotechnical Recommendation provided preliminary recommendations to aid in the selection of an alternative, the Move Whistlestop Alternative would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. This site-specific geotechnical investigation would provide specific recommendations which would reduce impacts related to liquefiable soils, including any potentially liquefiable soil present in the southern portion extending toward 2nd Street where Bay mud was identified. Therefore, as the risk of liquefaction in the majority of the project area is low, and with adherence to the Geotechnical Recommendation's suggestions, as well as any recommendations resulting from the site-specific geotechnical investigation, the Move Whistlestop Alternative would result in a ***less-than-significant*** impact related to ground failure resulting from liquefaction. No mitigation is required.

Adapt Whistlestop Alternative

The construction and operation impacts related to liquefaction of the Adapt Whistlestop Alternative would be the similar to those of the Move Whistlestop Alternative outlined above; therefore, the Adapt Whistlestop Alternative would pose a similar liquefaction risk as the Move Whistlestop Alternative. As outlined above, the Adapt Whistlestop Alternative would adhere to the Geotechnical Recommendation's suggestions as well as any recommendations resulting from the site-specific geotechnical investigation and would therefore result in a ***less-than-significant*** impact related to ground failure from liquefaction. No mitigation is required.

4th Street Gateway Alternative

The construction and operation impacts related to liquefaction of the 4th Street Gateway Alternative would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The construction and operation impacts related to liquefaction of the Under the Freeway Alternative would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Seismic Densification

All Build Alternatives

Construction and operation of the proposed project would not result in impacts related to seismic densification. As discussed above under Secondary Seismic Hazards, the Geotechnical Recommendation identified very stiff, clayey soils underlying the project area in the area west of US-101 and relatively weak, loose, granular materials underlying an area outside of but near the eastern portion of the project area, and soft Bay mud near the southern portion of the project area.

Therefore, there is a risk of seismically induced settlement at the southern portion of the project area. While the Geotechnical Recommendation provided preliminary suggestions to aid in the selection of an alternative, the proposed project would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. This site-specific geotechnical investigation would include boring samples, which would determine the weakness and compressibility of soils in the project area. The site-specific geotechnical investigation would provide specific recommendations if weak, compressible soils are found (such a replacement with stable, engineered fill), which would reduce impacts related to these soils to a less-than-significant level. Therefore, with adherence to any specific recommendations in the geotechnical investigation, the proposed project would result in a ***less-than-significant*** impact related to seismic densification. No mitigation is required.

Lateral Spreading

Move Whistlestop Alternative

Construction and operation of the Move Whistlestop Alternative could potentially result in impacts related to lateral spreading. As discussed above under Secondary Seismic Hazards, the Geotechnical Recommendation noted that the risk of liquefaction is low in soils underlying much of the project area; therefore, the potential for soils to liquify and spread toward an open face are low. The Geotechnical Recommendation reviewed data from borings completed for previous projects by Miller Pacific Engineering Group, Parikh Consultants Inc., and Caltrans and found a low risk of liquefaction in soils west of US-101, because as-built borehole data found very stiff, sandy clay to a depth of 32 feet or more. Therefore, the potential for liquefaction in the majority of the project area is low. However, a portion of the Move Whistlestop Alternative project site extends south toward 2nd Street, where the risk of lateral spreading is greater due to the proximity of San Rafael Creek. In addition, the depth of groundwater near the southern part of the project area has been recorded as being high (6 feet) (outside the project footprint) and the presence of Bay mud was detected in borings. Therefore, risk of lateral spreading exists in the southern portion of the project area. The preliminary analysis in the Geotechnical Recommendation provides substantial evidence that it is highly unlikely for liquefaction to occur at the majority of the project site. However, the proposed project would be required to complete a site-specific detailed geotechnical investigation per the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. The site-specific geotechnical investigation would provide specific design and geotechnical recommendations, which would address the risk of lateral spreading in this southern portion of the project area and reduce impacts related to lateral spreading to a less-than-significant level. Therefore, the Move Whistlestop Alternative would result in a ***less-than-significant*** impact related to lateral spreading. No mitigation is required.

Adapt Whistlestop Alternative

The construction and operation impacts related to lateral spreading for the Adapt Whistlestop Alternative would be the same as those of the Move Whistlestop Alternative outlined above. As outlined above, the Adapt Whistlestop Alternative would adhere to the Geotechnical Recommendation's suggestions as well as any recommendations resulting from the site-specific geotechnical investigation and would therefore result in a ***less-than-significant*** impact related to lateral spreading. No mitigation is required.

4th Street Gateway Alternative

The construction and operation impacts related to lateral spreading for the 4th Street Gateway Alternative would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The construction and operation impacts related to lateral spreading for the Under the Freeway Alternative would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Landslides

All Build Alternatives

Construction and operation of the proposed project would have no impact regarding landslides. As discussed above under Landslides, the project area is flat and there have been no reported landslides or recorded landslide deposits in the immediate vicinity. It is not in a landslide risk area; therefore, there is no potential for a landslide occurring in or near the project area. Therefore, the proposed project would result in ***no impact*** related to landslides. No mitigation is required.

Mitigation Measures

No mitigation is required.

Result in Substantial Soil Erosion or the Loss of Topsoil

All Build Alternatives

Neither construction nor operation of the proposed project would lead to erosion or the loss of topsoil. The proposed project is in an urbanized area and would not disturb any established vegetation. The project area would require excavation and grading to provide a secure foundation, allow for positive drainage, and, depending on the alternative selected, for the installation of piles. Due to the composition of fill in the project area, it is likely that onsite soils could be moisture conditioned and reused on site, minimizing the amount of soil that would be off-hauled. The proposed project would disturb more than 1 acre of land and would therefore be required to the comply with the National Pollutant Discharge Elimination System Construction General Permit, *The City of San Rafael General Plan 2020*, and the San Rafael Municipal Code and, as discussed in Section 3.9, Hydrology and Water Quality, would be required to implement best management practices (BMPs) to control sediment and minimize erosion. BMPs could include the installation of erosion control measures (e.g., silt fences, staked straw bales/wattles, silt/sediment basins or traps), geofabric, sandbag dikes, covers for stockpiles, or storage precautions for outdoor material storage areas. Therefore, with adherence to the BMPs included in the erosion control plan, impacts related to soil erosion or loss of topsoil would be ***less than significant***. No mitigation is required.

Mitigation Measures

No mitigation is required.

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 Onsite or Offsite Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse

Move Whistlestop Alternative

A portion of the Move Whistlestop Alternative could potentially be located on a geologic unit or on soil that is unstable or would become unstable as a result of the proposed project. As discussed above under Expansive Soils and Weak Soils, boring samples indicate the majority of the project area is underlain with soils consisting of stiff to very stiff, clayey soils. Sand boils and liquefaction-related ground fissures can occur when surface layers above the liquefiable soils are thin. The majority of the project area does not appear to pose a risk of liquefaction; however, a portion of the Move Whistlestop Alternative extends south toward 2nd Street, where the presence of Bay mud beneath fill was confirmed in boring data outside of but near the project footprint. Therefore, there may be a higher risk of liquefaction in this portion of the alternative. Although the Geotechnical Recommendation provided preliminary recommendations to aid in the selection of an alternative, the Move Whistlestop Alternative would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. Any liquefiable soils that might be present in this area would be identified in the site-specific geotechnical report and design requirements and recommendations regarding these soils would be followed. Therefore, the project area poses a low risk of liquefaction, and the risk of sand boils or fissure during a seismic event is low.

Lateral spreading is a phenomenon in which a surficial soil displaces along a shear zone that formed within an underlying liquefied layer. As discussed above under Lateral Spreading, while the risk of lateral spreading is considered low in the majority of the project area, a portion of the Move Whistlestop Alternative project site extends south toward 2nd Street, where the risk of lateral spreading is greater due to the proximity of San Rafael Creek, the depth of groundwater, and the presence of Bay mud. Although the Geotechnical Recommendation provided preliminary recommendations to aid in the selection of an alternative, the Move Whistlestop Alternative would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. The site-specific geotechnical investigation would provide specific design and geotechnical recommendations, which would address the risk of lateral spreading in this southern portion of the project area and reduce impacts related to lateral spreading to a less-than-significant level. Therefore, instability as a result of lateral spreading is unlikely to occur as a result of the proposed project.

Weak soils can compress or subside under the weight of buildings and fill, causing settlement relative to the thickness of the weak soil. Usually the thickness and composition of weak soil will vary throughout an area, and differential settlement can occur under a load. The Geotechnical Recommendation determined that the project site, north of 3rd Street on the west side of Tamalpais Avenue, was underlain with stiff to very stiff, clayey soils, which had strength and low compressibility. However, as-built borehole data taken from near but outside of the footprint of the southern portion of the Move Whistlestop Alternative revealed loose fills over layers of soft Bay mud, which poses a risk of compression. Although the Geotechnical Recommendation provided

preliminary recommendations to aid in the selection of an alternative, the Move Whistlestop Alternative would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. This site-specific geotechnical investigation required for the proposed project would identify the presence of weak soils and would provide site-specific recommendations.

The Geotechnical Recommendation identified groundwater near the project site as varying between 22 and 32 feet below the current ground surface, well below the anticipated excavation necessary for the build alternatives. However, borings taken outside of but close to the southern portion of the alternative have identified groundwater at 6 to 8 feet below the ground surface. A portion of the footprint of the Move Whistlestop Alternative stretches toward this southern area near 2nd Street and San Rafael Creek. The Geotechnical Recommendation anticipates the project site would need to be excavated to 2 feet below ground surface, and as deep as 9 feet below ground surface for storm drain trenching, above groundwater levels for most of the project site but possibly below groundwater levels in the southern portion near 2nd Street. As groundwater levels fluctuate seasonally, particularly near creeks, excavations for utility trenches may encounter groundwater in this area and may require dewatering, shoring, and other ground-stabilizing measures. Although the Geotechnical Recommendation provided preliminary recommendations to aid in the selection of an alternative, the Move Whistlestop Alternative would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. This site-specific geotechnical investigation required for the proposed project would provide site-specific analysis for depth to groundwater and recommendations on how to address groundwater-related concerns.

Dewatering, if it is extensive, can result in subsidence. Subsidence occurs when the compaction of underlying soils results in a lowering of land surface. However, the amount of dewatering necessary for the Move Whistlestop Alternative would not be great enough to result in subsidence.

The Geotechnical Recommendation provided preliminary suggestions to aid in the selection of an alternative. If selected, the Move Whistlestop Alternative would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. The Move Whistlestop Alternative would comply with the recommendations in the site-specific detailed geotechnical investigation regarding the design of foundations, floor slabs, and other geotechnical aspects of the proposed project. In addition, the Move Whistlestop Alternative would comply with regulations required by the California Building Code, which are adopted by reference in the San Rafael Municipal Code. Therefore, impacts related to potential liquefaction, lateral spreading, soil compression, and settlement and subsidence due to dewatering in soil that is unstable, or could become unstable as a result of such construction, would be ***less than significant***. No mitigation is required.

Adapt Whistlestop Alternative

The construction and operation impacts of the Adapt Whistlestop Alternative would be similar to those of the Move Whistlestop Alternative outlined above, but without the portion of the Move Whistlestop Alternative site that extends south toward 2nd Street and San Rafael Creek. The Adapt Whistlestop Alternative would adhere to the Geotechnical Recommendation's suggestions as well as any recommendations resulting from the site-specific geotechnical investigation. Therefore, impacts

related to potential liquefaction, lateral spreading, soil compression, and settlement and subsidence due to dewatering in soil that is unstable, or could become unstable as a result of such construction, would be ***less than significant***. No mitigation is required.

4th Street Gateway Alternative

The construction and operation impacts of the 4th Street Gateway Alternative would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The construction and operation impacts of the Under the Freeway Alternative would be similar to those of the Move Whistlestop Alternative outlined above; however, a portion of the Under the Freeway Alternative site extends east toward Irwin Street/US-101, where Caltrans borings taken in the 1960s identified groundwater at between 4 and 6 feet below ground surface. Utility trenching for the Under the Freeway Alternative could reach 6 feet below ground surface, potentially encountering groundwater. As groundwater levels fluctuate seasonally, particularly near creeks, excavations for utility trenches may require dewatering, shoring, and other ground-stabilizing measures. However, any dewatering required would not be great enough to result in subsidence. Although the Geotechnical Recommendation provided preliminary recommendations to aid in the selection of an alternative, the Under the Freeway Alternative would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, *the Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. The Under the Freeway Alternative would adhere to any recommendations resulting from the site-specific geotechnical investigation. Therefore, impacts related to potential liquefaction, lateral spreading, soil compression, and settlement and subsidence due to dewatering in soil that is unstable or could become unstable as a result of such construction would be ***less than significant***. No mitigation is required.

Mitigation Measures

No mitigation is required.

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

All Build Alternatives

The construction and operation of the proposed project would not create a direct or indirect risk to life or property by being located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994). As discussed above under Expansive Soils and Weak Soils, the Geotechnical Recommendation determined that the project area is underlain with 1.5 to 5 feet of fill, generally consisting of clayey sand with gravel and stiff, sandy clay of low to medium plasticity, posing a low to moderate risk of expansion. However, the Geotechnical Recommendation analysis was based on old as-built borings, and the proposed project would still need to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*. The site-specific

geotechnical investigation would provide an updated analysis of the plasticity of the underlying soils and, depending on the result, offer specific recommendations regarding how to reduce any risk associated with expansive soils. As the Geotechnical Recommendation determined the risk of expansive soils was low, and as a site-specific geotechnical report would be required, which would provide specific design recommendations, adherence to these recommendations would reduce any related impacts to a ***less-than-significant*** level. No mitigation is required.

Mitigation Measures

No mitigation is required.

Have Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Waste Water Disposal Systems Where Sewers Are not Available for the Disposal of Wastewater

All Build Alternatives

The construction and operation of the proposed project would have no impact regarding the support of septic tanks. The proposed project would connect to San Rafael's existing sewer, water, and power infrastructure to operate the planned restrooms, kitchenette, and building spaces. Therefore, the proposed project would not use a septic tank or alternative water disposal system and would have ***no impact***. No mitigation is required.

Mitigation Measures

No mitigation is required.

Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

One geologic unit underlying the project area is known to have yielded significant fossils: the Franciscan Formation. However, significant fossils from this geologic unit are rare, so generally the Franciscan Formation is considered to have low potential for paleontological resources (see Section 3.6.2.1, Methodology). Furthermore, the Franciscan Complex is known for its chaotic and disjointed structure, and the typical assemblage of diverse rock types present at most locations sometimes is referred to as a "mélange." The chaotic assemblage mainly is the result of the deformation, folding, breaking, and mixing associated with movement along the nearby San Andreas fault. Because of this, rocks within the mélange zones contain only a sparse assemblage of fossils, and those that are rarely present usually are microfossils. Vertebrate fossils are extremely rare. Based on this information, the likelihood of paleontological resources being present is low and paleontological sensitivity is also considered low.

In addition, the Holocene geologic units at the project area, because they are too young to contain fossils, have low paleontological sensitivity.

Construction

Move Whistlestop Alternative

Maximum depth of excavation is anticipated to be up to 6 feet below ground surface to accommodate storm drain utility trenching. Because all geologic units in the project area have low paleontological sensitivity, this alternative is unlikely to disturb or destroy any significant fossils. The impact would be ***less than significant***.

Adapt Whistlestop Alternative

The Adapt Whistlestop Alternative construction impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

4th Street Gateway Alternative

Maximum depth of excavation is anticipated to be up to 9 feet below ground surface to accommodate storm drain utility trenching. Otherwise, the 4th Street Gateway Alternative construction impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The Under the Freeway Alternative construction impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Operations

All Build Alternatives

The operations period of the proposed project would not include ground-disturbing activities. There would be ***no impact***.

Mitigation Measures

No mitigation is required.

Section 3.7
Greenhouse Gas Emissions

This section describes the regulatory setting and environmental setting for greenhouse gas (GHG) emissions. It also describes the GHG impacts that would result from implementation of the San Rafael Transit Center Replacement Project (proposed project) and other build alternatives and mitigation measures that would reduce significant impacts, where feasible and appropriate. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.7.1 Existing Conditions

3.7.1.1 Regulatory Setting

This section summarizes the federal, state, and local policies and plans related to GHG emissions.

Federal

There is currently no federal overarching law specifically related to climate change or the reduction of GHG emissions. Under the Obama administration, the U.S. Environmental Protection Agency (EPA) had been developing regulations under the Clean Air Act (CAA). There have also been settlement agreements among EPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries, as well as EPA's issuance of an "Endangerment Finding" and a "Cause or Contribute Finding." These findings established that EPA can regulate GHGs as pollutants under the CAA. EPA has also adopted a Mandatory Reporting Rule and Clean Power Plan. Under the Clean Power Plan, EPA issued regulations to control carbon dioxide (CO_2) emissions from new and existing coal-fired power plants. However, on February 9, 2016, the Supreme Court issued a stay of these regulations pending litigation. Former EPA Administrator Scott Pruitt also signed a measure to repeal the Clean Power Plan. The fate of the proposed regulations is uncertain given the 2021 change in federal administrations and the pending deliberations in federal courts.

The National Highway Traffic Safety Administration sets the Corporate Average Fuel Economy standards to improve average fuel economy and reduce GHG emissions generated by cars and light-duty trucks. The National Highway Traffic Safety Administration and EPA have proposed amendments to the current fuel-efficiency standards for passenger cars and light-duty trucks and new standards for model years 2021 through 2026. Under the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, current 2020 standards would be maintained through 2026. California, 22 other states, the District of Columbia, and two cities filed suit against the proposed action on September 20, 2019 (*California et al. v. United States Department of Transportation et al*., 1:19-cv-02826, U.S. District Court for the District of Columbia). The lawsuit requests a "permanent injunction prohibiting defendants from implementing or relying on the preemption regulation" but does not stay its implementation during legal deliberations. Part 1 of the SAFE Vehicles Rule went into effect on November 26, 2019. Part 2 of the rule was finalized on March 30, 2020. The rule will decrease the stringency of the Corporate Average Fuel Economy standards 1.5 percent each year through model year 2026; the standards issued in 2012 would have required annual fuel efficiency increases of

about 5 percent. California, 22 other states, and the District of Columbia filed a petition for review of the final rule on May 27, 2020. The fate of the SAFE Vehicles Rule remains uncertain in the face of pending litigation and potential rulemakings by the Biden Administration.

State

California has taken proactive steps, briefly described in this section, to address the issues associated with GHG emissions and climate change. Much of this legislation establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. The state's governors have also issued several executive orders (EOs) related to the state's evolving climate change policy. Of particular importance are Assembly Bill (AB) 32 and Senate Bill (SB) 32, which outline the state's GHG reduction goals of achieving 1990 emissions levels by 2020 and a level 40 percent below 1990 emissions levels by 2030. In the absence of federal regulations, control of GHGs is generally regulated at the state level. It is typically approached by setting emission-reduction targets for existing sources of GHGs, setting policies to promote renewable energy and increase energy efficiency, and developing statewide action plans. The following state regulations, polices, and programs are applicable to the proposed project.

Executive Order S-3-05

On June 1, 2005, Governor Arnold Schwarzenegger signed California EO S-3-05. The goal of this EO was to reduce California's GHG emissions to (1) 2000 levels by 2010 (achieved); (2) 1990 levels by 2020; and (3) 80 percent below the 1990 levels by 2050. EO S-3-05 also calls for the California Environmental Protection Agency to prepare biennial science reports on the potential impact of continued global warming on certain sectors of the California economy. As a result of the scientific analysis presented in these biennial reports, a comprehensive Climate Adaptation Strategy was released in December 2009 following extensive interagency coordination and stakeholder input. The latest of these reports, *Climate Action Team Biennial Report*, was published in December 2010.

Executive Order S-01-07

With EO S-01-07, Governor Schwarzenegger set forth the low-carbon fuel standard for California in 2007. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Executive Order B-55-18

In June 2017, former President Donald Trump announced his intention to withdraw from the Paris Agreement. Following former President Trump's decision, California decided to join the Under2 Coalition, which is an international coalition of jurisdictions that signed the Global Climate Leadership Memorandum of Understanding (Under2 MOU). The Under2 MOU aims to limit global warming to 2 degrees Celsius (°C), to limit GHGs to below 80 to 95 percent below 1990 levels, and/or achieve a per-capita annual emissions goal of less than 2 metric tons by 2050. The Under2 MOU has been signed or endorsed by 135 jurisdictions that represent 32 countries and 6 continents. EO B-55-18 acknowledges the environmental, community, and public health risks posed by future climate change. It further recognizes the climate stabilization goal adopted by 194 states and the European Union under the Paris Agreement. Based on the worldwide scientific agreement that carbon neutrality must be achieved by midcentury, EO B-55-18 establishes a new state goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain

net negative emissions thereafter. The EO charges CARB with developing a framework for implementing and tracking progress toward these goals. This EO extends EO S-3-05 but is only binding on state agencies. On November 4, 2019, the United States formally announced its resignation. However, on January 20, 2021, President Biden signed an EI to have the United States rejoin the Paris Agreement (NPR 2021).

Assembly Bill 1493

With the passage of AB 1493, also known as Pavley I, in 2002, California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light-truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with model year 2009. Although litigation challenged these regulations and EPA initially denied California's related request for a waiver of CAA preemption, the waiver request was granted. Additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the Advanced Clean Cars measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025.

Assembly Bill 32

One goal of EO S-03-05 was further reinforced by AB 32 (Chapter 488, Statutes of 2006), the Global Warming Solutions Act of 2006, which requires the state to reduce GHG emissions to 1990 levels by 2020. Since AB 32 was adopted, CARB, the California Energy Commission, the California Public Utilities Commission, and the Building Standards Commission have been developing regulations that will help meet the goals of AB 32. Under AB 32, CARB is required to prepare a Scoping Plan and update it every 5 years. The Scoping Plan was approved in 2008, the first update approved in 2014, and an additional update was approved in 2017 (see discussion of SB 32 below). *California's 2017 Climate Change Scoping Plan* (CARB 2017a) identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires CARB and other state agencies to develop and enforce regulations and other initiatives for reducing GHGs. Specifically, the 2017 Scoping Plan articulates a key role for local governments, recommending they establish GHG reduction goals for both their municipal operations and the community consistent with those of the state.

Assembly Bill 939 (1989) and Assembly Bill 341 (2011)

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to state agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting Mandatory Commercial Recycling Regulation (2012) requires that on and after July 1, 2012, certain businesses that generate 4 cubic yards or more of commercial solid waste per week must arrange recycling services. To comply with

this requirement, businesses may either separate recyclables and self-haul them to a recycling facility or subscribe to a recycling service that includes mixed-waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939.

Senate Bill 375

SB 375, signed into law by Governor Schwarzenegger on September 30, 2008, became effective January 1, 2009. This law requires the state's 18 Metropolitan Planning Organizations to develop a sustainable communities strategy (SCS) as part of their Regional Transportation Plans (RTPs) through integrated land use and transportation planning, and to demonstrate an ability to attain the GHG emissions-reduction targets that CARB established for the region by 2020 and 2035. This would be accomplished through either the financially constrained SCS as part of the RTP or an unconstrained alternative planning strategy. If regions develop integrated land use, housing, and transportation plans that meet the SB 375 targets, new projects in these regions can be relieved of certain California Environmental Quality Act (CEQA) review requirements. The applicable RTP/SCS for the project area is *Plan Bay Area 2040* (MTC and ABAG 2017), discussed under "Local" below.

Senate Bills 1078, 107, and 2

SBs 1078 (2002), 107 (2006), and 2 (2011), California's Renewables Portfolio Standard (RPS), obligates investor-owned utilities, energy service providers, and Community Choice Aggregators to procure additional retail sales per year from eligible renewable sources with the long-range target of procuring 33 percent of retail sales from renewable resources by 2020. The California Public Utilities Commission and California Energy Commission are jointly responsible for implementing the program.

Senate Bill 32 and Assembly Bill 197

SB 32 (2016) requires CARB to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 level by 2030, consistent with the target set forth in EO B-30-15. The companion bill to SB 32, AB 197, creates requirements to form a Joint Legislative Committee on Climate Change Policies, requires CARB to prioritize direct emission reductions and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit, requires CARB to prepare reports on sources of GHGs and other pollutants, establishes 6-year terms for voting members of CARB, and adds two legislators as non-voting members of CARB. CARB adopted *California's 2017 Climate Change Scoping Plan* in November 2017 to meet the GHG reduction requirement set forth in SB 32. It proposes continuing the major programs of the previous Scoping Plan including Cap-and-Trade Regulation; low-carbon fuel standard; more efficient cars, trucks, and freight movement; RPS; and reduction of methane (CH_4) emissions from agricultural and other wastes (CARB 2017a).

Senate Bill 605 and Senate Bill 1383

SB 605 directed CARB, in coordination with other state agencies and local air districts, to develop a comprehensive Short-Lived Climate Pollutant (SLCP) Reduction Strategy (CARB 2017b). SB 1383 directed CARB to approve and implement the SLCP Reduction Strategy to achieve the following reductions in SLCPs:

- 40-percent reduction in CH_4 below 2013 levels by 2030

- 40-percent reduction in hydrofluorocarbon gases below 2013 levels by 2030
- 50-percent reduction in anthropogenic black carbon below 2013 levels by 2030

The bill also establishes the following targets for reducing organic waste in landfills and CH_4 emissions from dairy and livestock operations:

- 50-percent reduction in organic waste disposal from the 2014 level by 2020
- 75-percent reduction in organic waste disposal from the 2014 level by 2025
- 40-percent reduction in CH_4 emissions from livestock manure management operations and dairy manure management operations below the dairy sector's and livestock sector's 2013 levels by 2030

CARB and CalRecycle are currently developing regulations to achieve the organic waste reduction goals under SB 1383. In January 2019 and June 2019, CalRecycle proposed new and amended regulations in Titles 14 and 27 of the California Code of Regulations. Among other things, the regulations set forth minimum standards for organic waste collection, hauling, and composting. The final regulations will take effect on or after January 1, 2022.

Short-Lived Climate Pollutant Reduction Strategy

CARB adopted the SLCP Reduction Strategy in March 2017 as a framework for achieving the CH_4, hydrofluorocarbon, and anthropogenic black carbon reduction targets set by SB 1383 (CARB 2017b). The SLCP Reduction Strategy includes 10 measures to reduce SLCPs, which fit within a wide range of ongoing planning efforts throughout the state, including CARB's and CalRecycle's proposed rulemaking on organic waste diversion (discussed above).

Senate Bill 100

The state's existing RPS requires all retail sellers to procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 25 percent of retail sales by December 31, 2016 (achieved); 33 percent by December 31, 2020; 40 percent by December 31, 2024; 45 percent by December 31, 2027; and 50 percent by December 31, 2030. SB 100 revises and extends these renewable resource targets to 50 percent by December 31, 2026; 60 percent December 31, 2030; and 100 percent by December 31, 2045.

Senate Bill 743

SB 743 requires revisions to the State CEQA Guidelines that establish new impact analysis criteria for the assessment of a project's transportation impacts. The intent behind SB 743 and revising the State CEQA Guidelines is to integrate and better balance the needs of congestion management, infill development, active transportation, and GHG emissions reduction. The California Governor's Office of Planning and Research (OPR) recommends that vehicle miles traveled (VMT) serve as the primary analysis metric, replacing the existing criteria of delay and level of service. In 2018, OPR released a technical advisory outlining potential VMT significance thresholds for different project types. For example, it would be reasonable to conclude that residential and office projects demonstrating a VMT level that is 15 percent less than existing (2015–2018 average) conditions are consistent with statewide GHG reduction targets. With respect to retail land uses, any net increase of VMT may indicate a significant transportation impact.

Senate Bill X7-7

SB X7-7, the Water Conservation Act of 2009, sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the 2017 Scoping Plan that will continue to be implemented beyond 2020. Reduction in water consumption reduces the energy necessary and the associated emissions to convey, treat, and distribute the water; it also reduces emissions from wastewater treatment.

Cap-and-Trade (2011 and 2017)

CARB adopted the Cap-and-Trade program in October 2011. The California Cap-and-Trade program is a market-based system with an overall emissions limit for affected emission sources. Affected sources include in-state electricity generators, hydrogen production, petroleum refining, and other large-scale manufacturers and fuel suppliers and distributors. The original Cap-and-Trade program set a compliance schedule through 2020. AB 398 extends the program through 2030 and requires CARB to make refinements, including establishing a price ceiling. Revenue generated from the Cap-and-Trade program is used to fund various programs. AB 398 established post-2020 funding priorities, to include (1) Air Toxics and Criteria Pollutants, (2) Low and Zero Carbon Transportation, (3) Sustainable Agricultural Practices, (4) Healthy Forests and Urban Greening, (5) Short-lived Climate Pollutants, (6) Climate Adaptation and Resiliency, and (7) Climate and Clean Energy Research.

Green Building Code and Title 24 Updates

The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (24 California Code of Regulations). Part 11 established voluntary standards that became mandatory under the 2010 edition of the code. These involved sustainable site development, energy efficiency (in excess of California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The current energy-efficiency standards were adopted in 2019 and took effect on January 1, 2020. The standards are revised every 3 years, with the next update taking effect on January 1, 2023.

Local

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is the Metropolitan Planning Organization for the nine counties that compose the San Francisco Bay Area and the San Francisco Bay Area Air Basin (SFBAAB), which includes the City of San Rafael (City). The first per-capita GHG emissions-reduction targets for the SFBAAB were 7 percent by 2020 and 15 percent by 2035 from 2005 levels. MTC adopted an SCS as part of its RTP for the SFBAAB in 2013 known as *Plan Bay Area*. The plan exceeds the regional per-capita targets, achieving 10-percent and 16-percent reductions in per-capita GHG emissions by 2020 and 2035, respectively (MTC 2013). On July 26, 2017, the strategic update to this plan, known as *Plan Bay Area 2040*, was adopted by the Association of Bay Area Governments (ABAG) and MTC (MTC and ABAG 2017). As a limited and focused update, *Plan Bay Area 2040* builds upon the growth pattern and strategies developed in the original *Plan Bay Area* but with updated planning assumptions that incorporate key economic, demographic, and financial trends since 2013.

As required by SB 375, CARB updated the per-capita GHG emissions-reduction targets in 2018. The new targets will be addressed in MTC's forthcoming RTP/SCS and are a 10-percent per-capita GHG reduction by 2020 and 19-percent per-capita reduction by 2035 from 2005 levels (CARB 2018). The next update to *Plan Bay Area*, *Plan Bay Area 2050*, is currently in its planning stages and will outline the strategies for growth and investment through the year 2050 (ABAG and MTC 2020). The Transportation Authority of Marin contributed to *Plan Bay Area 2040* by serving as the Congestion Management Agency for Marin County.

Bay Area Air Quality Management District

As discussed in Section 3.2, Air Quality, the Bay Area Air Quality Management District (BAAQMD) is responsible for air quality planning within the SFBAAB, including projects in the City. BAAQMD has adopted advisory emission thresholds to assist CEQA lead agencies in determining the level of significance of a project's GHG emissions, including long-range plans (e.g., general plans, specific plans), which are outlined in its *California Environmental Quality Act: Air Quality Guidelines* (BAAQMD 2017a). These guidelines also outline methods for quantifying GHG emissions, as well as potential mitigation measures.

BAAQMD's 2017 Clean Air Plan includes performance objectives that are consistent with the state's climate protection goals under AB 32 and SB 375, which are designed to reduce GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030. The 2017 Clean Air Plan identifies a range of transportation control measures, land use and local impact measures, and energy and climate measures These make up the Clean Air Plan's control strategy for emissions, including GHGs (BAAQMD 2017b). Some measures applicable to the proposed project include the following:

- TR3— Local and Regional Bus Services
- TR9—Bicycle and Pedestrian Access and Facilities
- BL1—Green Buildings
- WR2—Support Water Conservation
- NW2—Urban Tree Planting

San Rafael Climate Change Action Plan 2030

In 2009, the City adopted its Climate Change Action Plan (CCAP) to reduce GHG emissions using a baseline year of 2005. The CCAP set goals of a 25-percent reduction of GHG emissions by 2020 and an ambitious 80-percent reduction by 2050 to meet state targets. The state issued new targets for 2030 and the City responded by convening a working group to revise the CCAP to meet the new 2030 targets. The product of the working group was the *San Rafael Climate Change Action Plan 2030* (CCAP 2030) (City of San Rafael 2019). CCAP 2030 was developed using information from the previous CCAP and the City's GHG inventory, which provided estimates to compare the progress in GHG reductions between baseline years for the 2009 CCAP (2005) and CCAP 2030 (2016). CCAP 2030 outlines state and local actions focused on low-carbon transportation, energy efficiency, renewable energy, waste reduction, water conservation, sequestration and adaption, and community engagement. CCAP 2030 targets would be similar to state targets to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

Overall, CCAP 2030 includes goals, policies, performance standards, and implementation measures for achieving GHG emission reductions and meeting the requirements of AB 32. CCAP 2030 is also

intended to meet the mandates outlined in the BAAQMD *California Environmental Quality Act: Air Quality Guidelines* and the recent standards for "qualified plans" set forth by BAAQMD (BAAQMD 2017a). Individual development projects that comply with CCAP 2030 can be determined to not have cumulatively considerable GHG emissions impacts under CEQA (State CEQA Guidelines Section 15183.5) for emissions generated prior to 2030.

3.7.1.2 Environmental Setting

GHG emissions become well mixed within the atmosphere and are transported over long distances. Consequently, unlike other resource areas that are concerned primarily with localized project impacts (e.g., within 1,000 feet of the project area), the global nature of climate change requires a broader analytic approach. Although this section focuses on GHG emissions generated in the project area as a result of construction and operation, the analysis considers potential regional and global GHG impacts.

Greenhouse Gases

The principal anthropogenic (human-made) GHGs contributing to global warming are CO_2, CH_4, nitrous oxide (N_2O), and fluorinated compounds, including sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic sources.

The primary GHGs of concern associated with the proposed project are CO_2, CH_4, and N_2O. Principal characteristics of these pollutants are discussed below.

Carbon dioxide enters the atmosphere through fossil fuels (oil, natural gas, and coal) combustion, solid waste decomposition, plant and animal respiration, and chemical reactions (e.g., manufacture of cement). CO_2 is also removed from the atmosphere (or *sequestered*) when it is absorbed by plants as part of the biological carbon cycle.

Methane is emitted during the production and transport of coal, natural gas, and oil. CH_4 emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal solid waste landfills.

Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in Intergovernmental Panel on Climate Change (IPCC) reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent (CO_2e), which compares the gas in question to that of the same mass of CO_2 (CO_2 has a global warming potential of 1 by definition). Table 3.7-1 lists the global warming potential of CO_2, CH_4, and N_2O and their lifetimes in the atmosphere.

Table 3.7-1. Lifetimes and Global Warming Potentials of Key Greenhouse Gases

Greenhouse Gas	Global Warming Potential (100 years)	Lifetime (years)
CO_2	1	50–200
CH_4	25	12
N_2O	298	114

Sources: CARB 2019a; IPCC 2001

All GWPs used for CARB's GHG inventory and to assess attainment of the state's 2020 and 2030 reduction targets are considered over a 100-year timeframe (as shown in Table 3.7-1). However, CARB recognizes the importance of SLCPs and reducing these emissions to achieve the state's overall climate change goals. SLCPs have atmospheric lifetimes on the order of a few days to a few decades, and their relative climate-forcing impacts, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO_2 (CARB 2017b). Recognizing their short-term lifespan and warming impact, SLCPs are measured in terms of CO_2e using a 20-year time period. The use of GWPs with a time horizon of 20 years better captures the importance of the SLCPs and gives a better perspective on the speed at which SLCP emission controls will affect the atmosphere relative to CO_2 emission controls. The SLCP Reduction Strategy, which is discussed in Section 3.7.1.1, Regulatory Setting, addresses the three primary SLCPs—CH_4, hydrofluorocarbon gases, and anthropogenic black carbon. CH_4 has lifetime of 12 years and a 20-year GWP of 72 compared to a GWP of 25 over a 100-year timeframe. Hydrofluorocarbon gases have lifetimes of 1.4 to 52 years and a 20-year GWP of 437 to 6,350. Anthropogenic black carbon has a lifetime of a few days to weeks and a 20-year GWP of 3,200 (CARB 2017b). The proposed project is evaluated with the 100-year GWPs in Table 3.7-1 to be consistent with CARB's emission inventory and plans. Additionally, the proposed project would not include emission sources that emit substantial amounts of SLCPs; therefore, the 20-year GWP is presented for informational purposes only.

Greenhouse Gas Reporting

A GHG inventory is a quantification of all GHG emissions and sinks[1] within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources. Table 3.7-2 outlines the most recent global, national, statewide, and local GHG inventories to help contextualize the magnitude of potential project-related emissions.

Table 3.7-2. Global, National, State, and Regional Greenhouse Gas Emission Inventories

Emissions Inventory	CO_2e (metric tons)
2017 IPCC Global GHG Emissions Inventory	53,500,000,000
2018 EPA National GHG Emissions Inventory	6,677,000,000
2018 CARB State GHG Emissions Inventory	425,300,000
2015 BAAQMD GHG Emissions Inventory	85,000,000

Sources: United Nations 2018; EPA 2020; CARB 2019b; BAAQMD 2017b

[1] A GHG sink is a process, activity, or mechanism that removes a GHG from the atmosphere.

As discussed above in Section 3.7.1.1, Regulatory Setting, the City adopted its CCAP to reduce GHG emissions. CCAP 2030 outlines state and local actions that would support the City's goal of meeting the 2030 target of 40 percent below 1990 levels. Table 3.7-3 provides a summary of the CCAP 2030 local action reductions.

Table 3.7-3. City of San Rafael Climate Change Action Plan Local Action Reduction Forecast

Local Action Strategy	GHG Reductions by 2030 ($MTCO_2e$)	Percent of Reductions
Low Carbon Transportation	37,030	38%
Energy Efficiency	18,280	19%
Renewable Energy	31,925	33%
Waste Reduction	10,025	10%
Water Conservation	830	1%
Sequestration and Adaptation	n/a	n/a
Community Engagement	n/a	n/a
Implementation and Monitoring	n/a	n/a
Total	**98,085**	**100%**

Source: City of San Rafael 2019.
n/a = Emissions reductions not quantified. For sequestration and adaptation, reduction credits were not assigned because sequestered carbon was not included in the community GHG inventory. Community engagement and implementation and monitoring were not assigned reduction credits because these are not sources of GHG emissions and the reduction strategies in them are more qualitative and behavioral measures to inform the community on how to reduce GHG emissions, as well as have a system for accounting the community's GHG reduction progress.
$MTCO_2e$ = metric tons of carbon dioxide equivalent

Climate Change

Global Climate Change

The process known as the *greenhouse effect* keeps the atmosphere near Earth's surface warm enough for the successful habitation of humans and other life forms. The greenhouse effect is created by sunlight that passes through the atmosphere. Some of the sunlight striking Earth is absorbed and converted to heat, which warms the surface. The surface emits a portion of this heat as infrared radiation, some of which escapes into space and some of which is absorbed by atmospheric GHGs and re-emitted toward the surface. Human activities that generate GHGs increase the amount of infrared radiation absorbed by the atmosphere, thus enhancing the greenhouse effect and amplifying the warming of Earth.

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution (IPCC 2007). Rising atmospheric concentrations of GHGs in excess of natural levels result in increasing global surface temperatures—a process commonly referred to as *global warming*. Higher global surface temperatures, in turn, result in changes to Earth's climate system, including increased ocean temperature and acidity, reduced sea ice, variable precipitation, and increased frequency and intensity of extreme weather events (IPCC 2018). Large-scale changes to Earth's system are collectively referred to as *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.

IPCC estimates that human-induced warming reached approximately 1°C above pre-industrial levels in 2017, increasing at 0.2°C per decade. Under the current nationally determined contributions of mitigation from each country until 2030, global warming is expected to rise to 3°C by 2100, with warming to continue afterward (IPCC 2018).

Potential Climate Change Effects

Climate change is a complex process that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result in sea level rise (both globally and regionally) as well as changes in climate and rainfall, among other effects, there remains uncertainty about characterizing precise local climate characteristics and predicting precisely how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty, it is widely understood that substantial climate change is expected to occur in the future, although the precise extent will take further research to define. Specifically, significant impacts from global climate change worldwide and in California include:

- Declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in atmospheric water vapor, due to the atmosphere's ability to hold more water vapor at higher temperatures (CNRA 2018)
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets (IPCC 2018)
- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones (IPCC 2014)
- Declining Sierra Mountains snowpack levels, which account for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years (CNRA 2018)
- Increasing the number of days conducive to ozone formation (e.g., clear days with intense sunlight) by 25 percent to 85 percent (depending on the future temperature scenario) by the end of the 21st century in high-ozone areas (CNRA 2018)
- Increasing the potential for erosion of California's coastlines and seawater intrusion into the Sacramento Delta and associated levee systems due to the rise in sea level (CNRA 2018)
- Exacerbating the severity of drought conditions in California such that durations and intensities are amplified, ultimately increasing the risk of wildfires and consequential damage incurred (CNRA 2018)
- Lower crop yields for agriculture due to extreme heat waves, heat stress, and increased water needs of crops and livestock (particularly during dry and warm years), and new and changing pest and disease threats (CNRA 2018)

The impacts of climate change pose direct and indirect risks to public health, as people will experience earlier death and worsening illnesses. Indirect impacts on public health include increased vector-borne diseases, stress, and mental trauma due to extreme events and disasters, economic disruptions, and residential displacement (CNRA 2018).

3.7.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. GHG impacts were analyzed for the project area rather than specific build alternatives because the location of each build alternative would experience a nearly equivalent impact for each resource considered here. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.7.2.1 Methodology

GHG and climate change impacts associated with construction and operation of the proposed project were assessed and quantified using standard and accepted software tools, techniques, and emissions factors. A summary of the methodology is provided below.

Construction Emissions

Construction GHG emissions were estimated using California Emissions Estimator Model (CalEEMod), version 2016.3.2; and CARB's EMission FACtor 2017 (EMFAC2017) model, and relied upon a combination of CalEEMod default data values, as well as project-specific information for each alternative provided by the project sponsor, such as phase durations and quantities for demolition, grading, and paving activities. Emissions from gasoline light-duty vehicles (e.g., construction workers) were adjusted to account for the impact of the implementation of Part 2 of the SAFE Vehicles Rule.

Project construction is estimated to begin in 2023 or 2024 and last approximately 18 months. It was assumed each build alternative would have the same schedule and phasing. The GHG analysis approach is consistent with approach presented in Section 3.2, Air Quality. Total GHG emissions for each build alternative were estimated. See Appendix B for the construction modeling outputs and detailed assumptions.

Operational Emissions

This proposed project would generate minimal GHG emissions from area, energy, water, and waste sources. Area sources are associated with combustion of fuel from landscaping equipment. Energy sources are associated with the combustion of natural gas and the use of electricity. Water consumption results in indirect GHG emissions from the conveyance and treatment of water. Waste generation results in fugitive CH_4 and N_2O emissions from the decomposition of organic matter. Emissions from the proposed project were estimated using CalEEMod.

Based on information in Section 3.14, Transportation, all build alternatives primarily represent a shifting of bus activity from location to another; the proposed project would not change the amount of bus service provided. Although the proposed project would improve the efficiency of bus operations and create operational flexibility for bus movements into and out of the transit center, no future expansion of transit service was planned at the time of this EIR's preparation and thus cannot be reasonably forecasted. Therefore, no mobile emissions were evaluated for project operations. The operations modeling outputs and detailed assumptions are provided in Appendix B.

3.7.2.2 Thresholds of Significance

State CEQA Guidelines Significance Criteria

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to existing GHG emissions and climate change.

Would the proposed project:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

In the 2015 California Supreme Court decision in the *Center for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company* (November 30, 2015, Case No. S217763) (hereafter Newhall Ranch) the Court identified several potential approaches that may be appropriate for determining significance of project-level GHG emissions in CEQA documents. Several air quality management agencies throughout the state have also drafted or adopted varying threshold approaches and guidelines for analyzing GHG emissions in CEQA documents. Common threshold approaches include (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright-line" thresholds, (4) efficiency-based thresholds, and (5) compliance with regulatory programs.

Applicability of Available Thresholds

The following sections discuss the threshold approaches recommended by the Courts and supported by CEQA and analyzes their applicability to the proposed project.

Compliance with a Qualified GHG Reduction Strategy

OPR acknowledges that the State Legislature encourages lead agencies to tier or streamline their environmental documents whenever feasible, and that GHG emissions may be best analyzed and mitigated at the programmatic level (OPR 2018). A qualified plan may be used in the cumulative impact analysis for later projects when the analysis "identifies those requirements specified in the plan that apply to the project." For a GHG reduction plan to be considered a qualified plan, it must meet certain criteria established under State CEQA Guidelines Sections 15183.5 (b) and 15064.4, also specified above. Consequently, if a project is consistent with a local climate action plan that was created to meet that area's fair-share reductions toward the AB 32 GHG target for 2020, then the project would be considered consistent with statewide GHG reduction goals for 2020. Additionally, if a climate action plan was adopted that was consistent with the state's overall goals for post-2020, including the downward trajectory as clarified in SB 32 and EO S-03-05, and a project is consistent with that climate action plan, it would be considered consistent with the state's post-2020 GHG emission strategy. Section 15183.5 also specifies that the project's CEQA analysis "must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project."

As discussed in Section 3.7.1.1, Regulatory Setting, the City has adopted a qualified GHG emissions-reduction strategy: CCAP 2030. Because the City is not the lead agency for CEQA, this analysis does not rely on CCAP 2030 for tiering purposes. Rather, project consistency with applicable GHG reduction measures outlined in CCAP 2030 is discussed for informational purposes below. CCAP 2030 outlines state and local policies to reduce GHG emissions to meet the 2030 target of 40 percent below 1990 levels, consistent with SB 32's target.

Performance-Based Reductions

Performance-based thresholds are based on a percentage reduction from a projected future condition; for example, reducing future business-as-usual (BAU) emissions by the AB 32 target of 29 percent (below 2020 BAU levels) through a combination of state measures, project design features (e.g., renewable energy), or mitigation. BAAQMD recommends a 26-percent reduction from 2020 BAU levels to meet the AB 32 target (BAAQMD 2017a).

Based on the Court's reasoning in the Newhall Ranch decision, relating a given project to the achievement of state reduction targets may require adjustments to CARB's statewide BAU model to not only isolate new development emissions, but also to consider unique geographic conditions and operational characteristics that may affect the performance of reduction measures in certain locations. To date, this type of adjustment to the statewide BAU target has not been performed and, therefore, is not appropriate for the proposed project's analysis. The primary value of a performance-based target, as indicated in the Newhall Ranch decision, is that it can provide a scenario by which to evaluate the effectiveness of a project's reduction efficiency relative to an unmitigated condition. As such, future year targets can be used to benchmark performance, using either statewide or regional emission targets, to determine a project's fair share of mitigation.

Numeric Bright-Line Thresholds

Numerical bright-line thresholds identify the point at which additional analysis and mitigation of project-related GHG emission impacts is necessary. BAAQMD has not developed bright-line thresholds for construction, but has set 1,100 metric tons of CO_2e per year for the operation of land use development projects. The land use development threshold is based on a gap analysis[2] and ties back to the state's AB 32 reduction target (1990 levels by 2020).[3] Because the buildout year for the proposed project is 2023, use of BAAQMD's numeric-bright line land use development threshold tailored to 2020 reduction targets would not be appropriate for the proposed project's analysis because the bright-line threshold was developed based on 2020 targets. Additionally, the bright-line threshold is intended for typical land use development projects, whereas the proposed project is a transit infrastructure project.

Efficiency-Based Thresholds

Another type of quantitative threshold is an efficiency-based threshold. Efficiency-based thresholds represent the GHG efficiency needed for development to achieve California's GHG emissions targets. While the Newhall Ranch decision did not specifically recommend the efficiency-based approach, the ruling did note that numerical threshold approaches may be appropriate for determining

[2] The gap analysis demonstrates the reductions needed at the residential and commercial land use levels to achieve state targets. Capture is the process of estimating the portion of projects that would result in emissions that exceed a significance threshold and would be subject to mitigation.

[3] The AB 32 Scoping Plan identifies specific measures to reduce GHG emissions to 1990 levels by 2020.

significance of GHG emissions and to emphasize the consideration of GHG efficiency. Efficiency-based thresholds allow lead agencies to compare projects of various types, sizes, and locations equally, and determine whether a project is consistent with the state's reduction goals. Efficiency-based thresholds for a residential project can be expressed on a per-capita basis, for an office project on a per-employee basis, or for a mixed-use project on a per-service-population (the sum of jobs and residents) basis. For a transit project, however, an efficiency-based threshold is not applicable, because such projects are fundamentally different from land use development projects.

Compliance with Regulatory Programs

A lead agency could rely on regulatory compliance to show less-than-significant GHG impacts if the proposed project complies with or exceeds those programs adopted by CARB or other state agencies. However, such analysis is only applicable within the area governed by the regulations. For example, consistency with regulations addressing building efficiency would not suffice to determine that the proposed project would not have significant GHG emissions from transportation.

The Newhall Ranch decision specifically mentions consistency with both the SCS (per SB 375) and AB 32 as potential mechanisms for evaluating significance. A lead agency could assess project-level consistency with AB 32 in whole or part by evaluating whether the proposed project complies with applicable policies in the 2017 Scoping Plan. The 2017 Scoping Plan does not consider deeper reductions needed to meet the state's 2030 target under SB 32. Accordingly, exclusively relying on consistency with the 2017 Scoping Plan and related programs to evaluate emissions generated by land use development projects constructed after 2020 would not fully consider a project's potential GHG impacts on the state's long-term reduction trajectory.

More recent guidance on GHG reduction strategies and thresholds for operational emissions has been provided at the state level through the 2017 Scoping Plan, OPR, and CARB. The 2017 Scoping Plan outlines GHG reduction strategies by emission sector (water, transportation, and energy) required to meet the state's 2030 target under SB 32. OPR (2018) guidance specifies that a "land use development project that produces low VMT, achieves applicable building energy efficiency standards, uses no natural gas or other fossil fuels, and includes Energy Star appliances where available, may be able to demonstrate a less-than-significant greenhouse gas impact associated with project operation."

To the extent the proposed project's applicable GHG policies comply with or exceed the regulations outlined in the 2017 Scoping Plan and adopted by CARB or other state agencies, the proposed project could appropriately rely on their use as showing compliance with performance-based standards adopted to fulfill the statewide goal for reducing GHG emissions. The proposed project's compliance with regulatory programs adopted by CARB and other state agencies is therefore used to evaluate the significance of the proposed project's GHG emissions. While the regulatory framework to achieve long-term (post-2030) emissions reductions is in its infancy, many of the programs outlined in the 2017 Scoping Plan are likely to be carried forward or have already been adopted with post-2030 requirements (e.g., RPS). Accordingly, evaluating consistency with these programs and relevant guidance published by OPR and CARB for the reduction of long-term emissions is therefore also considered in the analysis of the proposed project's emissions.

Project Threshold Approach

As discussed above, BAAQMD's *California Environmental Quality Act: Air Quality Guidelines* do not identify a GHG emission threshold for construction-related emissions. Instead, BAAQMD recommends that GHG emissions from construction be quantified and disclosed, and that a determination regarding the significance of these GHG emissions be made with respect to whether a project is consistent with the emission-reduction goals. BAAQMD further recommends incorporation of best management practices to reduce GHG emissions during construction, as feasible and applicable. This approach is used to evaluate construction-generated emissions for the proposed project.

While BAAQMD has adopted GHG thresholds for operational emissions from land use development projects (numeric and efficiency), these thresholds are based on the state's 2020 target under AB 32 and do not consider deeper reductions needed to meet the state's 2030 target under SB 32. Accordingly, exclusively relying on BAAQMD's adopted thresholds to evaluate emissions generated by land use development projects constructed after 2020 would not fully consider a project's potential GHG impacts on the state's long-term reduction trajectory. As noted above, the City's CCAP 2030 is consistent with state reduction targets for 2030, and the proposed project's consistency with reduction measures in CCAP 2030 is discussed for informational purposes.

Based on the available threshold concepts recommended by air districts and the courts, GHG emissions from the project are evaluated on a sector-by-sector (e.g., energy, mobile, and water) basis using the most applicable regulatory programs, policies, and thresholds recommend by BAAQMD, CARB, and OPR. The buildout year for the proposed project is 2023. The state has a reduction goal of carbon neutrality set by B-55-18. However, the state's goal has not been codified in law, and the state has not adopted a plan or framework to achieve the 2045 reduction goal. The state's 2030 target has been codified in law through SB 32 and the 2017 Scoping Plan adopted to meet this goal. Therefore, 2030 marks the next statutory statewide milestone target applicable to the proposed project. The analysis focuses on the 2030 target and the plans, policies, and regulations adopted pursuant to achieving 2030 reductions. Where applicable, guidance from CARB, OPR, and other agencies related to long-term emissions-reduction requirements is incorporated into the analysis.

Mobile sources: The proposed project would not result in an increase of VMT or daily trips; therefore, mobile-source emissions were not evaluated for the proposed project.

Energy, water, waste, area, and land sources. CARB's 2017 Scoping Plan, which relies heavily on state programs (e.g., Title 24 and SB 100), outlines strategies required to reduce statewide GHG emissions in order to achieve California's SB 32 reduction target. Projects that implement applicable strategies from the 2017 Scoping Plan would be consistent with the state's GHG reduction framework and requirements for these sectors. Accordingly, a sector-by-sector review of the respective project features and sustainability measures included in the proposed project is conducted to evaluate consistency with the 2017 Scoping Plan. This assessment also considers recent OPR (2018) guidance related to the long-term reduction of statewide emissions. Accordingly, energy, water, waste, area, and land use source emissions would be considered less than significant if the proposed project is consistent with all applicable 2017 Scoping Plan strategies and supporting regulations and guidance.

3.7.2.3 Impacts

This section includes a discussion of each impact as it corresponds to the thresholds of significance discussed above.

Generate Greenhouse Gas Emissions During Construction, Either Directly or Indirectly, that May Have a Significant Impact on the Environment

All Build Alternatives

Construction

Construction of each build alternative would be expected to span approximately 18 months, beginning in 2023 or 2024. Construction activities would generate emissions of CO_2, CH_4, and N_2O from off-road construction equipment, construction employees' vehicles, and haul trucks, as well as from indirect GHG emissions from water and electricity consumption. The total GHG emissions generated from construction of each build alternative are summarized in Table 3.7-4. Construction emissions would cease once construction of the proposed project is complete; therefore, they are considered short term.

As shown in Table 3.7-4, the Adapt Whistlestop Alternative would result in the least GHG emissions and the Move Whistlestop and Under the Freeway Alternatives would result in the most GHG emissions. Each of the build alternatives are similar in size and it was conservatively assumed each would have identical off-road construction equipment fleets; however, one alternative may require more truck hauling trips than another depending on the site characteristics of the alternative, such as the amount of demolition debris to be hauled off site.

Table 3.7-4. Total Construction GHG Emissions from the Build Alternatives

Build Alternative	Total GHG Emissions ($MTCO_2e$)
Move Whistlestop	611.67
Adapt Whistlestop	590.83
4th Street Gateway	604.72
Under the Freeway	611.67

$MTCO_2e$ = metric tons carbon dioxide equivalent, including the relative warming capacity (i.e., GWP) of each GHG

The BAAQMD *California Environmental Quality Act: Air Quality Guidelines* do not identify a GHG emissions threshold for construction-related emissions; however, they do recommend that GHG emissions from construction be quantified and disclosed and a determination regarding the significance of the GHG emissions be made with respect to whether the project in question is consistent with state goals regarding reductions in GHG emissions.

If the proposed project does not implement feasible best management practices, it is anticipated that it would conflict with statewide emission goals and construction-related GHG emission impacts would be **significant**. Therefore, Mitigation Measure MM-GHG-CNST-1 would be implemented to avoid any conflict with statewide emission-reduction goals. With implementation of this mitigation measure, the proposed project would ensure that GHG emissions during construction would be minimized and that the impact would be ***less than significant with mitigation***.

Mitigation Measures

MM-GHG-CNST-1: Implement BAAQMD's Best Management Practices to Reduce GHG Emissions from Construction

- Use alternative-fuel (e.g., biodiesel, electric) construction vehicles/equipment (at least 15 percent of the fleet).
- Use local building materials (at least 10 percent).
- Recycle at least 50 percent of construction waste or demolition materials.

Operations

To assist lead agencies in determining whether operational GHG emissions require further analysis and whether a project may exceed the BAAQMD GHG mass emissions or efficiency threshold, BAAQMD developed screening criteria in its *California Environmental Quality Act: Air Quality Guidelines*. However, BAAQMD's screening criteria do not apply to the proposed project because they apply only to projects with buildout years prior to 2020 and the buildout of the proposed project is anticipated to occur in 2023.

As previously discussed, the proposed project would not result in an increase of VMT or daily trips; therefore, the proposed project would not generate new GHG emissions from mobile sources. GHG emissions related to project operations were estimated using CalEEMod. The operational emissions would be the same for all build alternatives. Table 3.7-5 shows the proposed project's annual GHG emissions.

Table 3.7-5. Project Operational Greenhouse Gas Emissions

Source Category	Annual GHG Emissions ($MTCO_2e$/year)[a]
Area	<0.01
Electricity	3.0
Natural Gas	0.7
Waste	1.6
Water	0.5
Total Project Emissions	**5.8**

[a] Sum of individual values may not equal total due to rounding.
$MTCO_2e$ = metric tons carbon dioxide equivalent

As shown in Table 3.7-5, the proposed project's GHG emissions would total approximately 6 metric tons of CO_2e per year. The proposed project's GHG analysis is conservative because it does not take reduction credits from operational GHG emissions related to the existing transit center, which is likely less energy-efficient than the proposed project because the customer service building would be Leadership in Energy and Environmental Design (LEED) Gold certified. This analysis evaluates operational GHG impacts, based on compliance with regulatory programs, which is recognized by the Supreme Court as an acceptable pathway for evaluating project-level GHG emissions under CEQA (*Center for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company*). Where applicable, the analysis considers guidance issued by CARB and OPR. Because the proposed project would be in operation in 2023, the 2017 Scoping Plan, which outlines reduction targets through 2030, is the most relevant regulatory document for evaluating the proposed project.

Area Emissions

Area sources include gasoline-powered landscaping equipment (e.g., trimmers, mowers). Area source emissions are based on CalEEMod's default assumptions, which represent a conservative estimate of equipment usage, based on the square footage of new building space. The proposed project would mainly constitute impervious surfaces and landscaped areas with California native trees, plants, and shrubs appropriate for the climatic conditions of the project area. As shown in Table 3.7-5, area emissions would contribute the least amount of GHG emissions for the proposed project. Although there are no relevant measures in the 2017 Scoping Plan related to area sources, the proposed project's minimal area emissions and use of California native plants that require minimal maintenance would be in line with the 2017 Scoping Plan's overall goal of reducing emissions.

Energy Emissions

OPR's 2018 *Discussion Draft CEQA and Climate Change Advisory* recommends that a land use development project that "achieves applicable building energy efficiency standards, uses no natural gas or other fossil fuels, and includes Energy Star appliances where available, may be able to demonstrate a less than significant greenhouse gas impact associated with project operation." Although OPR recommends new buildings do not consume fossil fuels, the 2017 Scoping Plan does not assume all-electric buildings in its 2030 reduction analysis. Rather, the 2017 Scoping Plan assumes new gas appliances will be high-efficiency units.

The proposed project would utilize the U.S. Green Building Council's LEED green building certification system as a tool for evaluating and measuring achievements in sustainable design. proposed The project's new construction and substantial renovation goal is to achieve, at a minimum, LEED Gold certification. Attaining LEED Gold certification would ensure the building component of each build alternative would be energy efficient and would be consistent with the assumptions and emissions-reduction requirements of the 2017 Scoping Plan.

Land Use Emissions

Each of the build alternatives would remove trees during construction. However, the project designs of each alternative would include landscape features such as trees, shrubs, and bushes. Additionally, the design of each alternative would incorporate natural materials, such as wood, which would store carbon, in the canopies of bus platforms and other components. Although there are no relevant measures in the 2017 Scoping Plan or explicit regulatory requirements related to tree planting, the project design and landscape designs would be consistent with the 2017 Scoping Plan's overall goal of avoiding losses in carbon sequestration.

Waste Emissions

The proposed project would install trash/recyclable receptacles to meet the City's Mandatory Recycling Priority. These features are consistent with the 2017 Scoping Plan's overall goal of reducing waste emissions and its specific strategy to avoid landfill CH_4 emissions by reducing the disposal of landfill waste and organics. In addition, these features would support and comply with AB 341's mandatory recycling requirement and support the state's recycling goal and the 2017 Scoping Plan.

Water Use Emissions

The project building would attain LEED Gold certification at a minimum. Furthermore, the proposed project would comply with all applicable City and state water conservation (indoor and outdoor) measures, including Title 24, Part 6, the California Energy Code baseline standard requirements for energy efficiency, based on the 2019 Energy Efficiency Standards requirements, and the 2019 California Green Building Standards Code. These features are consistent with the 2017 Scoping Plan's overall goal of reducing water emissions and serve to support ongoing regulatory programs (e.g., SB X7-7, Title 24) that aim to reduce GHG emissions associated with conveying and distributing water.

Conclusion

Operation of the proposed project is not expected to increase VMT and would support the shift from automobiles to public transit. Additionally, the proposed project is a transportation project (specifically a transit-supportive project) and by its nature would encourage the use of public transit to reduce single-occupancy vehicle trips, VMT, and associated GHG emissions. The customer service building would also be designed to achieve LEED Gold certification. Overall, the proposed project would be consistent with regulatory programs, such as SB 743, that expressly aim to reduce VMT and incorporate energy-efficient designs, which would be consistent with the state's climate change goals. Therefore, operational GHG impacts would be ***less than significant***.

Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

All Build Alternatives

AB 32 and SB 32 are the state's plans for reducing GHG emissions. At the local level, CCAP 2030 is the City's plan for reducing GHG emissions. The proposed project's consistency with AB 32 and SB 32 (including the 2017 Scoping Plan) and CCAP 2030 has been assessed to determine the significance of this impact. In addition, the proposed project's consistency with the 2017 Clean Air Plan, SB 375/*Plan Bay Area 2040*, and EO S-3-05 has also been reviewed.

Assembly Bill 32 and Senate Bill 32

AB 32 codifies the state's GHG emissions-reduction targets for 2020. CARB adopted the 2008 Scoping Plan and 2014 first update as a framework for achieving AB 32. The 2008 Scoping Plan and 2014 first update outlined a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted *California's 2017 Climate Change Scoping Plan* in November 2017 as a framework for achieving the 2030 GHG emissions-reduction goal described in SB 32.

The 2008 and 2014 Scoping Plans indicate that some reductions would need to come in the form of changes pertaining to vehicle emissions and mileage standards. Some would come from changes pertaining to sources of electricity and increased energy efficiency at existing facilities. The remainder would need to come from state and local plans, policies, or regulations to lower carbon emissions, relative to BAU conditions. The 2017 Scoping Plan carries forward GHG emissions-reduction measures from the 2014 first update as well as new measures to help achieve the state's 2030 target across all sectors of the California economy, including transportation, energy, and industry. Local governments will continue to play a vital role in reducing GHG emissions at the local level. Currently, 60 percent of cities and more than 70 percent of counties in California have

completed a GHG inventory. In addition, 42 percent of local governments have completed a climate, energy, or sustainability plan that addresses GHG emissions (CARB 2017a).

Applicable transportation-related GHG emissions-reduction strategies and policies outlined in the 2008, 2014, and 2017 Scoping Plans include the mobile-source strategy, which encourages a reduction in VMT through implementation of SB 375 and regional SCS as well as other VMT reduction strategies. Energy-efficiency measures, including implementation of green building standards, the use of solar power, and the installation of electric vehicle charging stations, are outlined in the Scoping Plans. The Scoping Plans also discuss existing and proposed water conservation measures, including drought-resistant landscaping. GHG emissions-reduction strategies related to trees and vegetation are also described in the Scoping Plans.

The proposed project would redevelop a transportation center in the City of San Rafael. The proposed project is consistent with the Marin *Strategic Vision Plan* (Transportation Authority of Marin 2017), *Plan Bay Area 2040* (MTC and ABAG 2017), and the *San Rafael Downtown Station Area Plan* (City of San Rafael 2012). The proposed project is one of the major projects included in these documents, which serve as the RTP/SCS for the respective areas, integrating transportation and land-use strategies to manage GHG emissions and plan for future population growth. On the state level, the proposed project is consistent with *California Transportation Plan 2050* (Caltrans 2021), which is the state's blueprint for meeting future mobility needs. One of the main policies identified in the regional and local plans of the jurisdictions where the proposed project would be located is the reduction of VMT on roadways. Operation of the proposed project is not expected to increase VMT and would support the shift from automobiles to public transit. Additionally, the proposed project would encourage the use of public transit to reduce single-occupancy vehicle trips, VMT, and associated GHG emissions, which would support the 2017 Scoping Plan. Additionally, the proposed project's new construction and substantial renovation goal is to achieve, at a minimum, LEED Gold certification for the customer service building and would ensure the building component of each build alternative would be energy efficient. Accordingly, the proposed project would not conflict with applicable policies described in the Scoping Plans for AB 32 and SB 32.

California's 2017 Climate Change Scoping Plan

The consistency of the proposed project with the policies in the 2017 Scoping Plan for achieving the 2030 GHG target is analyzed in Table 3.7-6.

Table 3.7-6. Consistency of the Proposed Project with 2017 Scoping Plan Policies[a]

Policy	Primary Objective	Proposed Plan Consistency Analysis
SB 350	Reduce GHG emissions in the electricity sector by implementing the 50% RPS, doubling energy savings, and taking other actions as appropriate to achieve the GHG emissions-reductions planning targets in the Integrated Resource Plan process.	This policy is a state program that requires no action at the local or project level. Nonetheless, the proposed project would be designed to meet LEED Gold standards. These design guidelines and standards would reduce energy demands.
Low-Carbon Fuel Standard	Transition to cleaner/less-polluting fuels that have a lower carbon footprint.	This policy is a state program that requires no action at the local or project level. Nonetheless, implementation of the proposed project would not reduce or minimize access to any bicycle and pedestrian facility and is intended to enhance or

Policy	Primary Objective	Proposed Plan Consistency Analysis
		create new multimodal connectivity to transit-oriented services in the region. Such connectivity reduces the need for single-occupancy vehicle trips.
Mobile-Source Strategy (Cleaner Technology and Fuels Scenario)	Reduce GHGs and other pollutants from the transportation sector by transitioning to zero-emission and low-emission vehicles, operating cleaner transit systems, and reducing VMT.	This policy is a state program that requires no action at the local or project level. Nonetheless, the proposed project is not expected to increase VMT and would support the shift from automobiles to public transit. Additionally, the proposed project is a transit-supportive project that would encourage the use of public transit to reduce single-occupancy vehicle trips and associated GHG emissions. The proposed project would not reduce or minimize access to any bicycle and pedestrian facility and is intended to enhance or create new multimodal connectivity to transit-oriented services in the region. Such connectivity reduces the need for single-occupancy vehicle trips.
SB 1383	Approve and implement SLCP strategy to reduce highly potent GHGs.	This policy is a state program that requires no action at the local or project level and is not applicable to the proposed project.
California Sustainable Freight Action Plan	Improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system.	This policy is a state program that requires no action at the local or project level and is not applicable to the proposed project.
Post-2020 Cap-and-Trade Program	Reduce GHGs across largest GHG emissions sources.	This policy is a state program that requires no action at the local or project level and is not applicable to the proposed project.

[a] The 2017 Scoping Plan policies included in this table are those representing the state strategy for meeting the 2030 GHG target of SB 32.

As shown, the proposed project would not conflict with or hinder implementation of the policies in the 2017 Scoping Plan.

City of San Rafael Climate Change Action Plan

As discussed above, the City adopted revisions to its CCAP, resulting in CCAP 2030. Table 3.7-7 evaluates the proposed project's consistency with applicable reductions measures in CCAP 2030.

Table 3.7-7. Consistency of the Proposed Project with the City of San Rafael Climate Change Action Plan

Local Measure	Measure Description	Project Consistency
LCT-C5: Public Transit	Support and promote public transit by taking the following actions: • Support the development of an attractive and efficient multi-modal transit center and provide safe routes to the transit center that encourage bicycle and pedestrian connections.	**Consistent:** The proposed project is the development of an attractive and efficient multi-modal transit center that would provide alternatives to single-occupancy vehicle travel by providing safe access to transit by bicyclists and pedestrians. Such connectivity reduces the need for single-

Local Measure	Measure Description	Project Consistency
		occupancy vehicle trips and associated GHG emissions.
WR-C3: Construction & Demolition Debris and Self-Haul Waste	Require all loads of construction & demolition debris and self-haul waste to be processed for recovery of materials as feasible. Investigate creation of an ordinance requiring deconstruction of buildings proposed for demolition or remodeling when materials of significant historical, cultural, aesthetic, functional, or reuse value can be salvaged.	**Consistent:** Mitigation Measure MM-GHG-CNST-1 would require the proposed project to recycle at least 50 percent of construction waste or demolition materials in accordance with BAAQMD best management practices.
WC-C1: Community Water Use	Reduce indoor and outdoor water use in residential and commercial buildings and landscaping. • Ensure all projects requiring building permits, plan check, or design review comply with state and Marin Municipal Water District regulations.	**Consistent:** The customer service building would be designed to achieve LEED Gold certification at a minimum. This certification would ensure the proposed project is designed to conserve water in its water fixtures such as toilets and sinks.
SA-C1: Urban Forest	Increase carbon sequestration and improve air quality and natural cooling through increasing tree cover in San Rafael. • Regulate and minimize removal of large trees and require planting of replacement trees. • Require that the site planning, construction, and maintenance of new development preserve existing healthy trees and native vegetation on site to the maximum extent feasible. Replace trees and vegetation not able to be saved.	**Consistent:** Although the proposed project would remove trees to develop the build alternatives, the designs of each alternative would include a variety of landscape features such as trees, shrubs, and bushes.
SA-C2: Carbon Sequestration	Increase carbon sequestration in the built environment, developed landscapes, and natural areas. • Encourage use of building materials that store carbon, such as wood and carbon-intensive concrete through agency partnerships and engagement campaigns.	**Consistent:** Although the proposed project would remove trees to develop the build alternatives, the designs of each alternative would include a variety of landscape features such as trees, shrubs, and bushes and incorporate natural materials, such as wood, in the canopies of bus platforms.

As shown in Table 3.7-7, the proposed project would be consistent with all applicable measures in the City's CCAP 2030. Because the proposed project would be consistent with all applicable GHG reduction measures, it would not conflict with CCAP 2030.

Bay Area 2017 Clean Air Plan

As described above, the proposed project includes numerous objectives and measures to reduce operational GHG emissions. The proposed project would be consistent with Clean Air Plan measures,

including Transportation Control Measures TR3, Local and Regional Bus Services; and TR9, Bicycle and Pedestrian Access and Facilities. The proposed project also would be consistent with Buildings Control Measure BL1, Green Buildings; Water Control Measure WR2, Support Water Conservation; and Natural and Working Lands Control Measure NW2, Urban Tree Planting. Based on this, the proposed project would support the applicable control measures identified in the 2017 Clean Air Plan to meet the plan's primary goals.

Plan Bay Area 2040/California Senate Bill 375

Under the requirements of SB 375, MTC and ABAG have developed an RTP/SCS with the adopted *Plan Bay Area 2040* for achieving the Bay Area's regional GHG emissions-reduction target. Targets for the San Francisco Bay Area, approved in March 2018 by CARB, include a 10-percent reduction in GHG emissions per capita from passenger vehicles by 2020 compared with 2005 emissions; the adopted target for 2035 is a 19-percent reduction. The emissions-reduction targets are those associated with land use and transportation strategies only.

The proposed project is one of the major projects included in the Marin *Strategic Vision Plan* and would support the regional plans of the Transportation Authority of Marin and transportation goals in *Plan Bay Area 2040*. On the state level, the proposed project is consistent with the state's blueprint for meeting future mobility needs. One of the main policies identified in the regional and local plans of the jurisdictions where the proposed project would be located is the reduction of VMT on roadways. Operation of the proposed project is not expected to increase VMT and would support the shift from automobiles to public transit. Additionally, the proposed project would encourage the use of public transit to reduce single-occupancy vehicle trips, VMT, and associated GHG emissions, which would be consistent with *Plan Bay Area 2040*.

Executive Order S-3-05

Achieving EO S-3-05 will require even more aggressive changes in all sectors of the economy and participation at all levels of government to reduce GHG emissions even further. Although many GHG emissions-reduction measures outlined in the 2017 Scoping Plan will most likely continue to be implemented and enhanced beyond 2030, no plan for meeting the 2050 GHG emissions-reduction goal described in EO S-3-05 has been adopted.

Based on the 2017 Scoping Plan, many of the reductions needed to meet the 2050 target will come from state regulations, including cap-and-trade, the requirement for increased renewable energy sources in California's energy supply, updates to Title 24, and increased emission-reduction requirements for mobile sources. The 2017 Scoping Plan indicates that reductions would need to come in the form of changes pertaining to vehicle emissions and mileage standards, changes related to sources of electricity and increased energy efficiency at existing facilities, and state and local plans, policies, or regulations that will lower GHG emissions relative to BAU conditions. The 2017 Scoping Plan carries forward GHG reduction measures from the First Update, as well as new potential measures to help achieve the state's 2030 target across all sectors of the California economy, including transportation, energy, and industry.

The proposed project includes measures to reduce operational and construction-related GHG emissions, which include meeting LEED Gold certification for the customer service building and measures in Mitigation Measure MM-GHG-CNST-1. It is also possible that future adopted state and federal actions will reduce the proposed project's emissions, as shown in Table 3.7-7, even further.

Accordingly, the proposed project's emissions levels would be consistent with the goals in EO S-3-05.

Other State Regulations

As discussed above in the analysis of consistency with SB 32 and EO S-3-05/B-55-18, systemic changes will be required at the state level to achieve the statewide future GHG reduction goals. Regulations, such as the SB 100-mandated 100-percent carbon-free RPS by 2045; implementation of the state's SLCP Reduction Strategy, including forthcoming regulations for composting and organics diversion; and future updates to the state's Title 24 standards (including requirements for net-zero energy buildings), will be necessary to attain the magnitude of reductions required for the state's goals. The proposed project would be required to comply with these regulations in new construction (in the case of updated Title 24 standards) or would be directly affected by the outcomes (e.g., energy consumption would be less carbon intensive due to the increasingly stringent RPS). Unlike the Scoping Plans, which explicitly call for additional emissions reductions from local governments and new projects, none of these state regulations identify specific requirements or commitments for new development beyond what is already required by existing regulations or will be required in forthcoming regulation. Therefore, for the foreseeable future, the proposed project would not conflict with any other state-level regulations pertaining to GHGs in the post-2020 era.

Conclusion

The proposed project includes measures that would be consistent with state regulations that will reduce GHG emissions (e.g., SB 100, SLCP Reduction Strategy) and the applicable policies described in the Scoping Plans for AB 32, SB 32, the City's CCAP 2030, 2017 Clean Air Plan, and *Plan Bay Area 2040*. Consequently, the proposed project would not conflict with achievement of AB 32 reduction goals for 2020, SB 32 reduction goals for 2030, or the RTP/SCS reduction goals for 2020 and 2035. Therefore, this impact would be ***less than significant***. No mitigation is required.

Section 3.8
Hazards and Hazardous Materials

This section describes the environmental and regulatory setting for hazards and hazardous materials. It also describes impacts on hazards and hazardous materials that would result from implementation of the proposed San Rafael Transit Center Replacement Project (proposed project) and other build alternatives and mitigation for significant impacts, where feasible and appropriate. This section is partially based on the Phase I Environmental Site Assessment (ESA) prepared for the proposed project by Baseline Environmental Consulting in May 2020. Refer to Section 3.17, Wildfire, for discussion of hazards related to wildfires. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.8.1 Existing Conditions

This section provides an overview of the regulatory setting pertaining to hazards and hazardous materials, a review of hazards and hazardous materials potentially present within the project area, and the potential for impacts during construction activities for the proposed project. A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. Factors that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

The California Code of Regulations defines a hazardous material as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either: (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. Hazardous wastes are defined in a similar manner. Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, or contaminated, or are being stored prior to proper disposal.

3.8.1.1 Regulatory Setting

Hazardous materials are subject to numerous laws and regulations intended to maintain health and safety when transporting, using, storing, or disposing of hazardous materials.

Federal

Federal agencies responsible for regulating hazardous materials include the U.S. Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), and U.S. Department of Transportation.

EPA is the primary regulator of the generation, transport, and disposal of hazardous substances. EPA regulates hazardous materials under the Resource Conservation and Recovery Act (RCRA) of 1976 and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. OSHA is the agency primarily responsible for ensuring worker safety, including by minimizing

the potential effect of hazardous materials and substances to workers. OSHA sets requirements for workplace training, exposure limits for certain substances and materials, and other safety procedures. The U.S. Department of Transportation regulates interstate transport of hazardous materials and substances through the Hazardous Materials Transportation Act. This act sets requirements for driver training, load labeling, container design, and other safety specifications.

The following federal laws and regulations contain guidance on hazards and hazardous materials.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/ Hazardous and Solid Waste Act

The federal Toxic Substances Control Act (1976) and the RCRA established an EPA-administered program for regulating the generation, transport, treatment, storage, and disposal of hazardous waste. The California Department of Toxic Substances Control (DTSC) regulates hazardous waste primarily under the authority of the federal RCRA.

Comprehensive Environmental Response, Compensation, and Liability Act/ Superfund Amendments and Reauthorization Act

CERCLA, commonly known as "Superfund," was enacted by Congress on December 11, 1980. This law (Title 42 of the United States Code Section 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for the liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enabled the revision of the National Contingency Plan (Title 40 of the Code of Federal Regulations [CFR], Part 300), which provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Occupational Safety and Health Administration

OSHA's mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in Title 29 of the CFR, Section 1910.

Department of Transportation Hazardous Materials Regulations

In Title 49 CFR Parts 100–185, the U.S. Department of Transportation's hazardous materials regulations cover packaging, handling, and transporting such materials. These regulations include Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 174 (Rail Transportation), 176 (Vessel Transportation), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance).

Lead-Based Paint Elimination Final Rule

In Title 24 CFR, Section 33, regulations for lead-based paint are specified in the Lead-Based Paint Elimination Final Rule, which is governed by the U.S. Department of Housing and Urban

Development. The rule requires sellers and lessors to disclose known lead-based paint and lead-based paint hazards to prospective purchasers and lessees. In addition, all lead-based paint abatement activities must be in compliance with state and federal OSHA requirements as well as those from the California Department of Health Services. Only trained and certified lead-based paint personnel are allowed to perform abatement. All lead-based paint removed from structures must be hauled and disposed of by a transportation company that has been licensed to transport this type of material to a landfill or receiving facility that has been licensed to accept the waste.

State

At the state level, the California EPA and the Office of Emergency Services (OES) regulate the use of hazardous substances. The California EPA coordinates California's environmental legislation to restore, protect, and enhance the environment (Cal/EPA 2020). The California OES is responsible for coordinating the state's response to earthquakes, floods, significant wildfires, prolonged drought impacts, and other emergencies (California OES 2020a). The California OES Special Operations & Hazardous Materials Section is responsible for coordinating statewide implementation of hazardous materials accident prevention and emergency response programs for all types of hazardous materials incidents and threats (California OES 2020b). The DTSC is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California.

California Health and Safety Code and California Code of Regulations

California Health and Safety Code Chapter 6.95 and California Code of Regulations Title 19, Section 2729, set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on site.

California Code of Regulations, Title 8, Industrial Relations

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health and OSHA are the agencies responsible for ensuring safety in the workplace. The California Division of Occupational Safety and Health assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices.

California Government Code Section 65962.5(a)

California Government Code Section 65962.5(a) (commonly referred to as the Cortese List) encompasses DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by the State Water Resources Control Board as having underground storage tank (UST) leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste or material.

Hazardous Waste Control Act

DTSC is responsible for enforcing the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which creates the framework under which hazardous wastes are

managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA's cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to, or in some cases more stringent than, federal requirements.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code Chapter 6.11, Sections 25404–25404.9) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of environmental and emergency response programs (e.g., the Hazardous Materials Business Plan Program, California Accidental Release Prevention Program, UST Program, Aboveground Storage Tank Program, Hazardous Waste Generator Program, Hazardous Waste Tiered-Permitting Program) and provides authority to the Certified Unified Program Agency. The Certified Unified Program Agency for San Rafael is the Marin County Department of Public Works, Waste Management Division.

California Labor Code (Division 5, Parts 1, 6, 7, and 7.5)

The California Labor Code is a collection of regulations pertaining to appropriate training for using and handling hazardous materials as well as operating equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5, ensures that employees who are in charge of handling hazardous materials are properly trained and informed about the materials they handle. Division 5, Part 7, ensures that employees who work with volatile flammable liquids are outfitted with appropriate safety gear and clothing.

State Water Resources Control Board General Stormwater Permits

The statewide General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities is issued, and periodically renewed, by the State Water Resources Control Board. The permit was adopted in 2009 and revised in 2012 (Order 2012-0006-DWQ). All construction activities that disturb 1 acre or more must prepare and implement a construction Stormwater Pollution Prevention Plan (SWPPP) that specifies best management practices (BMPs) to prevent pollutants from contacting stormwater. BMPs are effective, practical, structural, or nonstructural methods used to prevent or reduce the movement of sediments, nutrients, and pollutants from land to surface waters. The intent of the SWPPP and BMPs is to keep materials from moving off site into receiving waters, eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States, and perform sampling and analysis to determine the effectiveness of BMPs in reducing the volume of pollutants (even if not visually detectable) in stormwater discharges and preventing them from causing or contributing to violations of water quality objectives.

Local

Marin County Operational Area Emergency Recovery Plan

The *Marin County Operational Area Emergency Recovery Plan* (ERP), adopted in November 2012, establishes procedures and assigns responsibility to ensure the effective management of emergency recovery operations within the Marin County Operational Area, which includes the City of San Rafael (City). The ERP describes operational concepts relating to recovery, identifies components of recovery organization, and describes general responsibilities of the Marin County OES. Recovery operations in a multi-jurisdictional incident are coordinated and managed by the Operational Area in accordance with the California Emergency Services Act (Marin County Sheriff's OES 2012).

Marin Operational Area Emergency Operations Plan

The Marin County Sheriff's OES adopted the *Marin Operational Area Emergency Operations Plan* in October 2014. Cities and towns within the county participate in the Marin Operational Area coordination of emergency management activities. This plan addresses the planned response to emergency situations associated with large-scale disasters affecting Marin County. The plan is based on the functions and principles of the California Standardized Emergency Management System, the National Incident Management System, and the California Incident Command System. The *Marin Operational Area Emergency Operations Plan* assesses 19 different types of threats, including natural disasters, extreme weather conditions, infrastructure failures, and security threats. The plan explains general responsibilities and procedures to be utilized in an emergency situation and provides background information and potential damages for each specific type of potential emergency (Marin County Sheriff's OES 2014).

The City of San Rafael General Plan 2020

The City of San Rafael General Plan 2020 contains multiple goals and policies that pertain to hazardous materials (City of San Rafael 2016). *The City of San Rafael General Plan 2020* discusses hazardous materials in the context of their use by businesses, transport on highways and streets, and presence in household cleaning products. *The City of San Rafael General Plan 2020* also acknowledges the presence of hazardous materials due to historical industrial uses, the types of materials used to fill low-lying sites for development, or materials deposited in dump sites prior to current regulations governing sanitary landfills.

The following policies are applicable to hazards and hazardous materials:

S-1. Location of Future Development: Permit development only in those areas where potential danger to the health, safety, and welfare of the residents of the community can be adequately mitigated.

Policy S-1a: Through the entitlement process, evaluate applications for geoseismic and hazardous materials dangers and require appropriate mitigations.

Policy S-11: Restriction of Businesses: Restrict siting of businesses or expansion of businesses that have the potential for a significant hazardous materials release within one- quarter mile of schools.

S-11a. Survey of Facilities. Survey existing industrial facilities within one-quarter mile of the schools. The survey would be used to determine the presence of hazardous materials and evaluate the risk of an accidental release that could adversely affect the health and safety of students and school staff

Policy S-13. Potential Hazardous Soils Conditions: Where development is proposed on sites with known previous contamination, sites filled prior to 1974 or sites that were historically auto service, industrial or other land uses that may have involved hazardous materials, evaluate such sites for the presence of toxic or hazardous materials. The requirements for site-specific investigation are contained in the Geotechnical Review Matrix.

S-13a. Potentially Hazardous Soils Map: Prepare a map showing sites with known soil and groundwater contamination, in order to identify new developments that warrant environmental investigation and testing.

S-13b. Hazardous Soils Cleanup: Require remediation and cleanup in accordance with regional and local standards in order to develop on sites where hazardous materials have impacted soil or groundwater. At a minimum, remediation and clean up of contaminated sites shall be in accordance with regional and local standards. The required level of remediation and clean-up shall be determined by the Certified Unified Program Agency (CUPA) based on the intended use of the site and health risk to the public.

S-14. Hazardous Materials Storage, Use, and Disposal: Enforce regulations regarding proper storage, use and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.

S-14a. CUPA Program. Continue to participate in the CUPA program

S-15. Hazardous Waste Management: Support measures to responsibly manage hazardous waste consistent with protection of the public health, welfare, safety and the environment. The City of San Rafael supports the Marin County Hazardous Waste Management Plan as adopted by the State, County and Cities within Marin County. See S-14a (CUPA Program).

S-16. Transportation of Hazardous Materials: Enforce Federal, State and Local requirements and standards regarding the transportation of hazardous materials. Support, as appropriate, legislation that strengthens safety requirements for the transportation of hazardous materials.

S-16a. Safe Transport of Hazardous Materials. Support California Highway Patrol's efforts to ensure the safe transport of hazardous materials.

Draft San Rafael General Plan 2040 and Downtown San Rafael Precise Plan

The City released a public draft of the *San Rafael General Plan 2040* in November 2020 (City of San Rafael 2020a). This update to *The City of San Rafael General Plan 2020* is accompanied by a *Downtown San Rafael Precise Plan*, which provides a roadmap to growth and development in the Downtown San Rafael neighborhood (City of San Rafael 2020b). Applicable policies from these plans are listed below.

Goal S-5: Protection from Hazardous Materials. Protect those who live, work, and visit San Rafael from risks associated with hazardous materials.

Policy S-5.1: Hazardous Waste Management. Support State, regional, countywide and local programs to responsibly manage hazardous waste consistent with protection of public health, welfare, safety and the environment.

Policy S-5.2: Hazardous Materials Storage, Use and Disposal. Enforce regulations regarding proper storage, labeling, use and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.

Program S-5.2A: CUPA Program. Continue to participate in the Certified Unified Program Agency (CUPA) program. The CUPA's responsibilities shall include overseeing the investigation and closure of contaminated underground storage tank sites.

San Rafael Local Hazard Mitigation Plan

The *San Rafael Local Hazard Mitigation Plan* (LHMP), adopted in November 2017, is a guide to hazard mitigation within San Rafael and serves as a tool to help decision-makers direct hazard mitigation activities and resources. In the context of an LHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including fire and other natural hazards (City of San Rafael 2017). A more detailed description of the LHMP, relating to wildland fires, is provided in Section 3.17, Wildfire, of this Draft Environmental Impact Report.

City of San Rafael Municipal Code

The following section of the City of San Rafael Municipal Code pertains to potential hazards and hazardous materials impacts related to the proposed project:

> **Title 4, Section 5704.3.3.11:** Storage of flammable and combustible liquids and other hazardous materials. The storage of flammable or combustible liquids or other hazardous materials in public storage facilities is prohibited. Such facilities shall post legible and durable signs to indicate same in a manner and locations as specified by the Fire Chief. This section shall apply to new and existing public storage facilities.
>
> **Title 14, Section 16.180 Hazardous soils conditions:** New development on lots filled prior to 1974 or on lots which were used for auto service uses, industrial uses or other land uses which may have involved hazardous materials shall be evaluated for the presence of toxic or hazardous materials prior to development approvals. The requirements for review are set forth in the geotechnical review matrix in the general plan. (Ord. 1625 § 1 (part), 1992)

3.8.1.2 Environmental Setting

A Phase I ESA was prepared by Baseline Environmental Consulting in May 2020 to identify and evaluate hazardous materials and substances with potential to be encountered during construction and maintenance of the proposed project. This assessment included a review and evaluation of the physical setting, historical land uses, environmental records, previous environmental investigations in the project vicinity, and a site reconnaissance.

ASTM International's E1527-13 standard defines minimum search distances to use in the evaluation of environmental records of hazardous materials release sites. Minimum search distances range from 0.5 to 1.0 mile from the study area, which included all the areas of substantial improvements proposed for each of the four build alternatives. Refer to Appendix I for additional detail on the environmental records search conducted as a part of the Phase I ESA.

Site History

As early as 1924, land uses developed within the study area included residential dwellings, a hotel, a lumber yard, a train station, and a railroad corridor. Two gasoline service stations were adjacent to the study area (Baseline Environmental Consulting 2020). Between 1924 and 1950, the railroad corridor and station operations expanded, the U.S. Highway 101 (US-101) viaduct was constructed over the study area, and additional land uses within the study area included a bus station, milk and creamery company, gravel company, and automotive repair services. Two additional gasoline service stations were within the study area, six additional gasoline service stations were adjacent to the study area, and one aboveground oil storage tank was adjacent to the study area (Baseline Environmental Consulting 2020). Between 1950 and 1970, the US-101 viaduct expanded, one

additional gasoline service station was within the study area, and six additional gasoline service stations were adjacent to the study area (Baseline Environmental Consulting 2020).

Since 1970, most of the automotive repair services and all of the gasoline service stations and the aboveground oil tank previously identified within and adjacent to the study area have been redeveloped primarily for residential and commercial uses. Based on the site reconnaissance conducted on May 15, 2020, there are two land uses currently within the study area that appear to manage hazardous materials: an automotive repair service station and a dry cleaner facility (Baseline Environmental Consulting 2020).

Common contaminants of concern in soil and/or groundwater associated with automotive repair services, gasoline service stations, and aboveground oil tanks include heavy metals (e.g., lead and arsenic), total petroleum hydrocarbons, volatile organic compounds, and polychlorinated biphenyls. Common contaminants of concern associated with dry cleaner facilities include chlorinated solvents. Some of these land uses in the study area have documented hazardous materials releases. The land uses that do not have documented hazardous materials releases include the following (Baseline Environmental Consulting 2020):

- A former gasoline service station (circa 1950) adjacent to the study area at the northeast corner of the current Lincoln Avenue and 3rd Street intersection
- A former automobile service building (circa 1950) within the study area north of the current Hetherton Street and 4th Street intersection
- A former aboveground oil storage tank for a gravel company (circa 1950) adjacent to the study area to the northeast of the current Hetherton Street and 3rd Street intersection
- Former automobile and gasoline service stations (circa 1950 and 1970) and a current automobile service station and dry cleaner building (2020) within and adjacent to the study area at the northwest, southwest, and southeast corners of the current Irwin Street and 4th Street intersection

Evidence of potentially undocumented hazardous materials releases or future threats of hazardous materials releases was not observed within or adjacent to the study area during the site reconnaissance. However, this does not preclude the possibility that undocumented releases may have occurred in the past at these facilities that store and manage hazardous materials. Therefore, undocumented soil and/or groundwater contamination (if any) could potentially be encountered during project construction and maintenance in proximity to historical and current land uses associated with hazardous materials.

Hazardous Materials Records Search

The review of environmental records identified 54 hazardous materials release sites within 1 mile of the study area (Appendix B of the Phase I ESA). Release sites that could potentially pose a threat of affecting environmental conditions within the study area include sites within and adjacent to the study area. In addition, offsite migration of groundwater contaminant plumes from active release sites hydraulically upgradient (i.e., west) of the study area can pose a potential threat of affecting environmental conditions within the study area. Based on these screening criteria, 13 of the 54 release sites are considered a potential concern and are discussed further below to determine if they pose a known or potential threat of affecting environmental conditions within the study area. The

other 41 release sites are either hydraulically downgradient of the study area or are closed sites[1] and not within or adjacent to the study area; therefore, these sites are not expected to affect environmental conditions within the study area. Further evaluation determined that six of the 13 release sites of potential concern are not expected to affect environmental conditions within the study area. The remaining seven sites of concern are listed and described in Table 3.8-1 and shown on Figure 3.8-1.

Table 3.8-1. Hazardous Materials Sites of Concern

Site #	Site Name	Site Description
1	D&S Garage 718 4th Street	In 1989, a release of petroleum from leaking USTs was reported following tank removal activities at the D&S Garage site, which is adjacent to the study area. In 2007, the case was closed by the lead regulatory oversight agency (Regional Water Quality Control Board). According to the most recent groundwater monitoring event in 2006, residual concentrations of total petroleum hydrocarbons as diesel (TPH-d) and methyl tert-butyl ether (MTBE) were reported in the immediate vicinity of the former USTs about 25 feet west of the study area.
2	John Irish Jeep Dealership 475 Francisco Boulevard	In 1988, a release of petroleum from leaking USTs was reported at this site following tank removal activities. The site is adjacent to the study area. In 1996, the case was closed by the lead regulatory oversight agency (Regional Water Quality Control Board). According to the most recent groundwater sampling results in 1996, residual concentrations of toluene and MTBE were reported in groundwater samples collected in the immediate vicinity of the USTs about 200 feet west of the study area.
3	Marin Color Service 770 2nd Street	A release of petroleum and paint thinner from leaking USTs was reported at this site following tank removal activities, adjacent to the study area. In 1998, the case was closed by the lead regulatory oversight agency (Regional Water Quality Control Board). According to the most recent groundwater sampling results in 1998, residual concentrations of chlorinated solvents were reported in groundwater samples collected about 50 feet west of the study area.
4	Shell 755 2nd Street	The Shell site, adjacent to the study area, was formerly a gasoline service station. In 1987, a release of petroleum from leaking USTs was reported following tank removal activities at the site. In 2009, the case was closed by the lead regulatory oversight agency (Regional Water Quality Control Board). According to the most recent groundwater sampling results in 2008, residual concentrations of TPH-d and MTBE were reported in groundwater samples collected about 30 feet west of the study area.
5	Greyhound Line, Inc. 701 3rd Street	On 8 November 1990, a release of petroleum from leaking USTs was reported at the Greyhound Line, Inc. site, which appears to be within the study area. The case was subsequently closed by the lead regulatory agency (Regional Water Quality Control Board).
6	Savoy Rain Tunnel 620 2nd Street	In 1990, a release of petroleum from leaking USTs was reported at the Savoy Rain Tunnel site, which is adjacent to the study area. In 1996, the case was closed by the lead regulatory oversight agency (Regional Water Quality Control Board). According to the most recent sampling results, residual concentrations of total petroleum hydrocarbons remain in the soil and groundwater near the former USTs.

[1] Investigation and/or remediation activities have been completed.

Site #	Site Name	Site Description
7	Exxon 902 Irwin Street	The Exxon site was formerly a gasoline service station. In 2003, the case was closed by the lead regulatory oversight agency (Regional Water Quality Control Board).

Source: Baseline Environmental Consulting 2020

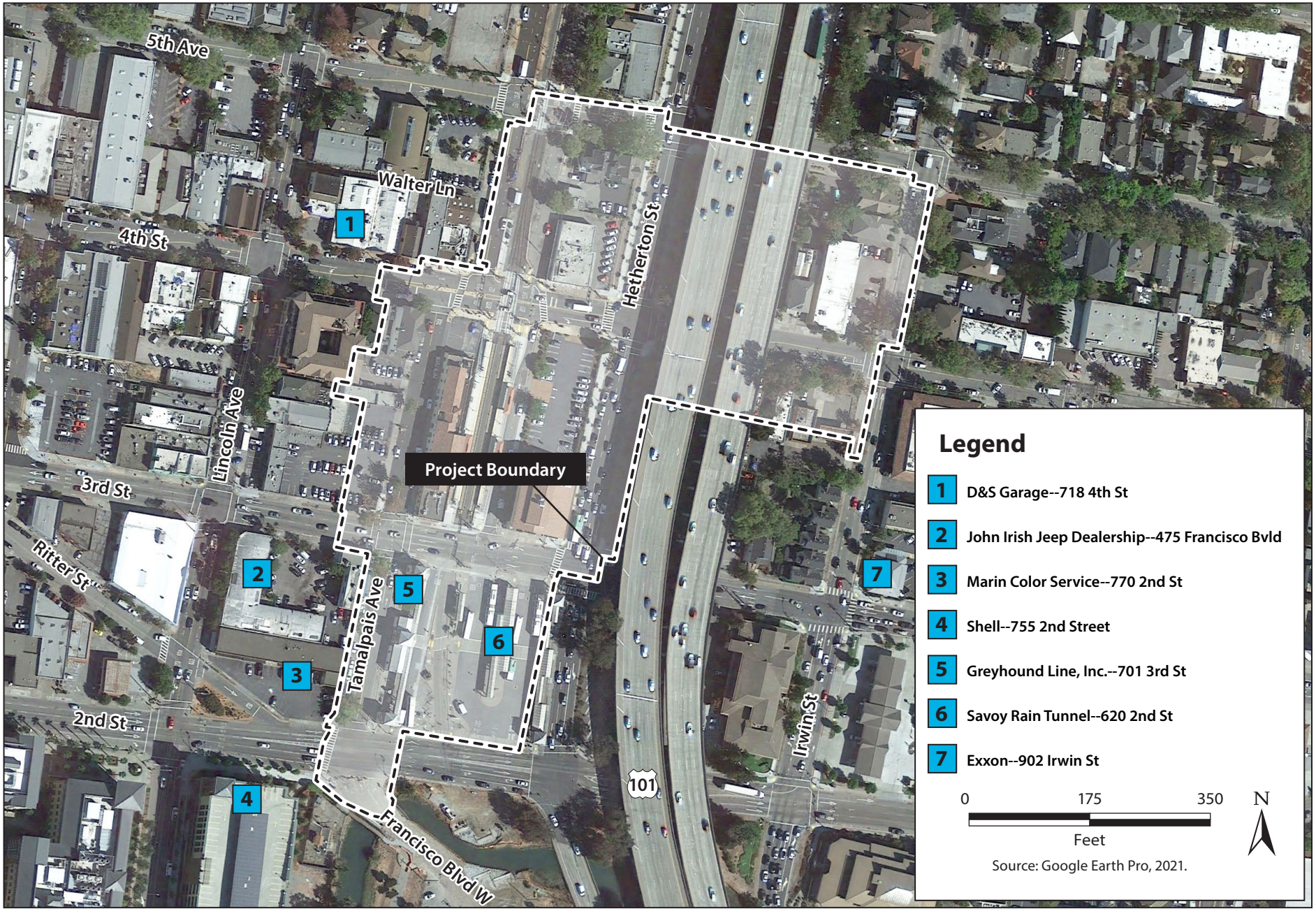


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Figure 3.8-1
Hazards and Hazardous Materials

Schools

Schools in the vicinity of the project area include Saint Raphael School, James B. Davidson Middle School, Laurel Dell Elementary School, Madrone High School, and San Rafael High School. Saint Raphael School is at the intersection of 5th Avenue and Court Street. James B. Davidson Middle School is on Woodland Avenue, near the intersection of Woodland Avenue and Lindaro Street. Laurel Dell Elementary School is on Woodland Avenue between Eva Street and Seibel Street. Madrone High School and San Rafael High School share a campus and are on Mission Avenue between Union Street and Embarcadero Way.

Airports

The closest airport to the project area is the San Rafael Airport (also called Marin Ranch Airport), a small, privately owned airport approximately 3 miles north of the project area. Marin County Airport (also called Gnoss Field) is a small, publicly owned airport operated by the Marin County Public Works Department and located about 13 miles north of the project area. Marin County Airport's airport land use plan, adopted in 1991, defines the boundary of the planning area as 2 miles from the airport boundary, which was the default planning boundary as of the time of this document's issuance (Marin County Planning Department 1991). The updated airport land use planning handbook states that 2 miles is still the default study area for an airport's influence area boundary (Caltrans 2011).

City of San Rafael Fire Department

The San Rafael Fire Department provides fire protection and emergency services to the City. The San Rafael Fire Department includes a Fire Prevention Bureau that issues fire permits for construction, operations, and inspections. The Fire Marshal works closely with the City's Code Enforcement Officer to ensure all structures meet State Fire Code Standards. The San Rafael Fire Department also is responsible for monitoring the storage and use of hazardous materials and issuing permits for hazardous materials use. Hazardous materials inspections are included in the program (City of San Rafael 2016).

The San Rafael Fire Department also delivers fire response and rescue services for both urban and wildland fires (City of San Rafael 2021).

Wildland Fire Hazard

The project area is not within a Moderate, High, or Very High Fire Hazard Severity Zone (CAL FIRE 2020). See Section 3.17, Wildfire, for a discussion of hazards related to wildfire.

3.8.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.8.2.1 Methodology

The Phase I ESA was prepared in accordance with ASTM International's E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Assessment Process. The study area included all areas of substantial improvements associated with each of the build alternatives.

The assessment included a review of published maps, technical reports, and environmental records available on regulatory databases to identify and evaluate potential conditions of concern in the study area. Environmental conditions of concern that could potentially be encountered by the proposed project include Recognized Environmental Conditions (RECs), as defined by ASTM International (2013 [as cited in the Phase I ESA]). RECs are defined as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." The following environmental conditions of concern that are not classified as RECs were also considered in the Phase I ESA:

- Aerially deposited lead (ADL) from highway corridors
- Soil contamination from railroad corridors
- Hazardous building materials

3.8.2.2 Thresholds of Significance

The following California Environmental Quality Act Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to hazards and hazardous materials.

Would the proposed project:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

3.8.2.3 Impacts

Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials

Construction

All Build Alternatives

Project construction would involve routine transport, use, and disposal of hazardous materials such as fuels, lubricants, solvents, and paint. Transport, use, and disposal of these hazardous materials during construction would be required to comply with applicable hazardous materials regulations, such as those discussed under Section 3.8.1.1, Regulatory Setting. The use of small amounts of hazardous materials during construction is typical to the construction of similar projects. Construction of the proposed project would not be expected to require the transport, use, and disposal of acutely hazardous materials. Mitigation Measure MM-HYD-CNST-1, Prepare and Implement a Stormwater Pollution Prevention Plan, would include BMPs, to be finalized by the project contractor, employed during construction to prevent spills or release of hazardous materials into the surrounding environment. BMPs may include, but are not limited to, treatment requirements and operating procedures to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from material storage. The SWPPP would also require that equipment and materials for cleanup of spills must be available on site, and spills and leaks must be cleaned up immediately and disposed of in accordance with applicable regulations. In the event of a hazardous material spill or release, project construction staff would follow the procedures outlined in BMPs.

With the implementation of Mitigation Measure MM-HYD-CNST-1, this impact would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Operation of the completed transit center would not require the regular transport, use, or disposal of hazardous materials. Maintenance and fueling of the buses would not occur at the facility and any spills from bus operation would be incidental. No fuel would be stored on site at the transit center. The transit center could result in occasional, incidental impacts from the disturbance of soils containing hazardous materials or residual groundwater contamination. Hazardous materials used for maintenance of the facility (e.g., paints, solvents, cleaning substances) would be handled in accordance with appropriate regulations and guidelines on transport, use, storage, and disposal of such materials. A Hazardous Materials Management Plan would be prepared and would cover hazardous materials stored on site, per San Rafael Fire Department requirements. Due to the intermittent nature of maintenance activities with the potential to require hazardous materials and the proposed project's required compliance with hazardous materials regulations, this impact would be ***less than significant***. No mitigation measures would be required.

Mitigation Measures

See Mitigation Measure MM-HYD-CNST-1 in Section 3.9, Hydrology and Water Quality.

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

The Phase I ESA identified known hazardous materials sites with environmental conditions of concern as well as general environmental conditions of concern within 1 mile of the Phase I ESA study area, which encompassed the footprints of all four build alternatives. Because the Phase I ESA studied the proposed project in the context of this combined study area, the four build alternatives are analyzed together in this impact discussion and impact determinations apply to all build alternatives.

Construction

All Build Alternatives

Construction of the proposed project could result in potential spills or accidental release of hazardous materials. The Phase I ESA's records search identified seven known hazardous materials sites (see Table 3.8-2) with environmental conditions of concern that have the potential to be encountered during project construction. Although the Phase I ESA did not identify any RECs, the potential for construction to encounter contamination related to environmental conditions of concern remains and Mitigation Measure MM-HAZ-CNST-1 would be implemented to further assess hazardous materials of concern within the project area prior to construction.

Two of the sites are former gas stations, two sites are former automobile repair or service businesses, one is a former bus station, one is a former car dealership, and one is a former car wash. The conditions of concern at six of the seven sites are related to soil and/or groundwater contamination from USTs. Construction activities also have the potential to disturb hazardous materials from residual groundwater contamination, ADL contamination, soil contamination from railroad corridors, and hazardous building materials.

The US-101 viaduct, within the Phase I ESA's study area, was constructed before the phase-out of lead in gasoline. Shallow soils within approximately 20 feet of the edge of pavement in highway corridors have the potential to be contaminated with ADL from historical vehicle emissions prior to the elimination of lead in gasoline. Therefore, maintenance of the proposed project could disturb exposed shallow soils near the US-101 viaduct and encounter ADL contamination.

Common soil contaminants along railroad corridors include metals and petroleum products from railroad operations. A historical railroad corridor crosses the project area, generally following Tamalpais Avenue and curving to the west at the intersection of Tamalpais Avenue and 2nd Street. Project improvements that require ground disturbance within the railroad corridor could encounter soil contamination from past railroad operations.

Asbestos-containing materials, such as thermal system insulation, surfacing materials, and asphalt and vinyl flooring, may be present in buildings constructed prior to 1981. Residential structures built prior to 1978 and any commercial or industrial building (regardless of construction date) could have surfaces that have been coated with lead-based paint. The Phase I ESA identified that structures within the study area could contain these hazardous building materials. Modification or demolition of such structures during construction could release hazardous building materials into the environment and pose a health risk to construction workers and the public, if not handled and disposed of properly. This would be a potentially significant impact.

Mitigation Measure MM-HYD-CNST-1, which includes preparation and implementation of a SWPPP, would include BMPs designed to ensure proper handling of hazardous materials encountered during construction activities and compliance with applicable regulations and policies. For example, the SWPPP's BMPs would include treatment requirements and operating procedures to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from material storage. The SWPPP would also require that equipment and materials for cleanup of spills must be available on site, and spills and leaks must be cleaned up immediately and disposed of in accordance with applicable regulations. In the event of a hazardous material spill or release, project construction staff would follow the procedures outlined in BMPs.

Additionally, construction staff would follow all applicable federal, state, and local regulations and guidelines if hazardous materials are encountered during construction. In the event that construction activities encounter hazardous materials related to a known hazardous materials site, the contractor would follow appropriate safety procedures and relevant agencies would be notified promptly.

Any hazardous materials produced during demolition of existing structures and pavement would be disposed of appropriately in a permitted landfill. Compliance with federal, state, and local hazardous materials regulations, in combination with implementation of Mitigation Measure MM-HYD-CNST-1, would ensure that hazardous materials utilized and encountered during construction would be used, stored, and disposed of properly, minimizing potential impacts related to upset and accident conditions. With these considerations**,** construction-phase impacts from the disturbance of known hazardous materials sites near the project site would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Maintenance of the transit center could intermittently require use, transport, or disposal of hazardous materials (e.g., paints, solvents, cleaning substances), creating the possibility of accidental spills or release of hazardous materials.

Although they would be limited and intermittent, maintenance activities requiring ground disturbance could disturb the sites identified in the Phase I ESA as having environmental conditions of concerns that could potentially be encountered during maintenance of the proposed project. Table 3.8-2 summarizes the known hazardous material sites with residual soil and/or groundwater contamination that could potentially be encountered during maintenance of the proposed project. These maintenance activities could also encounter hazardous materials from residual groundwater contamination and ADL contamination in shallow soils. In the event of an accidental hazardous material spill, transit center staff would follow all appropriate reporting and cleanup procedures, such as those from the *City of San Rafael General Plan 2020*. A Hazardous Materials Business Plan would be prepared if necessary and would cover hazardous materials stored on site, per Marin County Department of Public Works, Waste Management Division CUPA requirements. The proposed project would also be required to comply with San Rafael Fire Department's fire permit conditions. Compliance with applicable hazardous materials regulations would ensure that hazardous materials encountered during maintenance activities would be handled safely, minimizing the effects of accidental spills. This impact would be ***less than significant***.

Mitigation Measures

MM-HAZ-CNST-1: Phase II Site Investigation

Prior to construction, a Phase II Site Investigation shall be performed to further investigate hazardous materials concerns related to soil, groundwater, and building materials that could be disturbed by construction of the selected alternative, per the recommendations made in the Phase I ESA.

See Mitigation Measure MM-HYD-CNST-1 in Section 3.9, Hydrology and Water Quality.

Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School

Construction

Move Whistlestop Alternative

Saint Raphael School is approximately 1,300 feet northwest of the Move Whistlestop Alternative. No other schools are within 0.25 mile of the project site. Limited quantities of hazardous materials commonly used in construction may be required for project construction and transported past Saint Raphael School for delivery to or removal from the project site. Additionally, construction could result in potential spills or accidental release of hazardous materials. As discussed above, construction could disturb hazardous materials related to known hazardous materials sites in the project area or from residual groundwater contamination, ADL contamination, soil contamination from railroad corridors, and hazardous building materials, resulting in spills or accidental release of such materials. This impact would be potentially significant but would be minimized by the implementation of Mitigation Measure MM-HYD-CNST-1, which includes preparation and implementation of a SWPPP. The SWPPP would include BMPs designed to ensure proper handling of hazardous materials utilized or encountered during construction activities and compliance with applicable regulations and policies, as described previously. This impact would be ***less than significant with mitigation***.

Adapt Whistlestop Alternative

Saint Raphael School is approximately 1,300 feet northwest of the Adapt Whistlestop Alternative. No other schools are within 0.25 mile of the project site. For the reasons described under the Move Whistlestop Alternative, this impact would be ***less than significant with mitigation***.

4th Street Gateway Alternative

No schools are within 0.25 mile of the 4th Street Gateway Alternative project site. ***No impact*** would occur.

Under the Freeway Alternative

No schools are within 0.25 mile of the Under the Freeway Alternative project site. ***No impact*** would occur.

Operations

Move Whistlestop Alternative

Saint Raphael School is approximately 1,300 feet northwest of the Move Whistlestop Alternative. No other schools are within 0.25 mile of the project site. As discussed above, operation of the proposed project would not generate hazardous materials or facilitate the routine transport, use, or disposal of hazardous materials within the project site. Maintenance of the proposed project may require infrequent use of limited quantities of hazardous materials within the project site. Additionally, maintenance activities requiring ground disturbance could disturb hazardous materials from residual groundwater contamination, ADL contamination, soil contamination from railroad corridors, and hazardous building materials, resulting in spills or accidental release of such materials. Any such use of hazardous materials utilized in project maintenance would adhere to the applicable local, state, and federal regulations regarding hazardous materials. This impact would be ***less than significant***.

Adapt Whistlestop Alternative

Saint Raphael School is approximately 1,300 feet northwest of the Adapt Whistlestop Alternative. No other schools are within 0.25 mile of the project site. For the reasons described under the Move Whistlestop Alternative, this impact would be ***less than significant***.

4th Street Gateway Alternative

No schools are within 0.25 mile of the 4th Street Gateway Alternative project site. ***No impact*** would occur.

Under the Freeway Alternative

No schools are within 0.25 mile of the Under the Freeway Alternative project site. ***No impact*** would occur.

Mitigation Measures

See Mitigation Measure MM-HYD-CNST-1 in Section 3.9, Hydrology and Water Quality.

Be Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code § 65962.5 and, as a Result, Create a Significant Hazard to the Public or the Environment

Construction and Operations

All Build Alternatives

The environmental records search conducted for the proposed project's Phase I ESA did not identify any sites on the Cortese List, as identified in Government Code § 65962.5, within the study area. ***No impact*** would occur.

Mitigation Measures

No mitigation is required.

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

Construction and Operations

All Build Alternatives

The project site is not within 2 miles of an airport or within an Airport Land Use Compatibility Plan's airport influence area. ***No impact*** would occur.

Mitigation Measures

No mitigation is required.

Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan

Construction

All Build Alternatives

Construction of the proposed project would result in construction-related lane closures that could temporarily interfere with the emergency response actions described in the *Marin Operational Area Emergency Operations Plan*, Marin County Operational Area ERP, and/or the San Rafael LHMP in the vicinity of the project area. The potential of construction to interfere with the emergency response actions outlined in these plans would be temporary and intermittent. As described in Chapter 2, Project Description, a Traffic Control Plan would be implemented to minimize obstructions at all major thoroughfares, which would help to ensure continued emergency access to the project area and nearby properties. The Traffic Control Plan would include provisions for construction truck marshaling to prevent congestion from construction traffic and associated impacts on emergency services on roads leading to and from the project area. As necessary, this plan would include detours and provisions for clear signage, including for emergency vehicles to use during emergency response. A ***less-than-significant*** impact would occur.

Operations

All Build Alternatives

Operation of the new transit center would not impair or physically interfere with the *Marin Operational Area Emergency Operations Plan*, Marin County Operational Area ERP, and/or the San Rafael LHMP, as the proposed project would be required to comply with applicable regulations and adopted plans as a part of the City's project approval process. Additionally, operation of the proposed project would not increase susceptibility to the emergency events discussed in these plans and would not change Marin County's or the City's ability to activate emergency response actions for the emergency events described in these plans. The Golden Gate Bridge, Highway and Transportation District's Emergency Operations Plan would be updated to include the new facility. This plan is intended to provide direction and guidance for use in response to and recovery from

emergency events and identifies coordination processes with relevant emergency management agencies (Golden Gate Bridge, Highway and Transportation District 2019). See Section 3.13, Public Services and Recreation, for a discussion of the potential impacts on public services, including emergency services. A ***less-than-significant*** impact would occur.

Mitigation Measures

No mitigation is required.

Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury or Death Involving Wildland Fires

The project area is not within a Very High Fire Hazard Severity Zone (CAL FIRE 2020). The project area is within a fully developed area of San Rafael. Therefore, potential impacts associated with exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, would be ***less than significant***. Impacts related to wildfires are discussed further in Section 3.17, Wildfire.

Section 3.9
Hydrology and Water Quality

This section addresses hydrology and water quality impacts that may result from implementation of the proposed San Rafael Transit Center Replacement Project (proposed project) and other build alternatives. The following discussion addresses existing hydrology and drainage conditions of the project area and surroundings, including drainage patterns, runoff quantity and quality, the capacity of the existing storm drain infrastructure, and flood hazards. It considers applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project implementation, as applicable. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.9.1 Existing Conditions

3.9.1.1 Regulatory Setting

Federal

Federal Clean Water Act

The proposed project is subject to federal permit requirements under the federal Clean Water Act (CWA). The primary goal of the CWA is to maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. The CWA forms the basic national framework for the management of water quality and the control of pollution discharges; it provides the legal framework for several water quality regulations, including the National Pollutant Discharge Elimination System (NPDES), effluent limitations, water quality standards, pretreatment standards, antidegradation policy, nonpoint-source discharge programs, and wetlands protection. The United States Environmental Protection Agency (EPA) has delegated the administrative responsibility for portions of the CWA to state and regional agencies. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCBs) to preserve, protect, enhance, and restore water quality.

Under the NPDES permit program, EPA establishes regulations for discharging stormwater by municipal and industrial facilities and construction activities. Section 402 of the CWA prohibits the discharge of pollutants into waters of the United States from any point source unless the discharge complies with an NPDES permit.

The Anti-degradation Policy under EPA's Water Quality Standards Regulations (48 Federal Register 51400, 40 Code of Federal Regulations 131.12, November 8, 1983), requires states and tribes to establish a three-tiered anti-degradation program to prevent a decrease in water quality standards.

- Tier 1—Maintains and protects existing uses and water quality conditions that support such uses. Tier 1 is applicable to all surface waters.

- Tier 2—Maintains and protects "high-quality" waters where existing conditions are better than necessary to support "fishable/swimmable" waters. Water quality can be lowered in such waters but not to the point at which it would interfere with existing or designated uses.
- Tier 3—Maintains and protects water quality in outstanding national resource waters. Water quality cannot be lowered in such waters except for certain temporary changes.

Anti-degradation was explicitly incorporated into the federal CWA through 1987 amendments, codified in Section 303(d)(4)(B), requiring satisfaction of anti-degradation requirements before making certain changes in NPDES permits.

Section 303(d) of the CWA requires the SWRCB to list impaired waterbodies that are too polluted or otherwise degraded to meet the water quality standards set by states, territories, or authorized tribes. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop Total Maximum Daily Loads (TMDLs) for these waters.

Section 404 of the CWA is administered and enforced by the U.S. Army Corps of Engineers. Section 404 establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands and coastal areas below the mean high tide. The U.S. Army Corps of Engineers administers the day-to-day program and reviews and considers individual permit decisions and jurisdictional determinations. The U.S. Army Corps of Engineers also develops policy and guidance and enforces Section 404 provisions.

States and authorized tribes where the discharge would originate are generally responsible for issuing water quality certifications under Section 401 of the CWA. Pursuant to CWA Section 401, an applicant for a Section 404 permit to conduct any activity that may result in discharge into navigable waters must provide a certification from the RWQCB that such discharge will comply with state water quality standards. A Section 401 water quality certification verifies compliance with water quality requirements.

National Flood Insurance Program

The Federal Emergency Management Agency's (FEMA's) primary missions are to reduce the loss of life and property and protect the nation from all hazards, including flooding. FEMA is responsible for administering the National Flood Insurance Program (NFIP). The NFIP 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. In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all properties within Zone A, which are communities subject to a 100-year flood event. In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the floodplains of Flood Insurance Rate Maps.

State

California Porter-Cologne Water Quality Control Act

SWRCB regulates water quality through the Porter-Cologne Water Quality Act of 1969 (Porter-Cologne Act), which contains a complete framework for the regulation of waste discharges to both surface waters and groundwater of the state. The Porter-Cologne Act (California Water Code Section 13000 et seq.) is the principal law governing water quality regulation in California. It established a

comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and groundwater and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act, the policy of the state is as follows:

- That the quality of all the waters of the state shall be protected,
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason, and
- That the state must be prepared to exercise its full power and jurisdiction to protect the quality of water in the state from degradation.

Through the SWRCB, the Porter-Cologne Act established nine RWQCBs that are charged with implementing its provisions and that have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrology regions. The SWRCB has numerous nonpoint-source[1] pollution-related responsibilities, including monitoring and assessment, planning, financial assistance, and management. The Porter-Cologne Act provides several options for enforcing waste discharge requirements and other orders.

The Porter-Cologne Act establishes a comprehensive program for the protection of beneficial uses of the waters of the state. California Water Code Section 13050(f) describes the beneficial uses of surface and groundwaters that may be designated by the state or regional boards for protection as follows: "Beneficial uses of the waters of the state that may be protected against quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves." Waterbodies with substantial evidence indicating that the waterbody supports rare, threatened, or endangered species are identified as RARE. Twenty-three beneficial uses are now defined statewide.

San Francisco Bay Water Quality Control Plan

The *San Francisco Bay Basin (Region 2) Water Quality Control Plan* (Basin Plan) is the San Francisco Bay RWQCB's master water quality control planning document for the San Francisco Bay Basin (San Francisco RWQCB 2019). The Basin Plan designates beneficial uses and water quality objectives for "waters of the state," including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan established water quality objectives for total dissolved solids, mineral constituents, and turbidity on a watershed-by watershed basis within the region, while objectives for total and fecal coliform bacteria, nutrients (total nitrogen and total phosphorus), pH, dissolved oxygen, and un-ionized ammonia are set on a region-wide basis.

Phase II Small Municipal Separate Storm Sewer System Program

The Municipal Stormwater Permitting Program regulates stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s). Most of these permits are issued to a group of co-permittees

[1] According to EPA, "NPS (*nonpoint source*) pollution generally results from land runoff, precipitation, atmospheric deposition, drainage, seepage or hydrologic modification." NPS pollution has many diffuse sources whereas point source pollution has a single, identified source (EPA 2020).

encompassing an entire metropolitan area. The MS4 permits require the discharger to develop and implement a Stormwater Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable, which is the performance standard specified in CWA Section 402(p). The management programs specify what stormwater best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach, illicit discharge detection and elimination, construction and post-construction, and good housekeeping for municipal operations.

The NPDES permit is broken up into two phases: I and II. Phase I requires medium and large cities, or certain counties with populations of 100,000 or more, to obtain NPDES permit coverage for their stormwater discharges. Phase II requires regulated small municipal MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges. The City of San Rafael (City) is covered under the Phase II MS4 permit (Order WQ 2013-0001-DWQ NPDES No. CAS000004 as amended by order WQ 2015-0133-EXEC, Order WQ 2016-0069-EXEC, Order WQ 2018-0001-EXEC, and order WQ 2018-0007-EXEC). As a Phase II implementing city, the City should enforce development of a Stormwater Management Plan containing pre- and post-construction BMPs. The Golden Gate Bridge, Highway and Transportation District is considered a non-traditional small MS4 permittee and is also covered under Order No. 2013-0001-DWQ.

The RWQCB regulates discharges to waters through issuance of NPDES permits for point-source discharges for contaminants and waste discharge requirements for nonpoint-source discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The SWRCB and the RWQCBs can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues.

NPDES General Permit for Construction Activities

The SWRCB has issued and periodically renews a statewide General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit (Order No. 2009-0009-DWQ, NPDES No. CAR000002, as amended by 2010-0014-DWQ and 2012-0006-DWQ) was adopted in 2009. The construction permitting is administered by the SWRCB, while the post-construction permitting is administered by the RWQCB. Development projects typically result in the disturbance of soil that requires compliance with the Construction General Permit. This statewide General Construction Permit regulates discharges from construction sites that disturb 1 or more acres of soil.

By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least 1 acre of total land area must comply with the provisions of this Construction General Permit and develop and implement an effective Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to contain a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP is required to list BMPs the discharger would use to protect stormwater runoff and the placement of those BMPs. Examples of BMPs include temporary vegetation, silt fences, and vegetative filter strips. Additionally, the SWPPP must contain the following elements: a visual monitoring program, a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site

discharges directly to a waterbody listed on the 303(d) list for sediment. Construction General Permit Section A describes the elements that must be contained in a SWPPP. A project applicant must submit a Notice of Intent to the SWRCB to be covered by the Construction General Permit and prepare the SWPPP before beginning construction. SWPPP implementation starts with the commencement of construction and continues through project completion. Upon project completion, the applicant must submit a Notice of Termination to the SWRCB to indicate that construction is completed.

For construction activities that would result in the disturbance of 1 or more acres, permittees must develop, implement, and enforce a program to reduce pollutant runoff in stormwater. This includes: (1) a program to prevent illicit stormwater discharges; (2) structural and non-structural BMPs to reduce pollutants in runoff from construction sites; and (3) prevention of discharges from causing or contributing to violations of water quality standards. Permittees are required to review construction site plans to determine potential water quality impacts and ensure proposed controls are adequate. These include preparation and submission of an Erosion and Sediment Control Plan with elements of a SWPPP, prior to issuance of building or grading permits.

NPDES Municipal Regional Permit Post-Construction Stormwater Quality Requirements

The City is a permittee under the NPDES Municipal Regional Permit and has the authority to administer Section E.12 regarding post-construction stormwater controls. The provisions require the installation of post-construction BMPs for new development as part of the federal NPDES program and the setting of standards for their implementation. The intent of these regulations is to rigorously control the quality and quantity of stormwater runoff from any new development that creates or replaces impervious area over 10,000 square feet (or 5,000 square feet for high water quality risk sites), so that receiving waters downstream are not adversely affected.

To comply with these requirements, projects meeting these criteria are required to install water quality stormwater runoff BMPs that filter or treat rainfall runoff generated from storm events up to approximately the 85th percentile rainfall event (or approximately the 1-inch storm event) before discharging into storm drains or natural drainage systems. Projects are required to capture 100 percent of rainfall runoff from new impervious surfaces and to treat it in post-construction stormwater systems. Projects are required to implement Low-Impact Development techniques such as harvesting and re-use, infiltration, evapotranspiration, and bioretention.

Industrial General Permit

The SWRCB has issued a statewide General Industrial Activities Stormwater Permit (Industrial Permit) for projects that do not require an individual permit for construction activities. The Industrial Permit (Order No. 2014-0057-DWQ) was adopted in 2014 and requires dischargers to develop and implement a SWPPP to reduce or prevent industrial pollutants in stormwater discharges, eliminate unauthorized non-storm discharges, and conduct visual and analytical stormwater discharge monitoring to verify the effectiveness of the SWPPP and submit an annual report. Industrial facilities such as manufacturers, landfills, mining, steam-generating electricity, hazardous waste facilities, transportation with vehicle maintenance, larger sewage and wastewater plants, recycling facilities, and oil and gas facilities are typically required to obtain Industrial Permit coverage. In the adoption of the Industrial Permit, the SWRCB recognized the need for a comprehensive training program to provide a statewide training specifically for individuals assisting

dischargers with compliance with this permit, standardized knowledge of implementing the Industrial Permit through training, and required quality assurance, sampling methods, and protocols for stormwater discharge sampling.

California Fish and Game Code Sections 1602

The California Department of Fish and Wildlife (CDFW) is a public trustee agency with a role in protecting water quality that is related to California Fish and Game Code Section 1602. CDFW coordinates with the SWRCB and uses the needs of fish and wildlife to inform water policy, legislation, and execution of water quality policy and management. CDFW participates in the development of high-profile water quality policies with statewide implications (e.g., Statewide Policies, Sacramento-San Joaquin River Delta) through coordination with regional and local agencies regarding water quality standards policy and permitting processes. In part, CDFW accomplishes this through ensuring compliance with Division 2, Chapter 6, Section 1602 of the California Fish and Game Code. CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife.

Local

Bay Conservation and Development Commission

The Bay Conservation and Development Commission (BCDC) has permitting authority for most projects in San Francisco Bay and along the shoreline, which is defined in the McAteer-Petris Act to include Bay waters up to the mean high-water line and the area 100 feet landward of and parallel to the mean high-water line of San Francisco Bay. Under the McAteer-Petris Act, an agency or individual must secure a permit from BCDC if it proposes to place fill, dredged sediment, or dredged materials in San Francisco Bay or certain tributaries within BCDC jurisdiction. Most activities within the 100-foot shoreline band are also subject to a permit from BCDC. The type of permit issued depends on the nature and scope of the proposed activities. Construction of those elements of the proposed project within BCDC's jurisdiction would require a Major Permit under the McAteer-Petris Act.

City of San Rafael General Plan

The City of San Rafael General Plan 2020

The City of San Rafael General Plan 2020 contains the following goals and policies that are applicable to the proposed project (City of San Rafael 2016).

Air and Water Quality Element

Policy AW-7. Local, State and Federal Standards. Continue to comply with local, state, and federal standards for water quality.

AW-7a. **Countywide Stormwater Program**. Continue to participate in the countywide stormwater program and comply with its performance standards.

AW-7b. **Stormwater Runoff Measures**. Continue to incorporate measures for stormwater runoff control and management in construction sites.

AW-7c. Water Quality Improvements in Canal and Other Waterways. Support water quality improvement efforts in the San Rafael Canal, creeks, and drainageways in accordance with standards of the State Water Quality Control Board or any agencies with jurisdiction.

Policy AW-8. **Reduce Pollution from Urban Runoff**. Address non-point source pollution and protect receiving waters from pollutants discharged to the storm drain system by requiring Best Management Practices quality.

- Support alternatives to impervious surfaces in new development, redevelopment, or public improvement projects to reduce urban runoff into storm drain system, creeks, and the Bay.
- Require that site designs work with the natural topography and drainages to the extent practicable to reduce the amount of grading necessary and limit disturbance to natural water bodies and natural drainage systems.
- Where feasible, use vegetation to absorb and filter fertilizers, pesticides and other pollutants.

Policy AW-9. Erosion and Sediment Control. Establish development guidelines to protect areas that are particularly susceptible to erosion and sediment loss.

San Rafael General Plan 2040

The City is currently working on the Draft *San Rafael General Plan 2040*. The Draft *San Rafael General Plan 2040* contains the following goals and policies that would be applicable to the proposed project (City of San Rafael 2020).

Conservation and Climate Change Element

Policy C-1.1: Wetlands Preservation. Require appropriate public and private wetlands preservation, restoration and/or rehabilitation through the regulatory process. Support and promote acquisition of fee title and/or easements from willing property owners.

Policy C-1.6: Creek Protection. Protect and conserve creeks as an important part of San Rafael's identity, natural environment, and green infrastructure. Except for specific access points approved per Policy C-1.7 (Public Access to Creeks), development-free setbacks shall be required along perennial and intermittent creeks (as shown on Figure 6-2) to help maintain their function and habitat value. Appropriate erosion control and habitat restoration measures are encouraged within the setbacks, and roadway crossings are permitted.

Policy C-1.9: Enhancement of Creeks and Drainageways. Conserve or improve the habitat value and hydrologic function of creeks and drainageways so they may serve as wildlife corridors and green infrastructure to improve stormwater management, reduce flooding, and sequester carbon. Require creek enhancement and associated riparian habitat restoration/creation for projects adjacent to creeks to reduce erosion, maintain storm flows, improve water quality, and improve habitat value where feasible.

Policy C-3.1: Water Quality Standards. Continue to comply with local, state and federal water quality standards.

Policy C-3.2: Reduce Pollution from Urban Runoff. Require Best Management Practices to reduce pollutants discharged to storm drains and waterways. Typical BMPs include reducing impervious surface coverage, requiring site plans that minimize grading and disturbance of creeks and natural drainage patterns, and using vegetation and bioswales to absorb and filter runoff.

Policy C-3.3: Low Impact Development. Encourage construction and design methods that retain stormwater on-site and reduce runoff to storm drains and creeks.

Policy C-3.4: Green Streets. Design streets and infrastructure so they are more compatible with the natural environment, mitigate urban heat island effects, and have fewer negative impacts on air and water quality, flooding, climate, and natural habitat.

Safety and Resilience Element

Policy S-2.5: Erosion Control. Require appropriate control measures in areas susceptible to erosion, in conjunction with proposed development. Erosion control measures should incorporate best

management practices (BMPs) and should be coordinated with requirements for on-site water retention, water quality improvements, and runoff control.

Policy S-3.8: Storm Drainage Improvements. Require new development to mitigate potential increases in runoff through a combination of measures, including improvement of local storm drainage facilities. Other measures, such as the use of porous pavement, bioswales, and "green infrastructure" should be encouraged.

Marin County Flood Control and Water Conservation District

The Marin County Flood Control and Water Conservation District was formed in 1955 by an Act of the State Legislature found in Chapter 68 of the State Water Code. The Board of Supervisors sits as Board of the district and the district is staffed by the Department of Public Works. The boundaries of the district are contiguous with those of the County of Marin and eight zones have been established to address specific watershed flooding problems. Each zone has an advisory board of residents that reviews zone budgets and master plans and advises the district board on these matters. The district also maintains precipitation and stream gauges, publishes Creek Rating Tables, and oversees the Marin County Stormwater Pollution Prevention Program (MCSTOPPP) and FEMA Flood Insurance programs.

Marin County Stormwater Pollution Program

The City is a member agency of the MCSTOPPP, which aims to prevent stormwater pollution, protect and enhance water quality in creeks and wetlands, preserve beneficial uses of local waterways, and comply with state and federal regulations. As a member agency, the City implements the San Rafael Urban Runoff Pollution Prevention Ordinance and funds the countywide MCSTOPPP, which provides for coordination and consistency of approaches among local stormwater programs. The San Rafael Urban Runoff Pollution Prevention Ordinance identifies stormwater BMPs, land development standards, and permitting requirements to ensure compliance with all appropriate regulations (MCSTOPPP 2020).

Furthermore, the San Rafael Sanitation District has implemented a Sewer System Management Plan to meet all RWQCB and SWRCB requirements. The Sewer System Management Plan aims to work cooperatively with local, state, and federal agencies to reduce, mitigate impacts of, and properly report any Sanitary Sewer Overflows that may affect water quality.

3.9.1.2 Environmental Setting

Surface Water and Groundwater

The project area is within the San Rafael Creek Watershed as shown in *The City of San Rafael General Plan 2020*, Figure 6-2. The San Rafael Creek Watershed is in the southern part of the city and encompasses 11 square miles. The creek originates above Tamalpais Cemetery and flows through urbanized neighborhoods toward the San Rafael Canal, then enters San Rafael Bay in the vicinity of Pickleweed Park.

San Rafael Creek is south of the project area. San Rafael Creek drains a watershed of approximately 6.5 square miles with elevations ranging from sea level to approximately 1,100 feet. As a result of urbanization in the City, San Rafael Creek has been partitioned into two primary reaches: San Rafael Creek Canal and Mahon Creek. Existing drainage patterns identify that most of the project area drains south into San Rafael Creek before ultimately discharging into San Rafael Bay.

The project area, inclusive of the four alternatives, is within an urbanized and built-out area of Downtown San Rafael. Each of the alternative project sites considered in this analysis is developed with buildings, sidewalks, and asphalt parking areas, with minimal landscape vegetation. All runoff generated from the sites is directed toward stormwater drainage infrastructure that exists throughout the area. There are existing 18-inch and 48-inch storm drain main lines running west to east on 5th Avenue and two existing 14-inch storm drain lines running west to east on 3rd Street, east of the Sonoma-Marin Area Rail Transit (SMART) train tracks. Groundwater in the project area varies between 22 to 32 feet below the current ground surface. However, borings outside of but near the southern portion of the project area have recorded groundwater levels of 6 to 8 feet below the ground surface. In addition, borings made by the California Department of Transportation in the 1960s along the San Rafael Viaduct encountered groundwater between 4 and 6 feet below ground surface. Furthermore, the project area is not within a recognized groundwater basin.

Water Quality

The proposed project is within San Francisco Bay RWQCB jurisdiction. The concentration of pollutants in the surface runoff is determined by the quantity of a material in the environment and its characteristics. In an urban environment, the quantity of certain pollutants in the stormwater systems is generally associated with the intensity of land use. General hydrologic characteristics, land uses, and activities that involve pollutants have the greatest impact on water quality runoff. San Rafael Creek is 303(d) listed as impaired for diazinon and the San Francisco Bay Urban Creeks Diazinon TMDL was approved by EPA in 2007 (SWRCB 2018).

The RWQCB is charged with protecting all beneficial uses from pollution and nuisance that may occur as a result of waste discharges in the region. Beneficial use designations for any given waterbody do not rule out the possibility that other beneficial uses exist or have the potential to exist. Existing beneficial uses of San Francisco Bay identified in the Basin Plan include Industrial Service Supply, Industrial Process Supply, Commercial and Sport Fishing, Shellfish Harvesting, Estuarine Habitat, Fish Migration, Preservation of Rare and Endangered Species, Fish Spawning, Wildlife Habitat, Contact and Noncontact Water Recreation, and Navigation. Existing beneficial uses of San Rafael Creek identified in the Basin Plan include Warm and Cold Freshwater Habitat, Contact and Noncontact Water Recreation, and Wildlife Habitat. Existing beneficial uses that have not been formally designated in the Basin Plan are protected whether or not they are identified.

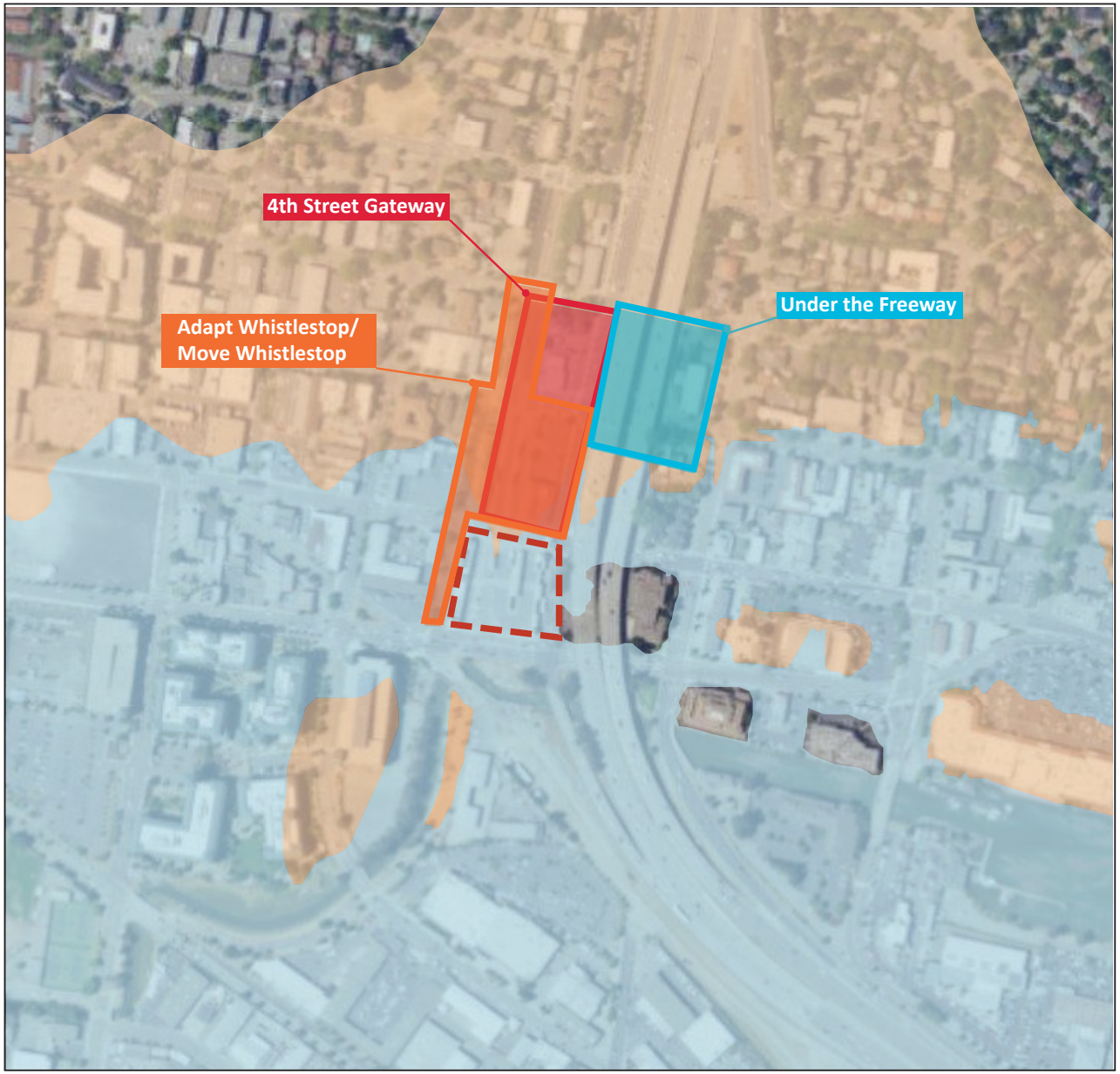
Floodplain

As shown on Figure 3.9-1, the existing San Rafael Transit Center is within FEMA Flood Zones AH and AE (EPA n.d.; FEMA 2020). The western portion of the site is within Zone AH, classified as an area inundated by a 1-percent annual chance (or 100-year) flood for which base flood elevations have been determined; flood depths range from 1 to 3 feet. The eastern portion of the project area is within Zone AE, classified as an area inundated by 1-percent annual chance flooding for which base flood elevations have been determined. The Move Whistlestop Alternative, Adapt Whistlestop Alternative, and 4th Street Gateway Alternative are primarily within Zone X, classified as an area of minimal flood hazard with a 0.2-percent annual chance (or 500-year) flood. However, the southernmost portion of the project area is within Zone AH. The Under the Freeway Alternative is entirely within Zone X. It is anticipated that flooding and storm surges will become more intense in the coming years as a result of climate change, and it is possible that FEMA's figures may underestimate future flood conditions. Flooding frequency is expected to increase as climate change influences sea level rise. The existing transit center site was assessed for projected changes in

inundation potential resulting from sea level rise using the Our Coast Our Future visualization tool, which displays data from the Coastal Storm Modeling System (Point Blue Conservation Service and United States Geological Survey 2017). This model presents projected flood conditions under various sea level rise elevation scenarios, including 0.8 foot, 1.6 feet, 2.5 feet, 3.3 feet, and 4.1 feet. Under existing conditions, the Our Coast Our Future model shows that the existing transit center does not face flood risk from a no-storm[2] or annual storm scenario. This model shows that the southern portion of the existing transit center would begin to experience partial, intermittent inundation from a no-storm scenario and an annual storm scenario at the 4.1-foot sea level rise scenario. During stronger storm events, the extent of flooding increases. The model shows that the existing transit center begins to face partial inundation from a 100-year (1 percent annual chance) storm at the 3.3-foot sea level rise scenario. The frequency and reach of inundation would increase as sea level rise increased.

The sites of the Move Whistlestop Alternative and other build alternatives vary in susceptibility to flooding based on their location relative to San Rafael Creek, which is south of the project area. The model shows that the southern portion of the Move Whistlestop and Adapt Whistlestop Alternatives would begin to experience inundation under no-storm and annual storm conditions at the 4.1-foot sea level rise scenario, similar to the existing transit center. The model shows that the 4th Street Gateway and Under the Freeway Alternatives would not experience inundation under no-storm or annual storm conditions at the 4.1-foot sea level rise scenario because they are farther from San Rafael Creek. The Move Whistlestop and Adapt Whistlestop Alternatives could be partially, intermittently inundated by a 100-year storm under the 3.3-foot of sea level rise scenario, similar to the existing transit center. The 4th Street Gateway and Under the Freeway Alternatives would have similar but relatively lower risk of inundation in a 100-year storm under the 3.3-foot sea level rise scenario because they are farther from San Rafael Creek.

[2] A no-storm scenario considers potential flooding from daily tidal fluctuations.



Source: FEMA, 2020.

Legend

- Existing SRTC
- Under the Freeway
- Adapt Whistlestop/Move Whistlestop
- 4th Street Gateway
- Zone X (Minimal Flood Hazard Area)
- Zone AH and AE (Special Flood Hazard Area)

N

Not to scale.

ICF Graphics ... 0748.17 (2-23-2021) JC

ICF

Figure 3.9-1
FEMA Flood Zones

3.9.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Hydrology and water quality impacts were analyzed for the proposed project area, as each alternative would have a nearly equivalent impact. Impacts for the build alternatives are presented together unless they differ substantially among alternatives. Information for this section was obtained through resources available online including *The City of San Rafael General Plan 2020*, database maps, Urban Water Management Plan (MMWD 2016), and planning documents.

Technical information used to prepare this section was provided from the following resources:

- City of San Rafael, *The City of San Rafael General Plan 2020* (City of San Rafael 2016) and Environmental Impact Report (City of San Rafael 2004)
- San Rafael Sanitation District *Sewer System Management Plan* (San Rafael Sanitation District 2015)
- Baseline Environmental Consulting, Phase 1 Environmental Site Assessment – San Rafael Transit Center Project (Baseline Environmental Consulting 2020)
- Parikh Consultants, Inc., Preliminary Geotechnical Design Recommendations, San Rafael Transit Center (Parikh 2020)

3.9.2.1 Methodology

Analysis of potential impacts related to hydrology and water quality was based on the existing and planned stormwater drainage systems and project elements were compared to baseline conditions, as described in Section 3.9.1.2, Environmental Setting, to conditions during construction and/or operations of the proposed project. The study area covered in the analysis consisted of the project area.

3.9.2.2 Thresholds of Significance

The following California Environmental Quality Act Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to hydrology and water quality.

Would the proposed project:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would
    - result in substantial erosion or siltation on or off site?

  - substantially increase the rate or amount of surface runoff in a manner that would result in 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?
  - impede or redirect flood flows?
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.9.2.3 Impacts

Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality

Construction

Move Whistlestop Alternative

The proposed project would disturb more than 1 acre of land and must comply with the requirements of the NPDES Construction General Permit, which controls water pollution by regulating point and non-point sources that discharge pollutants into receiving waters. Project construction would occur over approximately 18 months and could result in additional sources of polluted runoff that would have short-term impacts on water quality through activities such as clearing and grading, stockpiling of soils and materials, construction equipment, paving, and painting. Grading, excavation, and other earthmoving activities would have the potential to cause substantial erosion and result in sediment transport to roadways or watercourses via storm drains. Additional construction activities could result in soil compaction and wind erosion impacts that could adversely affect soils and reduce the revegetation potential at specific locations. If erosion is not prevented or contained during construction, sediments and pollutants including oil, litter, solvents, and dust could be conveyed off site and into San Rafael Creek and San Rafael Bay waters, resulting in water quality degradation and the subsequent violation of water quality standards. This impact would be potentially significant. Mitigation Measure MM-HYD-CNST-1 would be implemented to reduce this impact to a less-than-significant level.

Mitigation Measure MM-HYD-CNST-1 would include the preparation and implementation of a SWPPP and participation with the Construction General Permit. The SWPPP would contain site-specific BMPs implemented to control pollutants in stormwater discharge.

In addition, Chapter 9.30, Urban Runoff Pollution Prevention, of the San Rafael Municipal Code regulates grading, drainage, and erosion. This chapter contains requirements regarding discharge and construction site stormwater runoff control.

Although small amounts of construction-related dewatering are covered under the Construction General Permit, the San Francisco Bay RWQCB has regulations specific to dewatering activities that typically involve reporting and monitoring requirements. In the event of dewatering during construction activities or before dewatering to surface water via a storm drain, the contractor would obtain coverage under the NPDES Construction General Permit from the San Francisco Bay RWQCB.

Coverage under the Construction General Permit typically includes dewatering activities as authorized non-stormwater discharges, provided that dischargers prove the quality of water to be adequate and not likely to affect beneficial uses. All requirements of dewatering would be met to ensure water quality is not affected.

In the event groundwater is encountered during construction, dewatering discharge methods would include options for discharge to surface water via a storm drain in compliance with waste discharge requirements to ensure that any discharges would be within the capacity of existing facilities and would not require the construction or expansion of existing facilities. Waste discharge requirements also include regulations specific to dewatering activities requirements. If it is found that the groundwater does not meet water quality standards, it must either be treated as necessary prior to discharge so that all applicable water quality objectives (as designated in the Basin Plan) are met or hauled off site instead for treatment and disposal at an appropriate waste treatment facility that is permitted to receive such water. For water to be discharged to San Francisco Bay, the contractor would be required to notify the San Francisco Bay RWQCB and comply with the board's requirements related to the quality of water and discharges.

Implementation of MM-HYD-CNST-1 and compliance with the San Rafael Municipal Code and Water District requirements would minimize the potential impacts of project construction effects on water quality.

Therefore, construction of the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Potential impacts from construction activities would be ***less than significant with mitigation***.

Adapt Whistlestop Alternative

The Adapt Whistlestop Alternative construction impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant with mitigation***.

4th Street Gateway Alternative

The 4th Street Gateway Alternative construction impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant with mitigation***.

Under the Freeway Alternative

The Under the Freeway Alternative construction impacts would be similar to the impacts discussed for the Move Whistlestop Alternative above. However, the Under the Freeway Alternative would also require Section 401 and Section 404 CWA permits due to the required work in Irwin Creek. The area of impact on the creek would include 23,600 square feet of temporary impacts and 11,900 square feet of permanent impacts. As stated in Mitigation Measure MM-CNST-BIO-5, the project proponent would comply with any regulatory requirements determined as part of the state (Section 401 Water Quality Certification or waste discharge requirements, Lake and Streambed Alteration Agreement) and federal (Section 404 permit) processes for the work that would occur in Irwin Creek. With the implementation of Mitigation Measure MM-CNST-BIO-5, the impact would be ***less than significant with mitigation***.

Operations

Move Whistlestop Alternative

The project site has been previously developed with urban uses and does not include substantial vegetation or other pervious surfaces. Accordingly, implementation of the Move Whistlestop Alternative would not introduce new impervious surfaces to the area that could substantially increase the volume of runoff from the site. Notwithstanding, Move Whistlestop Alternative operation could contribute additional sources of polluted runoff such as pesticides, herbicides, oils, grease, debris, and other urban constituents to the stormwater drainage, which could flow into the City's stormwater system, San Rafael Creek, and San Rafael Bay. However, the Move Whistlestop Alternative is designed to have no negative impacts on downstream receiving waters related to stormwater pollutants through incorporation of stormwater treatment features. As described in Chapter 2, Project Description, the project design includes a total of seven bioscope vaults that would be installed at the southern portion of transit center drive aisles to treat runoff from the site prior to discharge into the existing storm drain infrastructure.

Furthermore, any project that includes site operation and maintenance has the potential to avoid or minimize impacts on receiving waters by changing the types and quantities of stormwater pollutants discharged from the site. The Move Whistlestop Alternative would reduce the volume of stormwater discharged downstream and the discharge of pollutants through the use of stormwater BMPs such as filters and bioscope vaults that remove pollutants combined with onsite retention of stormwater, which reduces the conveyance of any remaining pollutants. Additional post-construction design features would include:

- All new storm drain inlets and catch basins within the project site shall be marked with prohibitive language and/or graphical icons to discourage illegal dumping.
- Outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system shall be covered and protected by secondary containment.
- Permanent trash container areas shall be enclosed to prevent offsite transport of trash, or drainage from open trash container areas shall be directed to the sanitary sewer system.

All applicable design features would be incorporated into project development plans and construction documents and would be operational at the time of project occupancy.

The Move Whistlestop Alternative would not generate any point sources of wastewater or other liquid or solid water contaminants. All of the wastewater generated would be discharged into a local sanitary sewer system that would convey the flows into the San Rafael Sanitation District collection system and then to the Central Marin Sanitation Agency treatment facilities prior to discharge to San Rafael Bay or any other receiving water. All wastewater would be properly treated. This would reduce impacts and ensure pollutants from wastewater flows do not violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality.

As discussed above, the project applicant would be required to prepare a SWPPP and incorporate BMPs for post-construction conditions. Following compliance with NPDES and MS4 requirements, BMPs, MCSTOPPP, and relevant general plan policies and City requirements, project operations would not violate any water quality standards or waste discharge requirements or otherwise

substantially degrade surface or groundwater quality. No mitigation measures are required, and impacts would be ***less than significant***.

Adapt Whistlestop Alternative

The Adapt Whistlestop Alternative operation impacts would be the same as those of the Move Whistlestop Alternative outlined above. Project design features would include one bioscape vault, four stormwater filters, and one bioretention area installed at the southern portion of the transit center drive aisles to treat the site's water before being discharged into the existing storm drain infrastructure. Therefore, the impact would be ***less than significant***.

4th Street Gateway Alternative

The 4th Street Gateway Alternative operation impacts would be the same as those of the Move Whistlestop Alternative outlined above. Project design features would include two bioscape vaults, four stormwater filters, and one bioretention area installed at the southern portion of the transit center drive aisles to treat the site's water before being discharged into the existing storm drain infrastructure. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The Under the Freeway Alternative operation impacts would be the same as those of the Move Whistlestop Alternative outlined above. Project design features would include one bioretention area installed in the centermost drive aisle of the northern portion of the transit facility to treat the site's water before being discharged into the existing storm drain infrastructure. Therefore, the impact would be ***less than significant***.

Mitigation Measures

Refer to Mitigation Measure MM-BIO-CNST-5, Compensate for Temporary and Permanent Loss of Perennial Stream, in Section 3.3, Biological Resources.

MM-HYD-CNST-1: Prepare and Implement a Stormwater Pollution Prevention Plan

The proposed project will be required to implement a site-specific SWPPP that is consistent with the Construction General Permit. The SWPPP will include project construction features designed to protect the quality of stormwater runoff, known as BMPs. Construction BMPs could include, but not be limited to, the following:

- Minimization of disturbed areas to the portion of the project site necessary for construction
- Stabilization of exposed or stockpiled soils and cleared or graded slopes
- Establishment of permanent revegetation or landscaping as early as is feasible
- Removal of sediment from surface runoff before it leaves the project site by silt fences or other similar devices around the site perimeter
- Protection of all storm drain inlets on site or downstream of the project site to eliminate entry of sediment
- Prevention of tracking soils and debris off site through use of a gravel strip or wash facilities, which would be located at all construction exits from the project site

- Proper storage, use, and disposal of construction materials, such as solvents, wood, and gypsum
- Continual inspection and maintenance of all BMPs through the duration of construction
- Treatment requirements and operating procedures to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from material storage

The SWPPP will also contain a site map(s) showing the construction perimeter, existing and proposed buildings, stormwater collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways; a visual monitoring program; a chemical monitoring program for "non-visible" pollutants; and a sediment monitoring plan, should the site discharge directly into a waterbody listed on the 303(d) list for sediment. Section A of the Construction General Permit lists all elements that must be contained in a SWPPP. Once grading begins, the SWPPP must be kept on site and updated as needed while construction progresses.

Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such that the Project May Impede Sustainable Groundwater Management of the Basin

Construction and Operations

All Build Alternatives

The proposed project would not introduce new impervious surfaces on undeveloped land that would adversely affect groundwater recharge. The project site is developed with existing urban land use types and does not include vegetative cover that allows groundwater recharge on site. Accordingly, groundwater recharge would remain similar to existing conditions,

The Preliminary Geotechnical Design Recommendations (Parikh 2020) anticipate the project site would need to be excavated to 2 feet below ground surface. The depth of utility trenching is not known at this stage, but it is likely to be well above groundwater levels. However, the borings taken outside of but close to the southern portion of the project site, near Irwin Creek, have identified groundwater at 6 to 8 feet below the ground surface. In addition, borings made by the California Department of Transportation in the 1960s along the San Rafael Viaduct encountered groundwater between 4 and 6 feet below ground surface. As groundwater levels fluctuate seasonally, particularly near creeks, excavations for utility trenches may encounter groundwater in this area and may require dewatering, shoring, and other ground-stabilizing measures. If deemed necessary, construction-related dewatering would occur on a temporary basis and would not result in a loss of water that would substantially deplete groundwater supplies.

The Marin Municipal Water District (MMWD) provides water service to the City. MMWD's primary water supply comes from seven rain-fed reservoirs and groundwater is not currently or planned to be used as a municipal water source supply by the MMWD. Groundwater resources would not be used for project construction or operation. Accordingly, project implementation would not result in impacts on groundwater supplies within the City or MMWD. Therefore, the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alternation of the Course of a Stream or River or through the Addition of Impervious Surfaces, in a Manner that Would Result in Substantial Erosion or Siltation On or Off Site, Substantially Increase the Rate or Amount of Surface Runoff in a Manner that Would Result in 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, or Impede or Redirect Flood Flows

Construction and Operations

Move Whistlestop Alternative

There are no natural drainage features (streams, creeks, swales or rivers) that would be affected by construction and operation of the Move Whistlestop Alternative.

During project construction, stormwater drainage patterns could be temporarily altered. However, as discussed above, BMPs would be implemented, as required in the project SWPPP, to minimize the potential for erosion or siltation in nearby storm drains and temporary changes in drainage patterns during construction. Therefore, potential erosion or siltation impacts during and following construction would be reduced to less-than-significant levels through compliance with the established regulatory framework.

The project site is currently developed and there are existing 18-inch and 48-inch storm drain main lines running west to east on 5th Avenue and two existing 14-inch storm drain lines running west to east on 3rd Street, east of the SMART train tracks. Proposed stormwater infrastructure for the Move Whistlestop Alternative would include a replacement storm drain main added along West Tamalpais Avenue between 2nd Street and through the 3rd Street intersection. Storm drain inlets and connections to existing storm drain mains would be added to the north side of the intersection of West Tamalpais Avenue and 2nd Street, the whole intersection of West Tamalpais Avenue and 3rd Street, along the north side of 3rd Street, and along the south side of 4th Street.

All proposed project improvements would connect to the existing storm drain system at new connection points and be modified to ensure effectiveness based on final site design. In compliance with local and regional regulations, the proposed project would be designed to minimize discharge from future operations and storm events.

As required by the San Francisco Bay RWQCB, the new stormwater drainage facilities would be planned and designed to satisfy the RWQCB's Municipal Regional Permit standards, and all other applicable standards and requirements, which include ensuring that post-development flows do not exceed pre-development flows. The proposed project was designed to consider flood events consistent with San Rafael Municipal Code Title 18: Protection of Flood Hazard Areas. By

maintaining stormwater flows at or below pre-development levels, the new stormwater drainage system would reduce the potential for both on- and offsite erosion effects.

The proposed project would not substantially increase runoff quantities, result in substantial erosion or siltation on or off site, or increase the rate of flooding on or off site. Runoff volumes would be similar to existing conditions and the Move Whistlestop Alternative would not exceed the capacity of existing or planned stormwater drainage systems. As discussed above, the project applicant would be required to apply for coverage under the NPDES Construction General Permit and prepare a SWPPP for the project site. The Construction General Permit would include implementation of BMPs to control potential construction-related pollutants. Following compliance with San Francisco Bay RWQCB, MS4 permit, NPDES, MCSTOPPP, and City requirements, project implementation would not result in substantial erosion or siltation on or off site, increase the rate or amount of surface runoff resulting in flooding on or off site, or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. Impacts would therefore be ***less than significant***.

Adapt Whistlestop Alternative

Proposed stormwater infrastructure for the Adapt Whistlestop Alternative would include storm drain inlets and connections to existing storm drain mains along the north side of the intersection of West Tamalpais Avenue and 2nd Street, the whole intersection of West Tamalpais Avenue and 3rd Street, along the north side of 3rd Street, and along the south side of 4th Street.

The Adapt Whistlestop Alternative construction and operation impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

4th Street Gateway Alternative

Under the 4th Street Gateway Alternative, storm drain inlets and connections to existing storm drain mains would be added at locations between the SMART tracks and Heatherton Street, and along the north side of 3rd Street, the north side of 4th Street, and the south side of 5th Avenue. 4th Street Gateway Alternative construction and operation impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

Proposed stormwater infrastructure for the Under the Freeway Alternative would include a replacement storm drain main added along Irwin Street from south of 4th Street to north of 5th Avenue. Storm drain inlets and connections to existing and proposed storm drain mains would be added to the west side of Irwin Street between 4th Street and 5th Avenue. The Irwin Creek stormwater drainage channel is along the western boundary of the site, adjacent to Hetherton Street. The Under the Freeway Alternative would construct new box culverts over Irwin Creek to bridge over the creek and connect the transit center to Hetherton Street. Accordingly, the box culverts would provide water quality protection by limiting direct runoff into the waterway. Consequently, Under the Freeway Alternative construction and operation impacts would be the same as those of the Move Whistlestop Alternative. Therefore, the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

In Flood Hazard, Tsunami, or Seiche Zones, Risk Release of Pollutants Due to Project Inundation

Construction and Operations

Move Whistlestop Alternative

The Move Whistlestop Alternative site is designated by FEMA as Zone X, which indicates minimal risk of flooding, but the southernmost portion of the site is within Zone AH, which indicates a 1-percent annual chance of flooding (FEMA 2020).

However, a system of levees has been constructed throughout the San Rafael Bay Front to contain floodwaters during significant rainstorms and/or coincident high tides to reduce potential flooding impacts in the City. Accordingly, the potential for increased release of pollutants in a flood event would be less than significant.

As discussed in the *San Rafael General Plan 2020 General Plan Update Draft Environmental Impact Report*, the potential for significant damage from tsunami or seiche is very low, considering the variable tides, distance from the bay front levee, and short duration of a tsunami or seiche. The Move Whistlestop Alternative is not in a tsunami inundation area as shown in the Tsunami Inundation Map for the San Rafael/San Quentin Quadrangle (California Emergency Management Agency et al. 2009). The alternative is not in a tsunami inundation area and is approximately 0.13 mile northwest of the tsunami inundation line.

Furthermore, as discussed above, construction-related stormwater BMPs would be implemented to minimize degradation of water quality associated with stormwater runoff or construction-related pollutants. In addition, construction and maintenance activities would comply with local stormwater ordinances, stormwater requirements established by MS4 requirements, and regional waste discharge requirements. Operation would comply with stormwater requirements established by MS4 requirements and MCSTOPPP, and onsite stormwater treatment features including bioscope vaults and filters would reduce potential stormwater pollution. Accordingly, Move Whistlestop Alternative construction and operation impacts pertaining to risk release of pollutants due to project inundation would be ***less than significant***.

Adapt Whistlestop Alternative

The Adapt Whistlestop Alternative site is designated by FEMA as Zone X, which indicates minimal risk of flooding, but the southernmost portion of the site is within Zone AH, which indicates a 1-percent annual chance of flooding (FEMA 2020). The alternative is not in a tsunami inundation area and is approximately 0.15 mile northwest of the tsunami inundation line. Similar to the Move Whistlestop Alternative, construction and operation impacts pertaining to risk release of pollutants due to project inundation would be ***less than significant***.

4th Street Gateway Alternative

A majority of the 4th Street Gateway Alternative site is designated by FEMA as Zone X, which is outside of the 100-year floodplain and indicates minimal risk of flooding. However, the

southernmost portion of the site is within Zone AH, which is inside the 100-year floodplain and indicates a 1-percent annual chance of flooding (FEMA 2020). The site is approximately 0.18 mile northwest of the Tsunami Inundation Line. Similar to the Move Whistlestop Alternative, construction and operation impacts pertaining to risk release of pollutants due to project inundation would be ***less than significant***.

Under the Freeway Alternative

The Under the Freeway Alternative site is designated by FEMA as Zone X, which indicates minimal risk of flooding (FEMA 2020). The alternative is not in a tsunami inundation area and is approximately 0.17 mile north of the tsunami inundation line. Similar to the Move Whistlestop Alternative, construction and operation impacts pertaining to risk release of pollutants due to project inundation would be ***less than significant***.

Mitigation Measures

No mitigation is required.

Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

Construction and Operations

All Build Alternatives

Groundwater is not used as a water supply by MMWD and the proposed project is not within a recognized groundwater basin, so no Sustainable Groundwater Management Plan applies. Furthermore, the project area is previously developed and does not contain permeable surfaces that provide for groundwater recharge.

During construction, stormwater management BMPs would be implemented to control construction site runoff and to reduce the discharge of pollutants to storm drain systems from stormwater and other nonpoint-source runoff, as required by Mitigation Measure MM-HYD-CNST-1. Compliance with permit requirements and implementation of water quality control measures and BMPs would ensure that water quality standards would be achieved, including the water quality objectives that protect designated beneficial uses of surface and groundwater, as defined in the Basin Plan. Construction runoff would also comply with the appropriate water quality objectives for the region. The NPDES Construction General Permit also requires stormwater discharges not to contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards, including designated beneficial uses.

Project design incorporates post-construction stormwater management features including bioscope vaults and filters to treat the site's water prior to discharge into exiting storm drain infrastructure. Therefore, the proposed project would not be a substantial source of pollutants that would result in significant impacts on surface water or groundwater quality. Additionally, the proposed project would implement and comply with the SWPPP and NPDES permit. Therefore, the proposed project would not conflict with a water quality control plan or groundwater management plan and ***no impact*** would occur.

Mitigation Measures

No mitigation is required.

Section 3.10
Land Use and Planning

This section describes the applicable regulatory and environmental setting for land use, existing and proposed land uses within and around the project area for the San Rafael Transit Center Replacement Project (proposed project), and the potential for the proposed project and other build alternatives to divide an existing community or conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.10.1 Existing Conditions

3.10.1.1 Regulatory Setting

There are no federal or state laws or regulations pertaining to land use and planning that are relevant to the proposed project. The following regional and local policies and long-term transportation improvements are relevant to the proposed project.

Regional

Plan Bay Area

The Metropolitan Transportation Commission (MTC) acts as a regional transportation planning agency and as the region's metropolitan planning organization. Due to its designation, MTC is responsible for the Regional Transportation Plan (RTP), a compilation of plans for mass transit, highway, freight, bicycle, and pedestrian facilities. MTC also reviews applications from local agencies for state and federal grants for transportation projects to determine their compatibility with the RTP. MTC and Association of Bay Area Governments (ABAG) adopted *Plan Bay Area 2040* in 2013, which was subsequently updated in 2017 (MTC and ABAG 2017).

Plan Bay Area 2040 is the integrated land use/transportation plan and demographic/economic forecast for the nine-county San Francisco Bay Area region. This plan coordinates housing plans, open space conservation efforts, economic development strategies, and transportation investments. Specifically, to reduce greenhouse gas (GHG) emissions, *Plan Bay Area 2040* promotes compact, mixed-use, infill development within walkable/bikeable neighborhoods close to public transit, jobs, schools, shopping, parks, recreation, and other amenities. Local jurisdictions voluntarily identified Priority Development Areas (PDAs) as appropriate locations for these types of neighborhoods. PDAs are eligible for capital infrastructure funds, planning grants, and technical assistance. The adopted *Plan Bay Area 2040* estimates that approximately 80 percent of the region's future housing needs may be met within PDAs. The strategy of focusing growth within PDAs maximizes travel choices, reduces dependency on driving, takes advantage of existing infrastructure capacity, and reduces pressure to develop open space. The proposed project is within the Downtown San Rafael PDA (MTC 2021).

As part of ongoing updates every 4 years, MTC and ABAG are expected to adopt *Plan Bay Area 2050* in fall 2021 (ABAG and MTC 2020).

Regional and Local

San Rafael Transit Center Relocation Study

The purpose of the 2017 *San Rafael Transit Center Relocation Study* was to identify transit center solutions to address the near-term and long-term needs of transit riders, operators, and agencies in Downtown San Rafael while accommodating implementation of the Sonoma-Marin Area Rail Transit (SMART) system. The study identified an interim solution to maintain transit connectivity while also allowing for the extension of SMART to Larkspur (City of San Rafael et al. 2017).

Golden Gate Bridge, Highway and Transportation District Short-Range Transit Plan

The Golden Gate Bridge, Highway and Transportation District (District) is a Special District of California encompassing the city and county of San Francisco; the entirety of Marin, Sonoma, and Del Norte Counties; most of Napa County; and portions of Mendocino County. As of July 1, 2019, public transit service provided by the District includes 28 regional bus routes, four ferry routes, and paratransit service. The District also operates seven local bus routes under contract with Marin County Transit District. Federal transportation statutes require that MTC, in partnership with state and local agencies, develop and periodically update a long-range RTP and a Transportation Improvement Program, which implements the RTP by programming federal funds to transportation projects contained in the RTP. To execute these planning and programming responsibilities, MTC requires that each transit operator in its region that receives federal funding through the Transportation Improvement Program prepare, adopt, and submit to MTC a short-range transit plan. The District's current *Short-Range Transit Plan* addresses fiscal years 2018/19 through 2027/28. Within this plan, the District identifies that the existing San Rafael Transit Center will be replaced by a new facility at a nearby site (Golden Gate Bridge, Highway and Transportation District 2019).

San Rafael Downtown Station Area Plan

The *San Rafael Downtown Station Area Plan* (Downtown SAP), approved in 2012, was developed to focus on development within a 0.5-mile-radius area around the planned Downtown San Rafael SMART station. It sets the stage to create a more vibrant, mixed-use, livable area supported by a mix of transit opportunities, including passenger rail service. The plan supports the vision of creating a transit-oriented, walkable, and active enrollment in the SMART station area by limiting the amount of parking provided to encourage transit use, walking, and bicycling instead of personal vehicle use. The Downtown SAP includes the following goals for an integrated transit center located within the project area (City of San Rafael 2012):

- Locate bus transit operations in close proximity to the Downtown San Rafael SMART station and provide improved access to the station.
- Provide a safe and convenient transfer experience for passengers connecting between rail and bus transit.
- Provide a location that has adequate space to serve the existing and projected bus service, while also providing operating flexibility and travel time benefits to bus routes.

- Provide a comfortable experience for waiting passengers that includes enhanced amenities and integrates the Whistlestop site if possible.
- Ensure that the facility location and configuration fits within the larger context of Downtown.

San Rafael Design Guidelines

The City of San Rafael (City) has adopted general residential and non-residential design guidelines to assist design professionals and homeowners in planning out projects. During project review and approval, the guidelines are used by staff and the City Design Review Board to evaluate the quality of project design and make recommendations regarding design review approval or denial. The guidelines provide a framework of design principles that builds on the strength of the existing character of an area and that strives to improve the visual unity of the area. They span topics such as parking, landscaping, lighting, building form, material and colors, and pedestrian circulation, among other topics. The design guidelines are contained in the Community Design Element of the Draft *San Rafael General Plan 2040* (City of San Rafael 2020a).

City of San Rafael General Plan 2020

The City of San Rafael General Plan 2020, adopted in 2004, includes the following 16 elements: Land Use, Housing, Neighborhoods, Community Design, Economic Vitality, Circulation (transportation), Infrastructure, Governance, Sustainability, Culture and the Arts, Parks and Recreation, Safety, Noise, Open Space, Conservation, and Air and Water Quality. This section addresses the four elements in *The City of San Rafael General Plan 2020* that apply to land use: Land Use, Community Design, Circulation, and Sustainability. The remaining elements are addressed within the relevant topical sections of this draft EIR (City of San Rafael 2016).[1]

Land Use Element

The Land Use Element seeks to support the vision to revitalize Downtown to include high-quality buildings, redevelopment of underutilized and vacant lands, entertainment venues, and the construction of new homes. The Land Use Element includes two overarching goals for land use and planning in San Rafael: Growth to Enhance Quality of Life (Goal 1), and Balance and Diversity (Goal 2). The Land Use Element includes the following policies applicable to the proposed project:

LU-2. Development Timing. For health, safety and general welfare reasons, new development should only occur when adequate infrastructure is available consistent with the following findings:

a. Project-related traffic will not cause the level of service established in the Circulation Element to be exceeded;

b. Any circulation improvements needed to maintain the level of service standard established in the Circulation Element have been programmed and funding has been committed;

c. Environmental review of needed circulation improvement projects has been completed;

d. The time frame for completion of the needed circulation improvements will not cause the level of service in the Circulation Element to be exceeded, or the findings set forth in Policy C-5 have been made; and

[1] Since adoption in 2004, amendments to *The City of San Rafael General Plan 2020* have been made by resolutions adopted by the San Rafael City Council. These amendments were incorporated into *The City of San Rafael General Plan 2020* and it was reprinted on April 28, 2017.

e. Sewer, water, and other infrastructure improvements will be available to serve new development by the time the development is constructed.

LU-2a. Development Review. Through the development and environmental review processes, ensure that policy *provisions* are evaluated and implemented. The City may waive or modify any policy requirement contained herein if it determines that the effect of implementing the same in the issuance of a development condition or other approvals would be to preclude all economically viable use of a subject property.

LU-23. Land Use Map and Categories. Land use categories are generalized groupings of land uses and titles that define a predominant land use type (see Exhibit 11). All proposed projects must meet density and [floor area ratio] standards (see Exhibits 4, 5, and 6) for that type of use, and other applicable development standards. Some listed uses are conditional uses in the zoning ordinance and may be allowed only in limited areas or under limited circumstances. Maintain a Land Use Map that illustrates the distribution and location of land uses as envisioned by General Plan policies (see Exhibit 11).

Most of the project area west of U.S. Highway 101 (US-101) is identified with the Hetherton Office (32–65 units per acre) land use designation under the general plan; the southernmost block of the project area is identified with the Public/Quasi-Public land use designation; and, to the east of US-101, the blocks and portion of blocks are identified as Residential Office (15–32 units per acre) and Retail Office (15–32 units per acre). The Hetherton Office designation is intended to support ground-floor retail uses, personal service, food service, and live/work uses. The Residential Office designation is intended to promote residential, office, and mixed-use residential/office uses and serve as a transitional area between Downtown zoning districts and nearby residential uses. The Retail Office designation is intended to support retail and service uses, offices, and residential uses. Additional detail regarding *The City of San Rafael General Plan 2020* land use designation is addressed under Section 3.10.1.2, Environmental Setting, below.

Community Design Element

The Community Design Element addresses the physical form of the natural environment and the built form of the City. The overarching goal for this element is to have its best natural and built features preserved and strengthened to enhance the attractiveness and livability of the City (Goal 7). The Community Design Element includes the following policies applicable to the proposed project:

CD-1: City Image. Reinforce the City's positive and distinctive image by recognizing the natural features of the City, protecting historic resources, and by strengthening the positive qualities of the City's focal points, gateways, corridors and neighborhoods.

CD-1c. Way-Finding Signage. Prepare and implement an attractive citywide way-finding sign program to direct people to the City's cultural resources, public facilities, parks and other important destinations.

CD-1c. Landscape Improvement. Recognize that landscaping is a critical design component. Encourage maximum use of available landscape area to create visual interest and foster sense of the natural environment in new and existing developments. Encourage the use of a variety of site appropriate plant materials.

CD-8. Gateways. Provide and maintain distinctive gateways to identify City entryways.

CD-8a. Gateways. Evaluate each of the gateways defined on the design element maps to determine what natural, architectural, signage or landscape treatments should further establish these locations as identifiable gateways within the City, and implement the desired improvements as part of the City's Capital Improvement program.

CD-10. Nonresidential Design Guidelines. Recognize, preserve and enhance the design elements that contribute to the economic vitality of commercial areas. Develop design guidelines to ensure that new nonresidential and mixed-use development fits within and improves the immediate neighborhood and the community as a whole.

CD-10a. Visual Compatibility. Ensure that new structures are visually compatible with the neighborhood and encourage neighborhood gathering places. Guidelines may address screening of service functions, materials and detailing, screening of roof equipment, lighting, landscaping, outdoor café seating and pedestrian amenities.

CD-17. Street Furnishings. Encourage appropriate benches, trash containers, street lighting, public art, and other street furnishings. Select styles compatible with individual neighborhoods and the Downtown to strengthen their identities.

CD-17a. Street Furnishings. Provide street furnishings that are consistent with applicable design style. Work with neighbors and businesses to fund program.

CD-19. Lighting. Allow adequate site lighting for safety purposes while controlling excessive light spillover and glare.

CD-19a. Site Lighting. Through the design review process, evaluate site lighting for safety and glare on proposed projects.

CD-19b. Lighting Plan. Require new development and projects making significant parking lot improvements or proposing new lighting to prepare a lighting plan consistent with the Design Guidelines for review by City planning staff.

CD-21. Parking Lot Landscaping. Provide parking lot landscaping to control heat build-up from pavement, reduce air pollution, provide shade cover for vehicles and soften the appearance of the parking lot. Emphasize the use of trees, and limit the height of shrub plantings so as to avoid creating security problems.

CD-21b. Parking Lot Landscape Enforcement. Require that newly installed parking lot landscaping be maintained and replaced as needed. Assure that landscaping is thriving prior to expiration of the required 2-year maintenance bond.

Circulation Element

The Circulation Element addresses San Rafael's key circulation improvement strategy to create a safe and well-managed transportation network that provides greater choice for the traveler and limits, or even reduces, congestion on the City's roads. This element includes several guiding goals: A Leadership Role in Transportation (Goal 12); Mobility for All Users (Goal 13); A Safe and Efficient Street System (Goal 14); Connections Between Neighborhoods (Goal 15); Bikeways (Goal 16); Pedestrian Paths (Goal 17); and Adequate Parking (Goal 18). The Circulation Element includes the following policies applicable to the proposed project:

C-1. Regional Transportation Planning. Actively coordinate with other jurisdictions, regional transportation planning agencies, and transit providers to expand and improve local and regional transportation choice. Work cooperatively to improve transit and paratransit services, achieve needed highway corridor improvements, and improve the regional bicycling network. As part of this effort, support implementation of Marin County's 25-Year Transportation Vision.

C-3. Seeking Transportation Innovation. Take a leadership role in looking for opportunities to be innovative and experiment with transportation improvements and services.

C-3a. Transportation Technology. Use the most effective technologies in managing the City's roadways and congestion. For example, support timed connections at transit hubs, and promote the use of transportation information systems.

C-14. Transit Network. Encourage the continued development of a safe, efficient, and reliable regional and local transit network to provide convenient alternatives to driving.

C-14a. Transit Network. Support Countywide efforts to sustain and expand Marin County's transit network. Work with neighborhoods, employers, transit providers, transportation planning agencies and funding agencies to improve and expand regional transit to and from adjacent counties, increase local transit services, and provide responsive paratransit services.

C-17. Regional Transit Options. Encourage expansion of existing regional transit connecting Marin with adjacent counties, including basic service, express bus service, new commuter rail service, and ferry service…

C-17a. SMART. Support the following design features for SMART commuter service within San Rafael:

1) Establish stations in Downtown and in the Civic Center that will serve as multi-modal commuter transit hubs.
2) Design stations and rail crossings safe for pedestrians and with minimal impacts on roadway traffic.
3) Support crossings at-grade through Downtown and strongly advocate for trains that are of a length that they avoid blocking traffic at an intersection.
4) Ensure that new development adjacent to the rail line is set back a safe distance and adequately attenuates noise.
5) Encourage high-density transit-oriented development in the vicinity of the rail stations.
6) Include noise mitigation as described in policy N-9 (Sonoma Marin Area Rail Transit).
7) Provide a north/south bike/pedestrian path on or adjacent to the railroad right-of-way.

C-17b. SMART Right-of-Way. Maintain the SMART right-of-way for rail service.

C-20. Intermodal Transit Hubs. Support efforts to develop intermodal transit hubs in Downtown and at the Civic Center to provide convenient and safe connections and support for bus, rail, shuttle, bicycle, and pedestrian users, as well as automobile drivers using transit services. Hubs should include secure bicycle parking and efficient drop-off and pick-up areas without adversely affecting surrounding traffic flow. Reference the Downtown Station Area Plan and the Civic Center Station Area Plan, which address and present recommendations for transportation and access improvements to transit within a 0.5-mile radius of the two SMART stations.

C-20a. Transit Hubs. Work with Marin County, the Marin County Transit District, SMART Commission, the Golden Gate Bridge Transportation District, and other regional agencies to ensure that intermodal transit hubs are designed to be convenient and safe for San Rafael users. Work with SMART on the design of the new rail stations and the transit center interaction with the rail service.

Sustainability Element

The Sustainability Element is San Rafael's guiding strategy to actively adapt to ongoing changes within the community and in the environment. This element includes two overarching goals for sustainability in San Rafael: Sustainable Communities (Goal 25); and Highly Resource Efficient Operations (Goal 26). The Sustainability Element includes the following policies applicable to the proposed project:

SU-2. Promote Alternative Transportation. Decrease miles traveled in single-occupant vehicles.

SU-2d. SMART. Encourage continued funding, development and use of SMART, which will provide residents and employees of San Rafael an additional transportation alternative to single-occupant vehicles.

SU-6. Resource Efficiency in Site Development. Encourage site planning and development practices that reduce energy demand, support transportation alternatives and incorporate resource- and energy-efficient infrastructure.

SU-6a. Site Design. Evaluate as part of development review, proposed site design for energy-efficiency, such as shading of parking lots and summertime shading of south-facing windows.

San Rafael Zoning Code

The City of San Rafael Ordinance, Title 14 of the San Rafael Municipal Code, is the primary document that implements the general plan. Most of the project area west of US-101, which corresponds with the Hetherton Office land use designation under *The City of San Rafael General Plan 2020*, is zoned Hetherton Office (HO) under the zoning ordinance. The southernmost block of the project area is zoned Public/Quasi-Public (P/QP). To the east of US-101, the blocks and portion of blocks identified as Residential Office are similarly zoned Residential/Office (R/O), while those portions of the project area designated as Retail Office land use are zoned Commercial/Office (C/O).

Title 14 of the City's zoning code (Chapters 14.05 and 14.09) describes the standards of the HO, R/O, C/O, and P/QP zoned areas as follows.

<u>HO zoned areas:</u>

1. The HO district is at the eastern edge of Downtown adjacent to US-101. The district has a wide variety of uses from the Whistlestop Senior Center and the transit center to small and medium-sized offices and stores. An unused railroad right-of-way planned as a future transitway bisects the district, and there are a number of underutilized lots.
2. The HO district is expected to become a major office area because of its proximity to the transit center and 4th Street retail and services, and visibility from and access to US-101. New large-scale office development is encouraged to strengthen Downtown's standing as a business and financial center. On the ground floor, office, business-support retail, general retail for parcels that front 4th Street, personal service uses, and restaurants are encouraged. Parking structures are allowed and should have commercial uses on the ground floor. Limits on shops protect 4th Street retail businesses. Residential and live/work is permitted on the upper floors on 4th Street, and on the ground floor and above elsewhere.
3. The HO district is intended to become an elegant entryway into Downtown. Development will be large scale with off-street parking and should include landmark design elements supportive of the district's gateway role. Buildings typically range from three to five stories with upper stories stepped back. Plazas, public art, and ground-floor retail are encouraged along 4th Street between Hetherton Street and 4th Street.

<u>R/O zoned areas:</u>

1. The R/O district is a transitional area between the Downtown zoning districts and nearby residential areas. This district promotes residential, office, and mixed-use residential/office projects. This district also provides limited retail and personal service uses that support residential and office uses and are compatible with such uses. Gasoline service stations are allowed along major arterials such as 2nd Street.
2. This district is characterized by lower development intensity than in the Downtown zoning districts. The R/O district is also intended to be less intense in terms of evening and weekend activity than the Downtown zoning districts.

C/O zoned area:

1. The C/O district promotes retail, office, mixed retail/office/residential uses, and cultural facilities. The C/O district is different from the Downtown zoning districts in that it provides greater opportunity for office and financial uses in first-floor locations. Residential units are promoted to provide evening and weekend activity, increase the City's supply of housing, and support Downtown activities and uses.

P/QP zoned area:

1. The P/QP zone is intended to provide sites for governmental, educational, public safety, public utility, residential, and public transportation facilities, as well as to provide site opportunities for recreation and nonprofit community service facilities.

Local Plans under Review

The following local plans are undergoing public review. These are addressed for informational purposes and are not evaluated under Section 3.10.2.3, Impacts.

San Rafael General Plan 2040, Draft for Public Review

The City is currently working on the Draft *San Rafael General Plan 2040*, the product of a 3-year process that engaged residents and businesses throughout the City. The City Council authorized the plan update in 2017. One of the premises of the update was that the basic content of *The City of San Rafael General Plan 2020* should be carried forward. Building from *The City of San Rafael General Plan 2020*, the *San Rafael General Plan 2040* is structured into 13 specific elements, including an updated Housing Element and updated Community Design and Preservation Element (City of San Rafael 2020a).

A Notice of Preparation of an EIR for the *San Rafael General Plan 2040* was filed on March 29, 2019, and a Draft EIR was released for public review in January 2021. The plan will not be finalized until the draft EIR is published, comments are reviewed and responded to, and a final EIR is approved by the City Council. Under the Draft *San Rafael General Plan 2040*, the entirety of the project area is identified as the Downtown Mixed-Use land use designation.

Draft Downtown San Rafael Precise Plan

The Draft *Downtown San Rafael Precise Plan* (Downtown Precise Plan) is part of the broader effort to update *The City of San Rafael General Plan 2020* and is taking place concurrent with development of *San Rafael General Plan 2040*. The ongoing Downtown Precise Plan is an effort to assess the vision laid out for Downtown, analyze current conditions, and identify growth and development opportunities for the next 20 years. The Downtown Precise Plan covers the Downtown San Rafael PDA and adjacent West End neighborhood and provides zoning-level development standards for new development and reinvestment, as well as updated design direction to improve architectural quality, streetscape, and historic preservation. The plan includes priority projects associated with the SMART station under Chapter 8, Implementation. These projects, which relate to this proposed project, include the following (City of San Rafael 2020b):

> **8A.1.1. Downtown Gateway Improvements.** First/last mile improvements for SMART Station and Transit Center (pedestrian, bicycle, lighting, wayfinding). Downtown intersection improvements (traffic signals, roundabouts, and/or turn lane modifications).

8A.1.2. Transit Center Relocation. Implement the San Rafael Transit Center relocation project on site selection by the Golden Gate Bridge, Highway and Transportation District (District). Evaluate and implement necessary circulation and wayfinding improvements on surrounding streets to support the new function.

8A.1.8. Fourth Street Improvements. Pedestrian, bicycle, and vehicular circulation improvements on Fourth Street on the following segments, as described in Section 6.3: Street Transformations: - Fourth Street between H and E Streets - Fourth Street between E Street and Lincoln Avenue - Fourth Street between Tamalpais and Hetherton Streets - Fourth Street between Irwin and Grand Streets.

8A.1.10. Tamalpais Avenue West Improvements. Pedestrian, bicycle, and vehicular circulation improvements on Tamalpais Avenue on the following segments, as described in Section 6.3: Street Transformations: - Tamalpais Avenue between Second and Third Streets - Tamalpais Avenue between Third and Fourth Streets - Tamalpais Avenue between Fourth Street and Mission Avenue.

8A.2.1. Transit Plaza. Reconfigure Tamalpais Avenue between Fourth Street and Fifth Avenue to create a plaza designed to accommodate pedestrian and bicycle movement, temporary activities, and allowing emergency vehicular access as needed. Improve Walter Lane to enable it to function as a pedestrian passage.

3.10.1.2 Environmental Setting

The proposed project would replace the existing San Rafael Transit Center, which is between 2nd Street, 3rd Street, Tamalpais Avenue, and Hetherton Street. Figure 2-1, in Chapter 2, Project Description, shows the location of current San Rafael Transit Center and the regional vicinity. As shown on Figure 2-2 and described in detail in Chapter 2, the four build alternatives—Move Whistlestop Alternative, Adapt Whistlestop Alternative, 4th Street Gateway Alternative, and Under the Freeway Alternative—are each within 500 feet of the existing San Rafael Transit Center and bordered by a mix of office, residential, and retail uses. Together, the four build alternative project sites compose the project area. The footprint of each alternative would be approximately 3 acres in size, with exact footprint and boundaries dependent on the alternative chosen. The details regarding the specific location and boundaries of each build alternative are described in Chapter 2 and further addressed below.

Project Area

Land uses surrounding the project area include retail, office, residential, and commercial uses in the southern portion of Downtown San Rafael. The exact bordering uses of the project area vary slightly under each build alternative. US-101 runs north and south, adjacent to and above the project area (depending on the alternative). East of the project area is a mix of residential and commercial uses. San Rafael Creek, which flows from west to east draining into San Rafael Bay, lies south of the project area and 2nd Street. Irwin Creek, a tributary of San Rafael Creek, runs underneath US-101. To the west of the project area is a mix of restaurants and retailers. To the north of the project area are commercial uses.

According to *The City of San Rafael General Plan 2020* Land Use Map, most of the project area west of US-101 is designated as Hetherton Office, with the southernmost portion south of 2nd Street designated as Public/Quasi-Public. The 1.5 blocks of the project area east of US-101 are designated as Retail Office and Residential Office. The existing parcel sizes, addresses, and land uses within the project area are described in in Chapter 2.

Under existing zoning, the project area is classified into the following designations: HO, P/QP west of US-101, and R/O and C/O east of US-101. Additional project land use detail is provided below for each build alternative.

Move Whistlestop Alternative

The site is generally between West Tamalpais Avenue to the west and Hetherton Street to the east, 4th Street to the north, and 3rd Street to the south; see Figure 2-4 for the site plan. Additional improvements are included to shift West Tamalpais Avenue to the east from 2nd Street to 4th Street. This modification would align West Tamalpais Avenue with the block to the north and include construction of a bike path and sidewalk improvements on the west side of West Tamalpais Avenue from 2nd Street to 4th Street. From 2nd Street to 3rd Street, this improvement would extend into space occupied by the existing transit center and from 3rd Street to 4th Street, this improvement would extend onto the existing west sidewalk along West Tamalpais Avenue. As shown on the Figure 2-4 site plan, to support the proposed navigation and pedestrian improvements at this location, this site encompasses Tamalpais Avenue and its adjacent sidewalks from 2nd Street to 4th Street, the western adjacent parcels from 3rd Street to 4th Street, and the adjacent sidewalk east of Tamalpais Avenue from 4th Street to 5th Street.

With a dominant land use and zoning designation of HO, this project site and the surrounding area are primarily composed of commercial uses that are one to two stories in height. The southernmost extent of this project site extends into the land use and zoning designation of P/QP. This alternative site includes several parcels and is currently occupied by the Whistlestop building, a café, a restaurant, parking spaces, the SMART tracks, and the Citibank building with its affiliated parking lot. Surrounding the project site are retail, commercial, and office uses to the north, US-101 to the east, the existing San Rafael Transit Center to the south, and restaurants and retail facilities to the west.

Adapt Whistlestop Alternative

The site is generally between West Tamalpais Avenue to the west, Hetherton Street to the east, 4th Street to the north, and 3rd Street to the south. As shown on the Figure 2-5 site plan, to support the proposed navigation and pedestrian improvements at this location, this site encompasses the southeast corner of the intersection of Tamalpais Avenue and 4th Street for bicycle parking, and West Tamalpais Avenue between 3rd Street and 5th Avenue for on-street parking and loading improvements. This alternative would also include the construction of a bike path and pedestrian improvements on the west side of West Tamalpais Avenue from 2nd Street to 4th Street; construction of these facilities would extend into privately owned parcels between 3rd Street and 4th Street and would extend onto the west sidewalk of West Tamalpais Avenue between 2nd Street and 3rd Street.

With a dominant land use and zoning designation of HO, this project site and the surrounding area are primarily composed of commercial uses that are one to two stories in height. The southernmost extent of this project site extends into the land use and zoning designation of P/QP. This alternative site crosses several parcels and is currently occupied by the Whistlestop building, a café, a restaurant, parking spaces, the SMART tracks, and the Citibank building with its affiliated parking lot. Surrounding the project site are retail, commercial, and office uses to the north, US-101 to the east, the existing San Rafael Transit Center to the south, and restaurants and retail facilities to the west.

4th Street Gateway Alternative

The 4th Street Gateway Alternative site is a two-block site that extends across 4th Street. It is bounded by 5th Avenue to the north, Hetherton Street and US-101 to the east, 3rd Street to the south, and West Tamalpais Avenue to the west. As shown on Figure 2-6, to support the proposed pedestrian improvements and parking at this location, this site encompasses the SMART station and tracks, as it extends to West Tamalpais Avenue, but does not propose any alterations of tracks.

With a land use and zoning designation of HO, this project site and the surrounding area are primarily composed of commercial uses that are one to two stories in height. The northern portion of this project site, between 4th Street and 5th Street, is currently occupied by offices and retail uses and associated parking. The southern portion of this project site, between 3rd Street and 4th Street, is referred to as the "Citibank parcel" because is occupied by a Citibank and off-street parking. To the west of the Citibank parcel are the SMART tracks, which align the western portion of the southern section of the project site. Adjacent to the tracks is the Whistlestop building and a café. Surrounding the project site are retail and office uses to the north, US-101 to the east, the existing San Rafael Transit Center to the south, and restaurants and retail facilities to the west.

Under the Freeway Alternative

This project site is primarily beneath US-101 and bounded by 5th Avenue to the north, Irwin Street to the east, and Hetherton Street to the west. As shown on the Figure 2-7 site plan, to support the proposed navigation and pedestrian improvements at this location, this site encompasses a southern portion of the 5th Avenue right-of-way along with a northeastern portion of the 4th Street right-of-way and the adjacent parcel to its south, between US-101 and Irwin Street.

With dominant zoning designations of R/O and C/O and land use designations of Retail Office and Residential Office, this project site and the surrounding area are primarily composed of retail and office uses that are one to two stories in height. As mentioned, much of the site is beneath US-101. Beneath US-101, this project site is currently occupied by park-and-ride lots maintained and operated by the California Department of Transportation and Irwin Creek, which flows parallel to US-101. Between 4th Street and 5th Street, the site is currently occupied by a bike shop, several office buildings, and off-street parking. The parcels south of and adjacent to 4th Street are currently occupied by retail including a dry cleaners and restaurant. Surrounding this project site are residential offices to the north, residences to the east, retail and offices to the south, and retail uses, restaurants, and residential offices to the west.

3.10.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Land use impacts were analyzed for the project area rather than specific build alternatives because the location of each build alternative would experience a nearly equivalent impact for each resource considered here. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.10.2.1 Methodology

The California Environmental Quality Act (CEQA) requires that an EIR consider whether a proposed project may conflict with any applicable land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental impact. This environmental determination differs from the larger policy determination of whether a proposed project is consistent with a jurisdiction's general plan or other land use plan, policy, or regulation. The former determination, which is intended for consideration in a CEQA document, is based on, and limited to, a review and analysis of environmental effects. The latter determination, by comparison, is made by the decision-making body of the jurisdiction and is based on the jurisdiction's broad discretion to assess whether a proposed project would conform to the policies and objectives of its general plan/land use plan as a whole. In addition, the broader consistency determination considers all evidence in the record concerning the project characteristics, its desirability, and its economic, social, and other non-environmental effects.

Evaluation of the proposed project's potential to conflict with land use plans, policies, and regulations is based on the regional and local plans, policies, and regulations identified in Section 3.10.1.1, Regulatory Setting, above, and impacts and mitigation are presented on a per-plan, -policy, and -regulation basis. Given that construction of the proposed project, regardless of alternative, would be temporary (approximately 30 months), potential construction land use impacts would be temporary. Therefore, this analysis focuses on operational impacts. In addition, given that each project site is within Downtown San Rafael, the following analysis applies to each of the four alternatives equally unless otherwise noted.

Conflicts of a project with land use policies do not, in and of themselves, constitute significant environmental impacts. Policy conflicts are considered environmental impacts only when the policies themselves were adopted for the purpose of avoiding or mitigating an environmental effect. Such conflicts constitute significant environmental impacts only when the resulting direct environmental effects are significant.

3.10.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to land use and land use planning.

Would the proposed project:

- Physically divide an established community?
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

3.10.2.3 Impacts

Physically Divide an Established Community

This impact considers the proposed project's potential to result in a land use impact by physically dividing a community through construction and operation. The physical division of an established community typically refers to the construction of a linear feature, such as an interstate highway or

railroad tracks, or removal of a means of access, such as a local bridge, that would affect mobility within an existing community or between a community and an outlying area.

Construction

All Build Alternatives

Proposed project construction would begin in 2023 or 2024 and last 18 months. During construction, the selected build alternative would require demolition of existing uses, completion of necessary utility infrastructure, all civil and vertical structure work, and vertical structure finishing and inspections. Construction staging and parking where needed would be required to comply with all City requirements. While construction of each build alternative could temporarily affect sidewalks and intersections for project site improvements, these impacts would be minor and temporary. Construction of the proposed project would be limited to the individual project site and corresponding parcels and would not physically divide Downtown San Rafael. Therefore, the impact would be ***less than significant***.

Operations

All Build Alternatives

The proposed project does not involve the construction of any linear feature, such as an interstate highway or railroad tracks, and would not remove any means of access or divide an established community. As addressed under the project objectives (refer to Chapter 2), the proposed project is needed to preserve and enhance the functionality and effectiveness of the transit center. By providing new bus bays, paratransit access, pick-up/drop-offs and shuttle curb spaces, bicycle parking facilities, pedestrian weather protection and seating, public art, security, wayfinding signage, and a service building, the proposed project would make it easier for people to travel throughout the community, City, and region.

Proposed improvements, such as new crosswalks and egress points to existing roadways and infrastructure, would not introduce new physical divisions. Instead, the proposed project features would provide better multi-modal connectivity between the project area and local or regional destinations.

Given that the proposed project would not introduce any physical barriers to the project area or surrounding area and would improve connectivity within the community through proposed improvements, the impact would be ***less than significant***. No mitigation measures would be required.

Mitigation Measures

No mitigation is required.

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

Plan Bay Area 2040

As discussed in Section 3.10.1.1, Regulatory Setting, *Plan Bay Area 2040* promotes compact, mixed-use, infill development within walkable/bikeable neighborhoods close to public transit, jobs, schools, shopping, parks, recreation, and other amenities to reduce GHG emissions and adverse health impacts; increase housing opportunities, employment opportunities, access to affordable housing, and non-automotive mode share and the effectiveness of the transportation system; and focus development within the existing urban footprint. The proposed project would provide for improved service and access to regional transit, which is intended to reduce reliance on automobiles. This would in turn result in reduced GHG emissions and adverse health impacts and would focus development within the existing urban footprint. This fundamental project feature is consistent with the goals of *Plan Bay Area 2040*. Therefore, impacts of the proposed project related to conflicts with *Plan Bay Area 2040* would be ***less than significant***.

San Rafael Transit Center Relocation Study

The project proposes to relocate the existing San Rafael Transit Center consistent with the study. The *San Rafael Transit Center Relocation Study* determined that the transit center should be relocated nearby, which the proposed project, by creating a new transit center within 500 feet of the existing site, would do. Therefore, impacts of the proposed project related to conflicts with the *San Rafael Transit Center Relocation Study* would be ***less than significant***.

Golden Gate Bridge, Highway and Transportation District Short-Range Transit Plan

The project proposes to construct a new transit center within 500 feet of the existing San Rafael Transit Center. The District's *Short-Range Transit Plan* identifies that the existing San Rafael Transit Center would be replaced by a new facility at a nearby site (Golden Gate Bridge, Highway and Transportation District 2019). By developing any one of the four build alternatives, the proposed project would be consistent with the District's *Short-Range Transit Plan*. Therefore, impacts of the proposed project related to conflicts with the District's *Short-Range Transit Plan* would be ***less than significant***.

San Rafael Downtown Station Area Plan

While the Downton SAP primarily focuses on land use development surrounding the SMART station, it also includes five goals for an integrated transit center vision. These are identified under Section 3.10.1.1 above. Each of the build alternatives would provide new bus bays, paratransit access, pick-up/drop-offs and shuttle curb spaces, bike parking facilities, pedestrian weather protection and seating, new pedestrian walkways and crosswalks, public art, security, wayfinding signage, and a service building. As such, the proposed project would meet the plan's five goals for an integrated transit center that: (1) is close to the San Rafael SMART station, (2) provides access to the station and a safe and convenient transfer experience for passengers, (3) has adequate space to serve the existing and projected bus service, (4) provides a comfortable experience for waiting passengers, and (5) fits within the larger context of Downtown. For the Under Freeway Alternative, it should be noted that it would meet the overall Downtown SAP vision slightly less than the other alternatives

because it is about one block away from the SMART station, thus increasing the distance required for pedestrians to travel during a transfer. Conversely, both the Move Whistlestop Alternative and the Adapt Whistlestop Alternative would have increased Downtown SAP vision consistency in that they both would be at least partially integrated into the existing Whistlestop site. Overall, by developing any one of the four build alternatives, the proposed project would be consistent with the Downtown SAP. Therefore, impacts of the proposed project related to conflicts with the Downtown SAP would be ***less than significant***.

San Rafael Design Guidelines

While the City's design guidelines were intended as an interim document until *The City of San Rafael General Plan 2020* Community Design Element was released, the proposed project would still undergo review by City staff and the City Design Review Board as part of project approvals. This iterative process would provide opportunities for the proposed project to make modifications as recommended by the City as it seeks to improve the visual unity of the area. Through review and approval by City staff and the City Design Review Board, the proposed project would be consistent with the design guidelines. Therefore, impacts of the proposed project related to conflicts with the *San Rafael Design Guidelines* would be ***less than significant.***

City of San Rafael General Plan 2020

Move Whistlestop Alternative

Development of the proposed project is subject to *The City of San Rafael General Plan 2020* guidelines and policies. As addressed in Chapter 2, the proposed project would require general plan amendments to support the project land use. Related to the Land Use Element, the parcels under the Move Whistlestop Alternative currently designated as Hetherton Office land use would be modified to Public/Quasi-Public land use under this alternative. However, this change alone would not generate an impact on the environment. The Move Whistlestop Alternative would provide new bus bays, paratransit access, pick-up/drop-offs and shuttle curb spaces, bicycle parking facilities, pedestrian weather protection and seating, new pedestrian walkways and crosswalks, public art, security, wayfinding signage, and a service building. By supporting alternate modes of transit, regional transportation access, and design features for SMART service, the Move Whistlestop Alternative would not conflict with *The City of San Rafael General Plan 2020* Circulation Element or Sustainability Element. Design and approval of the Move Whistlestop Alternative would be subject to additional review per the Community Design Element prior to project approval by City planning staff. Consequently, while the Move Whistlestop Alternative would require a land use change to support Public/Quasi-Public land use under this alternative, this change as addressed in this draft EIR would not result in a significant impact on the environment. Therefore, the impact would be ***less than significant***.

Adapt Whistlestop Alternative

The Adapt Whistlestop Alternative impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

4th Street Gateway Alternative

The 4th Street Gateway Alternative impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The Under the Freeway Alternative would result in a land use change from Residential Office and Commercial Office to Public/Quasi-Public. However, the impacts of this change would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Zoning Code

Move Whistlestop Alternative

As addressed in Chapter 2, the proposed project would require zoning amendments to support the project land use. The parcels currently zoned HO would be modified to P/QP under the Move Whistlestop Alternative. However, this change alone would not generate an impact on the environment. Therefore, while the Move Whistlestop Alternative would result in a change of the zoning code to support Public/Quasi-Public Use under this alternative, this change as addressed in this draft EIR would not result in a significant impact on the environment. Therefore, the impact would be ***less than significant***.

Adapt Whistlestop Alternative

The Adapt Whistlestop Alternative impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

4th Street Gateway Alternative

The 4th Street Gateway Alternative impacts would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The Under the Freeway Alternative would result in a zoning code change from R/O and C/O to P/QP. However, the impacts of this change would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

Section 3.11
Noise

This section addresses potential noise impacts that may result from implementation of the proposed San Rafael Transit Center Replacement Project (proposed project). This section describes the regulatory and environmental setting for noise in the project area, analyzes effects related to noise that would result from implementation of the proposed project and other build alternatives, and provides mitigation measures to reduce the effects of any potentially significant impacts. The noise study area includes areas within a half-mile radius of the project area. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.11.1 Fundamentals of Noise and Vibration

3.11.1.1 Noise

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient sound. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary enormously within the range of human hearing, the logarithmic decibel scale is used to keep sound intensity numbers at a convenient and manageable level.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels, when exposed to steady, single-frequency (pure-tone) signals in the mid-frequency (1,000 Hertz to 8,000 Hertz) range. It is widely accepted, however, that people are able to begin to detect sound level changes of 3 dB for typical noisy environments. Furthermore, a 10-dB increase is generally perceived as a doubling of loudness. Therefore, doubling sound energy (e.g., doubling the volume of traffic on a highway), which would result in a 3-dB increase in noise, is generally perceived as a detectable, but not substantial, increase in sound level.

The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called “A-weighting.” Because humans are less sensitive to low-frequency sound than to high-frequency sound, A-weighted decibel (dBA) levels deemphasize low-frequency sound energy to better represent how humans hear. Table 3.11-1 summarizes typical A-weighted sound levels.

Table 3.11-1. Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock band
Jet flyover at 1,000 feet		
	—100—	
Gas lawnmower at 3 feet		
	—90—	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	—80—	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	—70—	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	—60—	
		Large business office
Quiet urban daytime	—50—	Dishwasher in next room
Quiet urban nighttime	—40—	Theater, large conference room (background)
Quiet suburban nighttime		
	—30—	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	—20—	
		Broadcast/recording studio
	—10—	
	—0—	

Source: Caltrans 2013
mph = miles per hour

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (L_{eq}), the minimum and maximum sound levels (L_{min} and L_{max}), percentile-exceeded sound levels (L_{xx}), the day-night sound level (L_{dn}), and the community noise equivalent level (CNEL). Below are brief definitions of these measurements and other terminology used in this section.

- **Sound:** A vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being 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 exclusive of particular noise sources to be measured.
- **Decibel (dB):** A unitless measure of sound. A sound level measurement in dB describes the logarithmic ratio of a measured sound pressure level to a reference sound pressure level of 20 micropascals.

- **A-Weighted Decibel (dBA):** An overall frequency-weighted sound level that approximates the frequency response of the human ear.
- **Maximum and Minimum Sound Levels (L_{max} and L_{min}):** The maximum or minimum sound level measured during a specified interval.
- **Equivalent Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The duration of the measurement is commonly indicated in the subscript; for example, a 1-hour L_{eq} sound level would be indicated as dBA L_{eq}(1h).
- **Exceedance sound level (L_{xx}):** The sound level exceeded "XX" percent of the time during a sound level measurement period. For example, L_{90} is the sound level exceeded 90 percent of the time, and L_{10} is the sound level exceeded 10 percent of the time. L_{90} is typically considered to represent the ambient noise level.
- **Day-night level (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 during the period from 10:00 p.m. to 7:00 a.m.
- **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 during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

L_{dn} and CNEL values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent. In general, human sound perception is such that a change in sound level of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving sound level.

For a point source, such as a stationary compressor, sound attenuates based on geometry at rate of 6 dB per doubling of distance. For a line source, such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance. Atmospheric conditions including wind, temperature gradients, and humidity can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface such as grass attenuates at a greater rate than sound that travels over a hard surface such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of site between a source and receiver, also increase the attenuation of sound over distance.

Auditory and non-auditory effects can result from excessive or chronic exposure to elevated noise levels. Auditory effects of noise on people can include temporary or permanent hearing loss. Non-auditory effects of exposure to elevated noise levels include sleep disturbance, speech interference, and psychological effects such as annoyance. Land use compatibility standards for noise typically are based on research related to these non-auditory effects.

3.11.1.2 Vibration

In contrast to airborne sound, groundborne vibration is not a phenomenon that most people experience every day. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The background vibration velocity level in residential areas is usually much lower than the threshold of human perception. Most perceptible indoor vibration is caused by sources within buildings, such as mechanical equipment while in operation, people moving, or doors slamming. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Dynamic construction equipment, such as pile drivers, can create vibrations that radiate along the surface and downward into the earth. These surface waves can be felt as groundborne vibration. Vibration can result in effects that range from annoyance to structural damage. Variations in geology and distance result in different vibration levels with different frequencies and displacements.

Groundborne vibration can be expressed in terms of root-mean-square (RMS) vibration velocity to evaluate human response to vibration levels. RMS is defined as the average of the squared amplitude of the vibration signal. The vibration amplitude is expressed in terms of vibration decibels (VdB), which use a reference level of 1 micro-inch per second. Vibration can also be measured by peak particle velocity (PPV), defined as the maximum instantaneous peak of the vibration signal in inches per second.

Table 3.11-2 summarizes typical vibration levels generated by construction equipment at a reference distance of 25 feet and other distances.

Table 3.11-2. Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet	PPV at 50 Feet	PPV at 75 Feet	PPV at 100 Feet
Impact pile driver	1.518	0.054	0.2920	0.190
Auger drill	0.089	0.032	0.017	0.011
Hoe ram	0.089	0.032	0.017	0.011
Large bulldozer	0.089	0.032	0.017	0.011
Loaded trucks	0.076	0.027	0.015	0.010
Jackhammer	0.035	0.012	0.007	0.004
Small bulldozer	0.003	0.001	0.001	< 0.001

Source: FTA 2018

3.11.2 Existing Conditions

3.11.2.1 Regulatory Setting

Federal

Noise Control Act of 1972

The Noise Control Act of 1972 (Public Law 92 574) established a requirement for all federal agencies to administer their programs in a manner that promotes an environment that is free of

noise that jeopardizes public health or welfare. The U.S. Environmental Protection Agency (EPA) was given the following responsibilities.

- Providing information to the public regarding the identifiable effects of noise on public health and welfare
- Publishing information on the levels of environmental noise to protect the public health and welfare with an adequate margin of safety
- Coordinating federal research and activities related to noise control
- Establishing federal noise emission standards for selected products distributed in interstate commerce

U.S. Environmental Protection Agency Standards for Environmental Noise

In 1974, EPA published *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, a comprehensive document that identifies noise levels consistent with the protection of public health and welfare against hearing loss, annoyance, and activity interference.

In response to the requirements of the Noise Control Act, EPA identified indoor and outdoor noise limits to protect public health and welfare. Outdoor L_{dn} limits of 55 dB and indoor L_{dn} limits of 45 dB were identified as desirable for protecting against speech interference and sleep disturbance in residential areas and at educational and health care facilities. The sound-level criterion for protecting against hearing damage in commercial and industrial areas is identified as the 24-hour L_{eq} value of 70 dB (both outdoors and indoors). Based on attitudinal surveys, EPA determined that a 5-dB increase in L_{dn} or L_{eq} is the minimum required for a change in community reaction (EPA 1974).

The Noise Control Act also directed federal agencies to comply with applicable federal, state, interstate, and local noise control regulations. Although EPA was given a major role in disseminating information to the public and coordinating with federal agencies, each federal agency retained authority to adopt noise regulations pertaining to agency programs. EPA can, however, require federal agencies to justify their noise regulations in terms of Noise Control Act policy requirements.

Key federal agencies that have adopted noise regulations and standards are listed below.

- Housing and Urban Development: Noise standards for federally funded housing projects
- Federal Aviation Administration: Noise standards for aircraft
- Federal Highway Administration: Noise standards for federally funded highway projects
- Federal Transit Administration (FTA): Noise standards for federally funded transit projects
- Federal Railroad Administration: Noise standards for federally funded rail projects

Federal Transit Administration Standards for Construction Noise

FTA has developed methods for evaluating construction noise levels, which are discussed in the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). The manual does not contain standardized criteria for assessing construction noise impacts but provides guidelines for suggested noise limits for residential uses exposed to construction noise to describe levels that may result in a negative community reaction. These guidelines are summarized in Table 3.11-3.

Table 3.11-3. Federal Transit Administration Construction Noise Impact Guidelines

Land Use	1-hour L_{eq} (dBA), Day	1-hour L_{eq} (dBA), Night
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: FTA 2018

Thresholds for construction noise may also be set at the local level according to expected hours of equipment operation and the noise limits specified in the noise ordinances of the applicable jurisdictions.

Federal Transit Administration Standards for Transit Noise

The U.S. Department of Transportation has implemented and published impact assessment procedures and criteria pertaining to noise based on the above standards. Noise impact criteria have been adopted by FTA to assess noise contributions and potential impacts from rapid transit sources on the existing environment. Noise impact criteria defined in the FTA manual are based on the objective of maintaining a noise environment considered acceptable for land uses that are noise sensitive. For noise from transit operations, FTA's three land use categories are as follows:

- **Category 1**: Tracts of land where quiet is an essential element in their intended purpose, such as outdoor amphitheaters, concert pavilions, and national historic landmarks with significant outdoor use
- **Category 2**: Residences and buildings where people normally sleep, including homes, hospitals, and hotels
- **Category 3**: Institutional land uses (schools, places of worship, libraries) with use typically during the daytime and evening. Other uses in this category can include medical offices, conference rooms, recording studios, concert halls, cemeteries, monuments, museums, historical sites, parks, and recreational facilities.

Noise exposure values are reported as the L_{dn} for residential land uses (Category 2) or hourly equivalent sound level (L_{eq}[h]) for other land uses (Categories 1 and 3). Commercial and industrial uses are not included in the vast majority of cases because they are generally considered compatible with higher noise levels. Exceptions would include commercial uses with a feature that receives substantial outdoor use, such as a playground, or uses that require quiet as an important part of their function, such as recording studios.

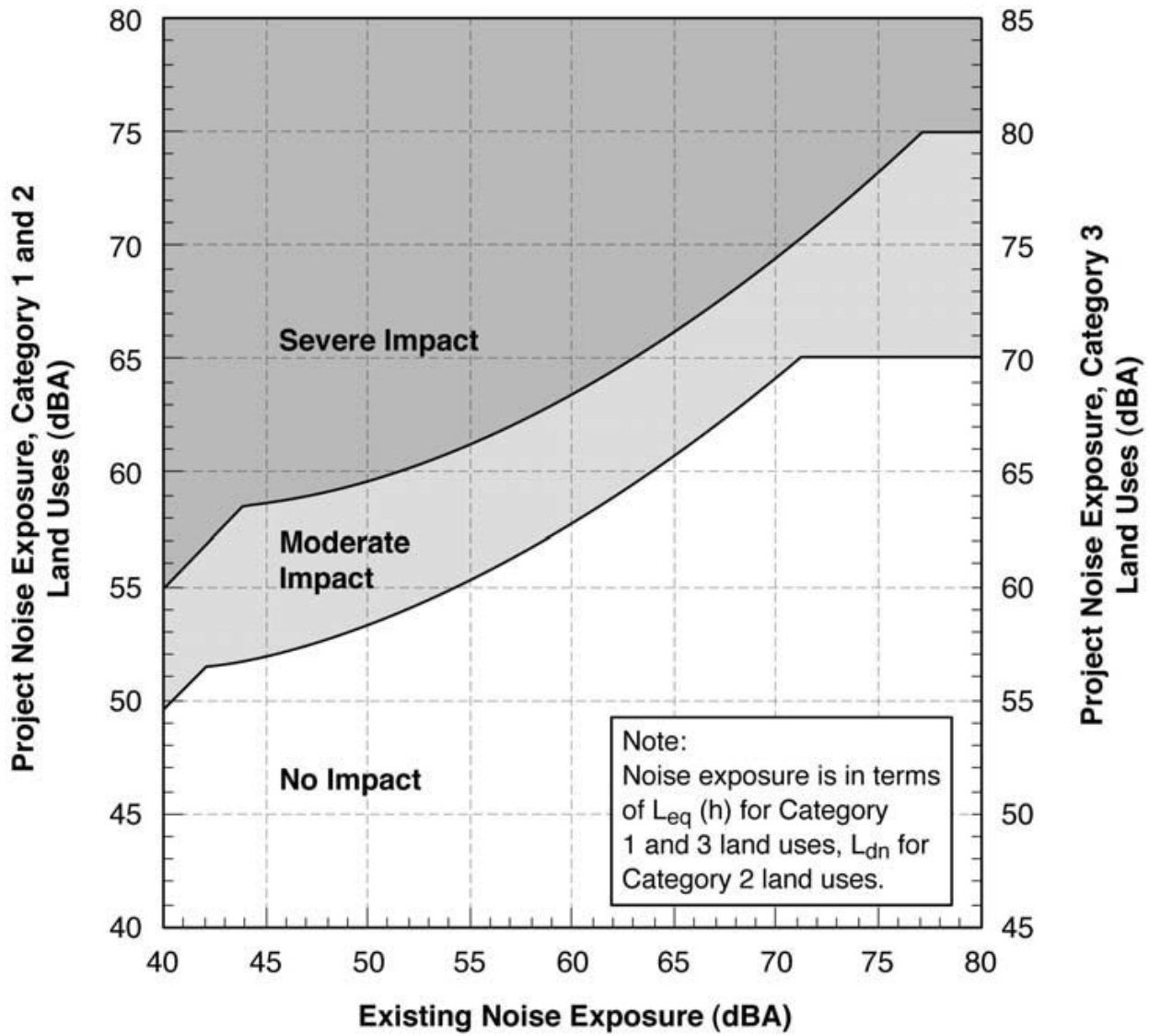
In the FTA manual, the noise impact criteria for construction and operation of rapid transit facilities consider a project's contribution to existing noise levels using a sliding scale based on land uses affected. The criteria correspond to heightened community annoyance due to the introduction of a new transit facility relative to existing ambient noise conditions.

Noise impacts are assessed by comparing existing outdoor exposures with future project-related outdoor noise levels, as illustrated on Figure 3.11-1. The criterion for each degree of impact is based on a sliding scale that is dependent on the existing noise exposure and the increase in noise exposure due to a project. The noise impact categories are as follows:

- **No Impact:** A project, on average, will result in an insignificant increase in the number of instances where people are "highly annoyed" by new noise.

- **Moderate Impact:** The change in noise is noticeable to most people but may not be enough to cause strong, adverse community reactions.
- **Severe Impact:** A significant percentage of people would be highly annoyed by the noise, perhaps resulting in vigorous community reaction.

Note that the proposed project's contribution relative to existing noise levels follows a sliding scale according to the level of existing noise exposure. The justification for this sliding scale is that people who are already exposed to high levels of noise in the ambient environment should be expected to tolerate smaller increases in noise in their community compared to locations where existing noise exposure is relatively low. For example, according to Figure 3.11-1, a project contribution of 59 dBA L_{dn} would be considered a Severe Impact at a Category 2 receiver with an existing noise exposure of up to 50 dBA L_{dn}, whereas a project contribution of 69 dBA L_{dn} would result in a Severe Impact at a Category 2 receiver with an existing noise exposure of up to 70 dBA L_{dn}.



Source: Federal Transit Administration, 2018.

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Figure 3.11-1
Federal Transit Administration Noise Imapact Criteria

State

California Noise Control Act

The California Noise Control Act was enacted in 1973. In preparing its general plan noise element, a city or county must identify local noise sources and analyze and quantify to the extent practicable current and projected noise levels from various sources, including highways and freeways; passenger and freight railroad operations; ground rapid transit systems; commercial, general, and military aviation and airport operations; and other stationary ground noise sources.

The *State of California General Plan Guidelines* (Governor's Office of Planning and Research 2017) provides noise compatibility guidelines for land use planning according to the existing community noise levels; however, these guidelines offer no information regarding construction noise. The state has also published its *Model Community Noise Ordinance* (California Office of Noise Control 1977), which provides guidance to cities and counties on how to develop a community noise ordinance.

California Department of Transportation Vibration Standards

The California Department of Transportation (Caltrans) provides guidelines regarding vibration associated with construction and operation of transportation infrastructure. Table 3.11-4 provides the Caltrans vibration guidelines for potential damage to different types of structures.

Groundborne vibration and noise can also disturb people. Numerous studies have been conducted to characterize the human response to vibration. In general, people are more sensitive to vibration during nighttime hours when sleeping than during daytime waking hours. Table 3.11-5 provides the Caltrans guidelines regarding vibration annoyance potential (expressed here as peak particle velocity [PPV]).

Table 3.11-4. Caltrans Vibration Guidelines for Potential Damage to Structures

	Maximum Peak Particle Velocity (PPV, in/sec)	
Structure Type and Condition	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2020:Table 19
Note: Transient sources create a single, isolated vibration event (e.g., blasting or the use of drop balls). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inch per second

Table 3.11-5. Caltrans Guidelines for Vibration Annoyance Potential

	Maximum PPV (in/sec)	
Human Response	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2020:Table 20
Note: Transient sources create a single, isolated vibration event (e.g., blasting or drop balls). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inch per second

Local

San Rafael General Plan

California requires that a noise element be included in the general plan of each county and city in the state. The noise element establishes the local government's goals, objectives, and policies related to noise control. The Noise Element of *The City of San Rafael General Plan 2020* (City of San Rafael 2016) establishes goals and policies for ensuring that existing and proposed land uses are compatible with their noise environments. Therefore, the City of San Rafael (City) has adopted quantitative exterior noise compatibility criteria for various land uses. The purpose of these criteria is to reduce the potential adverse noise effects of new developments on people, including sleep disturbance, interference with speech communication, and the general sense of dissatisfaction that is often associated with high noise exposure.

Land use compatibility noise standards are included in the City's Noise Element (see Table 3.11-6 below). According to the Noise Element as outlined under Goal 31, Acceptable Noise Levels, noise levels up to 60 dBA L_{dn} are considered acceptable for all new residential projects. In common outdoor areas in Downtown, mixed-use residential, and high-density residential districts, up to 65 dBA L_{dn} is allowed if determined acceptable through development review. New nonresidential projects are not permitted to increase noise levels in a nonresidential or mixed-use district by more than 5 dB or create noise impacts that would increase noise levels to more than 65 dBA L_{dn} for office and retail uses or 70 dBA L_{dn} for industrial uses.

Table 3.11-6. Land Use Compatibility Standards for New Development

Land Use	Exterior Noise Exposure to the Site L_{dn} (dB)						
	50	55	60	65	70	75	80
Residential, Hotels, Motels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Other Outdoor Recreation and Cemeteries							
Office and Other Commercial Uses							
Industrial, Manufacturing, Utilities, Agriculture							

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable: Specific land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

Clearly Unacceptable: New construction of development clearly should not be undertaken.

Source: City of San Rafael 2016

The following goals and policies from *The City of San Rafael General Plan 2020*[1] Noise Element pertain to noise and relate to the proposed project (City of San Rafael 2016).

Goal 31: Acceptable Noise Levels. It is the goal of San Rafael to have acceptable noise levels. Excessive noise is a concern for many residents of San Rafael. These concerns can be managed with proper mitigation or through the implementation of the noise ordinance. The City of San Rafael recognizes the issue of noise and has standards to protect people from excessive, unnecessary and unreasonable noises from any and all sources in the community.

N-1. Noise Impacts on New Development. Protect people in new development from excessive noise by applying noise standards in land use decisions. Apply the Land Use Compatibility Standards (see Exhibit 31) to the siting of new uses in existing noise environments. These standards identify the acceptability of a project based on noise exposure. If a project exceeds the standards in Exhibit 31, an acoustical analysis shall be required to identify noise impacts and potential noise mitigations. Mitigation should include the research and use of state-of-the-art abating materials and technology.

N-2. Exterior Noise Standards for Residential Use Areas. The exterior noise standard for backyards and/or common usable outdoor areas in new residential development is up to L_{dn} of 60 dB. In common usable outdoor areas in Downtown, mixed-use residential, and high-density residential districts, up to L_{dn} of 65 dB may be allowed if determined acceptable through development review.

N-3. Planning and Design of New Development. Encourage new development to be planned and designed to minimize noise impacts from outside noise sources.

N-4. Noise from New Nonresidential Development. Design nonresidential development to minimize noise impacts on neighboring uses.

N-5. Traffic Noise from New Development. Minimize noise impacts of increased off-site traffic caused by new development. Where the exterior L_{dn} is 65 dB or greater at a residential building or

[1] The City is in the process of updating its general plan, which was adopted in 2004 to provide guidance until 2020. At the time of this document's preparation, the City had prepared reports containing background information on specific topics that will be included in the revised *San Rafael General Plan 2040*, which will extend planning guidance until 2040.

outdoor use area and a plan, program, or project increases traffic noise levels by more than 3 dB, reasonable noise mitigation measures shall be included in the plan, program or project.

N-6. Traffic Noise. Attempt to minimize traffic noise through land use policies, law enforcement, and street improvements.

N-8. Sonoma Marin Area Rail Transit. If a commuter rail service or other use is developed along the Sonoma Marin Area Rail Transit right-of-way, minimize noise impacts on existing development.

N-9. Nuisance Noise. Minimize impacts from noise levels that exceed community sound levels.

Draft City of San Rafael General Plan 2040

The City is in the process of updating *The City of San Rafael General Plan 2020* with the *San Rafael General Plan 2040* in progress. Noise measurements were taken in May 2019 to provide a baseline for updated noise policies. Noise levels varied from 47 to 74 dBA L_{dn} through the City. Residential areas had a noise level of 60 dBA L_{dn} or below; Downtown San Rafael had just over 70 dBA L_{dn}. The City's noise compatibility guidelines have been adapted from state guidelines and specify acceptable noise levels based on land uses. Future residential uses, schools, and library uses around the Downtown Sonoma-Marin Area Rail Transit (SMART) station and proposed project would likely be required to incorporate extensive sound proofing to achieve required interior noise levels of 45 dBA. Policies currently under review for the Noise Element include the following (City of San Rafael 2020):

Goal 31: Acceptable Noise Levels. Protect the public from excessive unnecessary, and unreasonable noise. Excessive noise is a concern for many residents of San Rafael. This concern can be addressed through the implementation of standards to protect public health and reduce noise conflicts in the community, including the Noise Ordinance.

Policy N-1: Land Use Compatibility Standards for Noise. Protect people from excessive noise by applying noise standards in land use decisions. The Land Use Compatibility standards in Table 9-2 are adopted by reference as part of this General Plan and shall be applied in the determination of appropriate land uses in different ambient noise environments.

Policy N-2: Maintaining Acceptable Noise Levels. Use the following performance standards to maintain an acceptable noise environment in San Rafael: (a) New development shall not increase noise levels by more than 3 dB Ldn in a residential area, or by more than 5 dB Ldn in a non-residential area. (b) New development shall not cause noise levels to increase above the "normally acceptable" levels shown in Table 9-2. (c) For larger projects, the noise levels in (a) and (b) should include any noise that would be generated by additional traffic associated with the new development. (d) Projects that exceed the thresholds above may be permitted if an acoustical study determines that there are mitigating circumstances (such as higher existing noise levels) and nearby uses will not be adversely affected.

Policy N-3: Reducing Noise. Through Planning and Design Use a range of design, construction, site planning, and operational measures to reduce potential noise impacts.

Policy N-4: Sound Walls. Discourage the use of sound walls when other effective noise reduction measures are available. Vegetation, berms, and the mitigation measures in Policy N-3 are the preferred methods of absorbing sound along roads, rail, and other transportation features. Where there are no other feasible options (for example, along many sections of US Highway 101), the City will review and comment on sound wall design. Sound walls should be aesthetically pleasing, regularly maintained, and designed to minimize the potential displacement of sound.

Policy N-5: Mixed Use. Mitigate the potential for noise-related conflicts in mixed use development combining residential and nonresidential uses.

Policy N-6: Traffic Noise. Minimize traffic noise through land use policies, law enforcement, street design and improvements, and site planning and landscaping.

Policy N-7: Aviation-Related Noise. To the extent allowed by federal and state law, ensure that the noise impacts of any changes in facilities or operations are considered when granting or modifying use permits at the San Rafael Airport in North San Rafael and the heliport in East San Rafael (see Noise Contours for San Rafael Airport and Heliport in Appendix I). (See also Program M-1.4B on drones).

Policy N-8: Train Noise. Work with Sonoma Marin Area Rail Transit (SMART) to minimize noise and vibration associated with train service and to reduce the potential for impacts on nearby residences.

Policy N-9: Maintaining Peace and Quiet. Minimize noise conflicts resulting from everyday activities such as construction, sirens, yard equipment, business operations, night-time sporting events, and domestic activities.

Policy N-10: City-County Coordination. Coordinate with the County of Marin to consider and mitigate noise impacts when activities in one jurisdiction may affect the other.

Policy N-11: Vibration. Ensure that the potential for vibration is addressed when transportation, construction, and nonresidential projects are proposed, and that measures are taken to mitigate potential impacts.

San Rafael Municipal Code

The City's Municipal Code also contains noise regulations. Chapter 8.13, Noise, of the City's Municipal Code contains noise limitations and exclusions for land uses within the City in order to maintain noise levels that are not detrimental to the health and welfare of people. The noise ordinance addresses noise limits that would constitute a noise disturbance, primarily as measured at residential land uses. The City's Municipal Code regulations below would be applicable to the proposed project. General noise limits are outlined in Table 3.11-7.

8.13.040 – General noise limits.

A summary of general noise limits is included in Table 3.11-7. In the case where two or more noise limits apply, the more restrictive noise limit will take precedence.

Table 3.11-7. General Noise Limits

Property type or zone	Daytime limits	Nighttime Limits
Residential	60 dBA Intermittent 50 dBA Constant	50 dBA Intermittent 40 dBA Constant
Mixed-use	65 dBA Intermittent 55 dBA Constant	55 dBA Intermittent 44 dBA Constant
Multifamily residential (interior sound source)	40 dBA Intermittent 35 dBA Constant	35 dBA Intermittent 30 dBA Constant
Commercial	65 dBA Intermittent 55 dBA Constant	65 dBA Intermittent 55 dBA Constant
Industrial	70 dBA Intermittent 60 dBA Constant	70 dBA Intermittent 60 dBA Constant
Public Property	Most restrictive noise limit applicable to adjoining private property	Most restrictive noise limit applicable to adjoining private property

Source: San Rafael Municipal Code Title 8.13 (Ord. 1789 § 3 (part), 2002)

8.13.050 Standard exceptions to general noise limits

A summary of standard exceptions is included in Table 3.11-8 below.

Table 3.11-8. Standard Exceptions to General Noise Limits

Type of Activity	Maximum Noise Level	Days/Hours Permitted
Construction	90 dBA	Mon–Fri 7:00 a.m.–6:00 p.m. Sat 9:00 a.m.–6:00 p.m. Sun, Holiday—prohibited or as otherwise set by City approval
Residential Power Equipment and Construction Activities Undertaken by Residential Property Owners	90 dBA	Mon–Fri 8:00 a.m.–8:00 p.m. Sat, Sun, Holiday 9:00 a.m.–6:00 p.m.
Sound performances	80 dBA measured 50 feet or more from property plane, or as excepted by permit approval	Every day 10:00 a.m.–10:00 p.m., or as excepted by permit approval
Refuse Collection	95 dBA	Residential or mixed-use property: Mon–Sat 6:00 a.m.–9:00 p.m. Industrial or commercial property: Daily 4:00 a.m.–9:00 p.m.

Source: San Rafael Municipal Code Title 8.13 (Ord. 1789 § 3 (part), 2002)

8.13.060 – Exceptions allowed with permit

A. In addition to the standard exceptions permitted pursuant to Section 8.13.050 of this chapter, the director of community development or his designee may grant a permit allowing an exception from any or all provisions of this chapter where the applicant can show that a diligent investigation of available noise abatement techniques indicates that immediate compliance with the requirements of this chapter would be impractical or unreasonable, or that no public detriment will result from the proposed exception. Any such permit shall be issued with appropriate conditions to minimize the public detriment caused by the permitted exceptions. Any such permit shall be of such duration, as approved by the director of community development or his designee, up to a maximum period of six (6) months, but shall be renewable upon a showing of good cause, and shall be conditioned by a schedule for compliance and details of methods therefor in appropriate cases. At the discretion of the director of community development or his designee, an exception permit may be issued and reissued for successive short periods of time in order to allow monitoring of the adverse noise impacts of the excepted activity, and additional conditions may be imposed upon reissuance of the permit, if the director of community development or his designee determines that such additional conditions are necessary to mitigate noise impacts from the excepted activity to a level he deems acceptable under all the circumstances.

B. Any application for an exception permit under this section shall be accompanied by a fee to be set by resolution of the city council.

C. Prior to granting any permit under this section, the director of community development or his designee shall provide at least ten (10) calendar days' written notice to all property owners within three hundred feet (300') of the property for which the application is made, and shall consider any objections to the granting of such permit received before issuance of the permit.

D. Any person aggrieved with the decision of the director of community development or his designee may appeal to the city council, by writing filed with the city clerk within five (5)

business days after the date of such decision; however, such decision shall not stay the effective date of the permit.

8.13.070 – Exemptions

1. Aerial warning devices which are required by law to protect the health, safety and welfare of the community;
2. Emergency vehicle responses and all necessary equipment utilized for the purpose of responding to an emergency, or necessary to restore, preserve, protect or save lives or property from imminent danger of loss or harm;
3. Aviation, railroad, and public transit operations;
4. The operation of any municipal or public utility vehicles;
5. Public safety training exercises conducted between the hours of eight a.m. (8:00 a.m.) and eight p.m. (8:00 p.m.);
6. Uses established through any applicable discretionary review process containing specific noise conditions of approval and/or mitigation measures;
7. Work on capital improvements, or repairs on public property by employees or contractors of the city;
8. Vehicle noise subject to regulation under the California Vehicle Code;
9. Emergency repair work performed by, or at the request of, a property owner on his or her private property, where the delay required to obtain an exception permit under this chapter would result in substantial damage, personal injuries, or property loss to the owner, provided that such emergency work shall be subject to such reasonable conditions as may be imposed by authorized city employees to mitigate the noise level of the activity.
10. Portable generator used during emergencies or utility power outages per manufacturer's recommendations.
11. Stationary generator installed and used during emergencies, utility power outages or routine testing per manufacturer's recommendations. Routine testing for stationary generators shall be conducted between the hours of ten a.m. (10:00 a.m.) and four p.m. (4:00 p.m.).

3.11.2.2 Environmental Setting

Noise Sources in the Project Area

The proposed project is along the eastern limit of Marin County in the heart of Downtown San Rafael. Existing noise sources in the project area include traffic (primarily from U.S. Highway 101 [US-101] and Downtown commuting traffic), locomotive horns and rail car movements from the SMART Train passing through San Rafael Train Station, bus traffic to and from the existing transit center, and aircraft overflights. The nearest airport to the proposed project area is the San Rafael Airport (also called Marin Ranch Airport), a small, privately owned airport approximately 3 miles north of the project area. The areas immediately surrounding the project area include a mix of the following uses: residential/office, commercial/office, mixed use, and street retail characteristic of a Downtown urban area.

Noise Measurements

Noise-sensitive land uses in the project area consist primarily of single- and multifamily residences, mixed-use buildings with residential uses, schools, churches, and outdoor recreational areas. Other land uses in the project area include retail, office, and commercial uses, which are typically

considered to be less sensitive to noise. The existing ambient noise environment in the project area is characteristic of an urban environment (e.g., highway and local vehicular traffic, train operations, people walking, aircraft overflights, commercial noise). Noise from vehicular traffic traveling on the nearby US-101, major roadways (e.g., Hetherton Street), and the existing transit center are the dominant noise sources in the project area.

To quantify existing ambient noise levels in the project area, long-term (24-hour) ambient noise measurements were conducted between Monday, November 30 and Wednesday, December 2, 2020. Measurements were conducted at locations adjacent to the project area. Four long-term (LT) measurement locations were selected to capture noise levels in areas that are sensitive to noise or representative of ambient levels at the property line of the project area (see Figure 3.11-2). Piccolo II meters were installed at LT sites LT-1, LT-2, and LT-4 and one Piccolo I meter was installed at LT-3. Conditions were clear at time of installation with little to no wind and temperatures ranging from 45 to 57 degrees Fahrenheit. During installation of LT-2 and LT-3, there was audible utility construction taking place on 5th Avenue between Grand Avenue and Irwin Street.

Additional LT measurements were taken adjacent to the existing transit center to characterize ambient noise levels that included activity and bus movements through the existing facility. These measurements were taken from Tuesday, February 9 to Thursday, February 11, 2021. Site LT-5 was near the northwest corner of the existing transit center, and site LT-6 was near the southwest corner. Buses were observed to generate distinctive engine and rumbling sounds while operating in and around the station, but generally noise from buses was not observed to be noticeably higher than ambient traffic noise from surrounding streets.

The locations of the noise measurement sites are shown on Figure 3.11-2. Table 3.11-9 summarizes the results of the noise measurement survey. For the complete dataset of measured noise levels, see Appendix J.

Table 3.11-9. Long-Term Noise Measurements Near the Project Area and the Existing Transit Center

Site	Site Description	Date and Time	Daytime Average L_{eq} (dBA)	Nighttime Average L_{eq} (dBA)	Loudest Daytime Hour L_{eq} (dBA)	Quietest Daytime Hour L_{eq} (dBA)	L_{dn} (dBA)
LT-1	Located between the intersections of Lincoln Avenue/Tamalpais Avenue and 5th Avenue/Lincoln Avenue northwest of the project area, in front of the shared office and teen rehabilitation center building at 1104 Lincoln Avenue.	Start: Monday, November 30, 2020, at 12:47 p.m. End: Wednesday, December 2, 2020, at 9:01 a.m.	66.6	60.7	71.1 8:00 a.m.	61.0 9:00 p.m.	68.8
LT-2	Located between the intersections of Tamalpais Avenue/5th Avenue and 5th Avenue/Hetherton Street north of the project area in front of the San Rafael Auction Gallery on 634 5th Avenue.	Start: Monday, November 30, 2020, at 12:32 p.m. End: Wednesday, December 2, 2020, at 9:05 a.m.	75.2	70.3	77.8 3:00 p.m.	70.3 9:00 p.m.	78.1
LT-3	Located near the southwest corner of 4th Street and Lincoln Avenue, north and west of the project area.	Start: Monday, November 30, 2020, at 1:04 p.m. End: Wednesday, December 2, 2020, at 9:25 a.m.	72.9	67.4	78.1 4:00 p.m.	65.9 9:00 p.m.	75.1
LT-4	Located east of US-101 between the intersections of Mission Avenue and Irwin Street and Irwin Street/5th Avenue along Irwin Street in front of law offices.	Start: Monday, November 30, 2020, at 12:20 p.m. End: Wednesday, December 2, 2020, at 9:15 a.m.	78.8	70.3	88.0 5:00 p.m.	74.2 3:00 p.m.	79.5
LT-5	Located near the intersection of Tamalpais Avenue and 3rd Street, near the northwest corner of the existing transit center.	Start: Tuesday, February 9, 2021, at 12:00 p.m. End: Thursday, February 11, 2021, at 12:00 p.m.	70.8	65.9	76.3 6:00 p.m.	64.8 9:00 p.m.	73.6
LT-6	Located near the intersection of Tamalpais Avenue and 2nd Street, near the southwest corner of the existing transit center.	Start: Tuesday, February 9, 2021, at 12:00 p.m. End: Thursday, February 11, 2021, at 12:00 p.m.	72.2	67.0	74.6 7:00 a.m.	67.1 9:00 p.m.	74.7

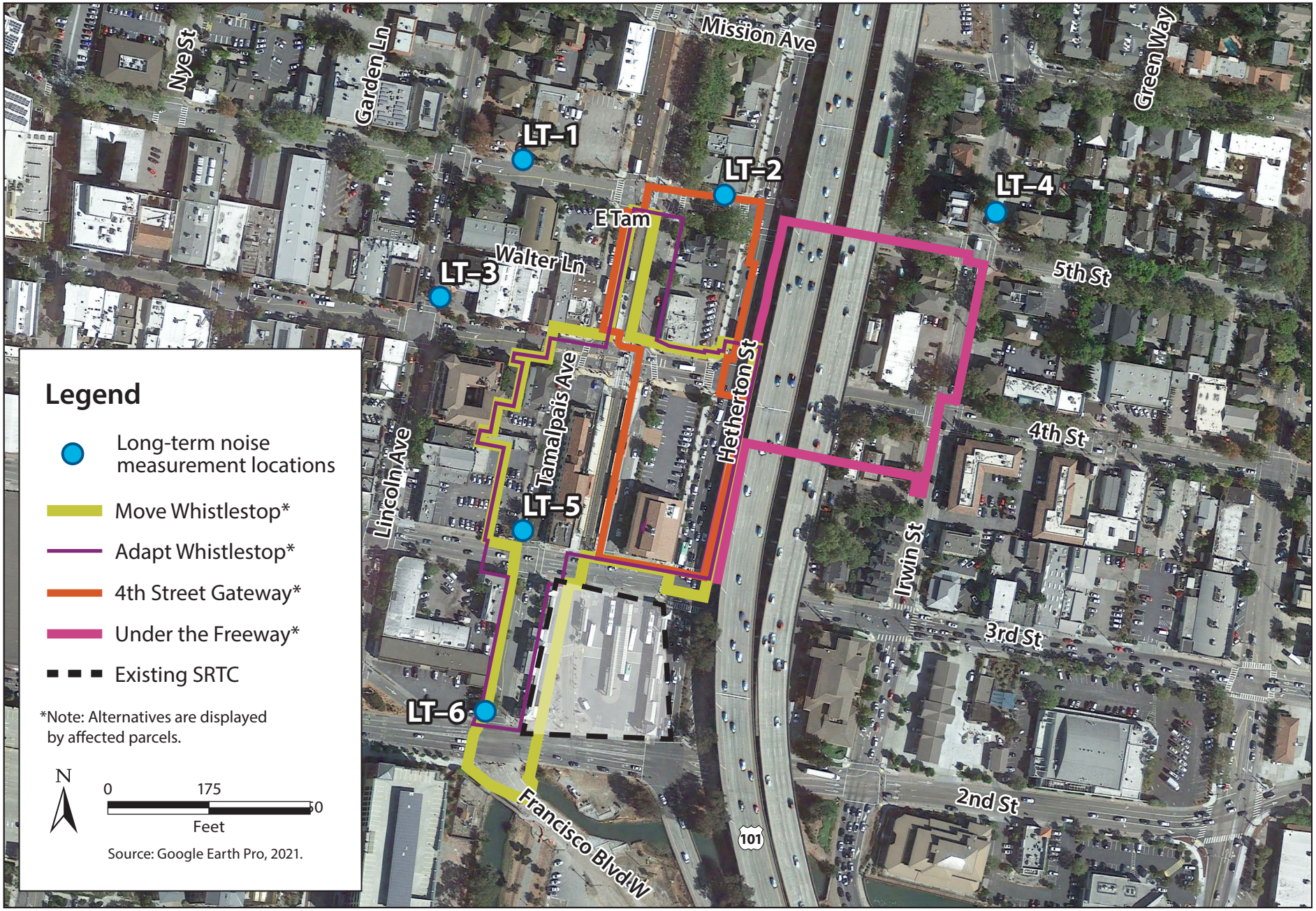

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Figure 3.11-2
Noise Measurement Locations

Alternatives for the Noise Analysis

The four build alternatives presented in the project description (Move Whistlestop Alternative, Adapt Whistlestop Alternative, 4th Street Gateway Alternative, and Under the Freeway Alternative) would have similar construction requirements. Construction is expected to occur in 2023 or 2024 and would last up to 18 months. As displayed in Table 3.11-10, all four build alternatives are adjacent to a mix of residential and commercial land uses.

Table 3.11-10. Alternatives Land Uses

Alternative	Land Uses within 500 feet
Move Whistlestop	North: Hetherton office and multifamily residential districts/office East: commercial/office South: public/quasi-public zoning district West: multifamily residential districts/office, retail, mixed-use The nearest residence is directly adjacent to the west of this alternative
Adapt Whistlestop	North: Hetherton office and multifamily residential districts/office East: commercial/office South: public/quasi-public zoning district West: multifamily residential districts/office, retail, mixed-use The nearest residence is directly adjacent to the west of this alternative
4th Street Gateway	North: Hetherton office East: residential/office, and commercial/office South: The existing San Rafael Transit Center West: multifamily residential districts/office, Hetherton office The nearest residence is approximately 50 feet north of this alternative.
Under the Freeway	North: residential/office and multifamily residential uses East: residential/office, commercial/office, and single-family residential South: commercial/office West: Hetherton office (including the Downtown San Rafael SMART station and the existing San Rafael Transit Center) The nearest residence is approximately 50 feet east of this alternative.

Sources: Google Maps 2021; City of San Rafael 2021

Surrounding Noise-Sensitive Land Uses

Some land uses are more sensitive to noise impacts than others. Consistent with the Governor's Office of Planning and Research's *State of California General Plan Guidelines*, noise-sensitive receptors are defined in this document as residential land uses, schools, open spaces, nursing homes, hospitals, convalescent homes, and churches (Governor's Office of Planning and Research 2017). Potential noise-related impacts on biological resources are disclosed in Section 3.3, Biological Resources. In addition, the Golden Gate Bridge, Highway and Transportation District considers hotels, motels, libraries, and cemeteries to be noise-sensitive receptors. As noted, sensitivity to noise may vary with the source of the noise and the land use context. An important way of predicting a human reaction to a new noise environment is to compare it with the existing ambient noise level. In general, the more a new noise source exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. The noise analysis in this section accounts for the Downtown urban environment and close proximity of the project area to US-101,

the existing transit center, and the SMART train station. Therefore, the existing ambient noise level is louder than non-urban uses.

Existing noise-sensitive land uses in the vicinity of the project area include residences, hotels, motels, schools, libraries, churches, hospitals, nursing homes, playgrounds, neighborhood parks, cemeteries, and other outdoor recreation (see Table 3.11-11 for a full list of surrounding sensitive receptors). These sensitive land uses are divided into Categories 1, 2, or 3 per the FTA standard for transit noise, as described in Section 3.11.2.1.

Vibration-Sensitive Historic Buildings

Historic buildings are also considered potentially sensitive to vibration according to the FTA manual. Section 3.4, Cultural Resources, identified four built environmental resources that qualify as historic sites for the purposes of California Environmental Quality Act (CEQA) review: 1011 Irwin Street, 709–711 4th Street, 633 5th Avenue, and 637 5th Avenue. As further described in Section 3.4, depending on the build alternative, cultural resources would either be relocated or removed.

The Move Whistlestop Alternative would involve the demolition of two historic-aged buildings: 703–705 4th Street and 927 Tamalpais Avenue (Barrel House). As described in Section 3.4.1.2, neither of the historic-aged buildings proposed for demolition under this alternative qualifies as a historic resource under CEQA. This alternative would utilize the existing alley that runs adjacent to the east façade of 709–711 4th Street as a vehicular circulation path. The Move Whistlestop Alternative proposes to relocate the Whistlestop building at 930 Tamalpais Avenue, which does not qualify as a CEQA historic resource, to the west side of Tamalpais Avenue. The relocated Whistlestop building would be in the vicinity of the historic buildings at 709–711 4th Street. Furthermore, the alternative would not alter the physical features that allow 709–711 4th Street to convey its historical significance.

The Adapt Whistlestop Alternative would occur adjacent to one historic building: the circa 1889 commercial building at 709–711 4th Street. The Adapt Whistlestop Alternative would involve similar project activities as the Move Whistlestop Alternative. Project activities would not result in a substantial adverse change in the significance of 709–711 4th Street.

The 4th Street Gateway Alternative plans to relocate buildings at 633 5th Avenue and 637 5th Avenue prior to or during construction to accommodate transportation facilities. However, there is no currently identified receiving site for either building and the method for relocation has not yet been determined.

The Under the Freeway Alternative contains one historic building: a residence at 1011 Irwin Street. The City has evaluated the residence as eligible for listing in the National Register of Historic Places and California Register of Historical Resources due to its hipped-roof cottage. This alternative would demolish this historical resource, thus destroying all the characteristics that qualify it for inclusion in the National Register of Historic Places and California Register of Historical Resources. As described further in Section 3.4, the demolition of 1011 Irwin Street would therefore be considered a substantial adverse change in the significance of the resources.

Table 3.11-11. Sensitive Receptors within 0.5 Mile of the Alternatives

Sensitive Receptor Type	Name	Address
Category 1		
Outdoor Amphitheatre	Forest Meadows Amphitheatre	890 Belle Avenue
Category 2		
Residential	Various	All surrounding zoning that falls into the following categories: Any zoning with an "R" and Downtown residential zoning including but not limited to the following: 4SRC, HO, CSMU, 2/3 MUE, 2/3, 2/3 MUW, WEV, and 5/MR/O.
Hospitals	Marin Treatment Center, Inc	1466 Lincoln Avenue
	Kaiser Permanente San Rafael Medical Center	99 Montecillo Road
Hotel	Panama Hotel	4 Bayview Street
Senior Homes	Goldenaires Senior Citizens	618 B Street
	San Rafael Commons	302 4th Street
	Aldersly Retirement Community	326 Mission Avenue
	Senior Assistance, LLC	14 Tierra Vista Way
	Home Safety Bath's	448 Du Bois Street
	Greenwood Assisted Living	233 West End Avenue
	San Rafael Healthcare & Wellness Centre	1601 5th Avenue
Category 3		
Churches	Trinity Community Church	1675 Grand Avenue
	Lincoln Hill Community Church	1411 Lincoln Avenue
	Thailao Baptist Church	1411 Lincoln Avenue
	St. Paul's Episcopal Church	1123 Church Street
	Church of Saint Raphael/Mission San Rafael Arcangel	1104 5th Avenue
	El Renuevo De Jehova Los Arcangeles	calle San Rafael 613 los Arcángeles García, N, L
	First Church of Christ Scientist	1618 5th Avenue
	Church of the Open Door	1104 5th Avenue
	Victory Christian Center	555 Francisco Boulevard E
	Trinity Lutheran Church	333 Woodland Avenue

Sensitive Receptor Type	Name	Address
Schools	Saint Raphael School	1100 5th Avenue
	Madrone High School	185 Mission Avenue
	San Rafael High School	150 3rd Street
	Coleman Elementary School	800 Belle Avenue
	Dominican University of California	50 Acacia Avenue
	Parkside Children's Center	51 Albert Park Lane
Parks and Open Spaces	Mountain Park	
	Beach Park	200 Yacht Club Drive
	Boyd Memorial Park Playground	341 Laurel Place
	Albert Park	155 Andersen Drive
	City Plaza	Plaza in former Court Street right-of-way
	Falkirk	Lower portion of site only; includes historic mansions/lawns. Excludes 8-acre upper open space.
	Marin Tennis Club	925 Belle Avenue
	John F. Allen Athletics Complex and Kennelly Field	890 Belle Avenue
Cultural Resources		709–711 4th Street
		633 5th Avenue
		637 5th Avenue
Libraries	San Rafael Public Library	1100 E Street

Source: Google Maps 2021

3.11.3 Environmental Impacts

This section describes the environmental impacts associated with noise that would result from implementation of the proposed project. It describes the methods used to determine the effects of the proposed project and lists the thresholds used to conclude whether an impact would be significant. Impacts for the build alternatives are presented together unless they differ substantially among alternatives. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts are provided.

3.11.3.1 Methodology

Construction Noise

The noise study area includes areas within a half-mile radius of the project area. The assessment of potential construction noise levels was based on methodology developed by FTA (2018) and construction noise criteria from applicable local guidance (such as local general plan documents or noise ordinances). Noise levels produced by commonly used construction equipment are shown in Table 3.11-12. Individual types of construction equipment are expected to generate maximum noise levels ranging from 80 to 90 dBA at a distance of 50 feet. The construction noise level at a given

receiver location depends on the type of construction activity and the distance and shielding between the activity and noise-sensitive receivers.

Table 3.11-12. Commonly Used Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 Feet from Source
Heavy truck	84
Excavator	85
Bulldozer	85
Pump	81
Generator	81
Mixer	80
Grader	85
Compactor	82
Impact hammer (hoe ram)	90
Back hoe	80
Crane	83
Drill rig	85
Pavement saw	90

Source: FTA 2018

The construction equipment used would vary by component or construction phase of the proposed project and would involve the use of excavators, bulldozers, heavy trucks, pumps, generators, graders, compactors, impact hammers, and other heavy equipment. The source levels used to calculate noise exposure are based on the L_{max} of equipment noise levels developed by FTA. Usage factors for construction noise are used in the analysis to develop reasonable worst-case L_{eq} noise exposure values. The L_{eq} value accounts for the energy-average of noise over a specified interval (usually 1 hour), and usage factors represent the amount of time a type of equipment is used during a typical interval.

Potential noise levels resulting from construction of the proposed project were evaluated by combining the noise levels of the two loudest pieces of equipment that would likely operate at the same time (for example, an excavator, bulldozer, and truck being operated simultaneously during the site preparation phase) and applying the appropriate usage factor (percentage of time equipment is in operation) to each piece of equipment. Sound levels from construction activities are calculated as a function of distance from the source(s), based on point-source attenuation over hard (i.e., acoustically reflective) ground, noting that 6 dB of reduction per doubling of distance can be assumed over hard ground.

Construction Haul Truck Noise

Construction haul truck noise is assessed qualitatively based on the likelihood of a noticeable increase in traffic noise at sensitive land uses along proposed project haul routes. It is assumed that all build alternatives would have the same construction schedule and on-road equipment fleet.

Based on the average number of trips per day during construction for other projects in the Bay Area utilizing the California Emissions Estimator Model (CalEEMod), as described in detail in Section 3.2, Air Quality, it is conservatively estimated that up to 12 one-way daily trips would be made by haul trucks during construction. These trucks are assumed to access or leave the station option sites by

way of Lincoln Avenue or Hetherton Street, connecting to 3rd Street or Mission Avenue to access US-101.

A substantial increase in noise from haul trucks during construction would occur if a project-related increase of 3 dB (L_{dn}) or more would occur where the existing and/or resulting noise levels are in any category other than "acceptable," according to the land use compatibility chart.

Operational Noise

Alternative Bus Operations

The noise and vibration assessment was conducted in accordance with the FTA *Transit Noise and Vibration Impact Assessment Manual* guidelines (described in Section 3.11.2.1). The FTA manual specifies that criteria are applied for a comparison between future project noise and existing noise, and not between future project noise and projections of future "no-build" noise exposure.

Following FTA guidelines, a screening assessment was used to select applicable receptors that are located within the FTA screening distance of 250 feet of the alignment for a busway with intervening buildings (described in Section 3.10, Land Use and Planning). Receptors were selected from land uses within this screening distance to represent sensitive land uses identified along the corridor. Existing noise levels for receptor locations were taken from results of the noise-monitoring program conducted in the area. Project buses were assumed to operate at up to 30 miles per hour. Calculated project noise levels were then compared with the "moderate impact" and "severe impact" criteria based on the existing ambient conditions recorded for a given receptor location.

Transit Center

Stationary equipment associated with the proposed project, such as backup generators and heating, ventilation, and air-conditioning (HVAC) equipment, could potentially result in noticeable levels of noise at nearby sensitive land uses. Sound level specifications for building equipment are unknown. As such, the analysis assumes typical equipment source levels at a reference distance of 50 feet. These types of equipment would be required to comply with the San Rafael Municipal Code and the Noise Element of *The City of San Rafael General Plan 2020* and were considered in the analysis.

Vehicle Traffic

To determine whether the proposed project would result in a substantial permanent increase in ambient noise levels from traffic, model calculations were developed to determine the change in project-related traffic volumes along segments adjacent to the build alternatives. An increase of 3 dB would be considered a noticeable increase in noise levels relative to existing conditions. Ambient noise levels obtained from sound level monitoring are also considered to determine whether an increase in traffic along a given roadway segment would result in a noticeable increase in noise levels, based on all sources of noise present in the area.

Traffic noise modeling for existing conditions and Year 2040 conditions was conducted using standard acoustical methods. For the assessment of project-level traffic noise impacts, p.m. peak hour traffic volumes were used to determine traffic noise levels under existing and Year 2040 conditions. The model assumes that the proposed project would alter traffic circulation on local streets but would not generate traffic, as the proposed project would not change the amount of bus service provided and new vehicle trips are not assumed to be generated by the proposed project.

Although the proposed project would improve the efficiency of bus operations and create operational flexibility for bus movements into and out of the transit center, no future expansion of transit service is currently programmed or planned and thus cannot be reasonably forecasted.

Construction Vibration

Potential vibration impacts during construction were evaluated using the construction vibration modeling methods recommended by the U.S. Department of Transportation, along with construction equipment data provided by the project engineering team. Reasonable worst-case construction vibration levels are provided and compared to the Caltrans vibration guidelines for damage and annoyance (refer to Tables 3.11-4 and 3.11-5).

Vibration source levels for a variety of typical construction equipment types are shown in Table 3.11-2. Source levels are shown in terms of PPV at 25 feet, 50 feet, 75 feet, and 100 feet, based on FTA guidelines.

The potential for damage to adjacent architectural resources from project-related construction vibration was investigated, in addition to the modeled noise- and vibration-sensitive receivers discussed above. Using assumptions provided by the project engineers and the FTA methodology, as outlined above, the potential for construction vibration damage to historic structures was analyzed.

3.11.3.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to noise and vibration.

Would the proposed project result in:

- Generation of 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?
- Generation of excessive groundborne vibration or groundborne noise levels?
- Placement of project-related activities in the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, resulting in exposure of people residing or working in the project area to excessive noise levels?

The City of San Rafael Municipal Code states that noise from construction equipment outside of the daytime hours of 7:00 a.m. to 6:00 p.m. would be prohibited unless approved by the City. Potential noise impacts at noise-sensitive uses from temporary use of construction equipment may occur where noise from a construction site exceeds 90 dBA L_{eq} during daytime hours, or 55 dBA L_{eq} during nighttime hours (based on the City noise limit for mixed use development).

A project is considered to contribute to a significant cumulative impact if future (Year 2040) traffic noise levels would result in an increase of 3 dB relative to future no-project conditions at a location where traffic noise exceeds 60 L_{dn}. A 3-dB increase in the ambient noise level is a noticeable increase (Caltrans 2020).

Note that there would be no impacts related to the influence of noise from aircraft or airports for the proposed project. The nearest two airports to the proposed project site are San Rafael Airport, a private airport, and Marin Ranch Airport, a public airport, directly east of San Rafael Airport, both approximately 3 miles north of the project area. The proposed project would not add sensitive uses that would potentially be affected by aircraft noise. Therefore, there would be no impact, and this topic related to aircraft noise at public airports or private airstrips is not discussed further in this section.

3.11.3.3 Impacts

Generation of 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

Construction

To characterize the overall noise level of the worst-case noise condition during a given phase of construction, the two loudest pieces of equipment were assumed to operate simultaneously at the construction site perimeter at a receiver distance of 50 feet. Heavy equipment, such as excavators and trucks, were assumed to operate for up to 50 percent of a given hour during construction hours. Pumps and generators were assumed to operate up to 100 percent of the time during construction hours. Sound levels by project phase are shown in Table 3.11-13.

Table 3.11-13. Construction Noise Levels by Activity and Distance to Allowable Sound Levels

Construction Activity	Equipment Used[a]	Combined Source Level at 50 Feet (L_{eq}, dBA)[b]	Distance to Exceedance of Daytime Sound Level Limit of 90 dBA L_{eq} (feet)[c]	Distance to Exceedance of Nighttime Sound Level Limit of 55 dBA L_{eq} (feet)[d]
Demolition	Hoe ram, truck	88	40	2,200
Excavation	Excavator, drill	85	30	1,600
Foundation	Grader, crane	84	25	1,400
Building construction	Grader, crane	84	25	1,400
Site improvements	Backhoe, concrete saw	87	40	2,100
Exterior closeout	Grader, crane	84	25	1,400

Note: Distance calculation does not include the effects, if any, of local shielding from walls, topography, or other barriers, which may further reduce sound levels.
[a] The two loudest pieces of equipment that may operate in one location simultaneously.
[b] Based on usage factors of 50 percent to 100 percent for the types of equipment used.
[c] The maximum distance where the combined equipment level may potentially exceed the City daytime construction noise limit of 90 dBA L_{eq}. Daytime is defined as the hours between 7:00 a.m. and 6:00 p.m. (9:00 a.m. to 6:00 p.m. on Saturdays).
[d] The maximum distance where the combined equipment level may potentially exceed the City nighttime threshold of 55 dBA L_{eq}. Nighttime is defined as the hours between 10:00 p.m. and 7:00 a.m. For the purpose of this analysis, it is assumed construction done outside of City-allowed hours may be bound by this limit. The distances shown in this column assume temporary nighttime permits would be obtained, if nighttime work is determined to be necessary.

Move Whistlestop and Adapt Whistlestop Alternatives

The nearest residential units are in a mixed-use office and residential building adjacent to these project sites on the western side. The nearest portion of the excavation perimeter is about 10 feet from these residences. Construction noise levels could be as high as 102 dBA at a distance of 10 feet during site demolition, which would likely be the loudest phase of construction. A noise level of this magnitude would be readily noticeable above ambient levels at this location. Utility work may be required at night on an intermittent basis. This would exceed City nighttime noise limits at receptors up to 2,200 feet from work sites. This would include several residential units and mixed-use buildings adjacent to the project sites. This impact would be **significant** due to exceedance of the City daytime and nighttime noise limits during construction. Implementation of Mitigation Measure MM-NOI-CNST-1 would reduce this impact to a ***less-than-significant level with mitigation***.

4th Street Gateway Alternative

The nearest residential units are north of the project site at the intersection of 5th Avenue and Tamalpais Avenue. The nearest portion of the excavation perimeter is approximately 50 feet from these residences. Construction noise levels could be as high as 88 dBA at a distance of 50 feet during site demolition, which would likely be the loudest phase of construction. A noise level of this magnitude would be readily noticeable above ambient levels at this location, but would only occur where equipment is used near the perimeter of the construction site relative to the receiver of the noise. Additionally, heavy equipment use would be temporary and would cease once construction is complete.

Utility work may be required at night on an intermittent basis. This would exceed City nighttime noise limits at receptors up to 2,200 feet from work sites. This would include several residential units as near as approximately 50 feet from the northern boundary of the site. This impact would be **significant** due to a potential exceedance of the City nighttime noise limit during construction. Implementation of Mitigation Measure MM-NOI-CNST-1 would reduce this impact to a ***less-than-significant level with mitigation***.

Under the Freeway Alternative

The nearest residential units are east of the project site on Irwin Street. The nearest portion of the excavation perimeter is approximately 50 feet from these residences. Construction noise levels could be as high as 88 dBA at a distance of 50 feet during site demolition, which would likely be the loudest phase of construction. A noise level of this magnitude would be readily noticeable above ambient levels at this location. Utility work may be required at night on an intermittent basis. This would potentially exceed City nighttime noise limits at receptors 2,200 feet from work sites. This would include several mixed-use residential units as near as approximately 50 feet from the eastern boundary of the site. This impact would be **significant** due to a potential exceedance of the City nighttime noise limit during construction. Implementation of Mitigation Measure MM-NOI-CNST-1 would reduce this impact to a ***less-than-significant level with mitigation***.

Operations

All Build Alternatives

Bus Operations

The proposed transit center would provide bus service consistent with existing bus trip volumes and fleet assignments. The model also assumed that up to eight buses may idle engines for up to 3 minutes each in a given hour. The new transit center would be in an urban area with high levels of vehicle traffic and overall ambient noise levels would be influenced by vehicle traffic on surface streets and the adjacent elevated section of US-101, which would be less than 100 feet from the transit center under all build alternatives, including its current location.

Noise analysis results are shown in Table 3.11-14. The results indicate that transit center operations would result in an increase of 0.5 dB or less (in terms of L_{dn}) at all receiver locations across all four build alternatives. This is primarily due to the presence of existing traffic and train sources in the area, as recorded by monitoring. The noise from these sources would overshadow noise from the new transit center, similar to the noise environment observed at the existing transit center. Noise levels from the transit center would result in moderate impacts at the nearest receptors for the 4th Street Gateway and Under the Freeway Alternatives. There would be no severe impacts. Generally, FTA considers mitigation as a requirement only for severe impacts. Mitigation for moderate impacts may be considered on a case-by-case basis. Mitigation would not be acoustically feasible for this location, as any measure specific to either of the transit center locations would only provide up to 0.5 dB of noise reduction and would not mitigate vehicle noise from existing sources.

The greatest noise level increase from the transit center would be 0.5 dB. An increase of this magnitude would not be perceptible over existing ambient noise levels at these locations. Noise levels would not exceed the threshold for severe impacts as defined by FTA. Therefore, this impact is considered to be ***less than significant***. No mitigation is required.

Table 3.11-14. Predicted Noise Levels from Transit Center Bus Operations under Each Alternative

Receiver	Existing Ambient Level	Project Noise Level	Combined Level	Increase over Existing	Moderate Impact Threshold (Project Noise)	Severe Impact Threshold (Project Noise)	Impact?	Moderate Contour Distance (feet)	Severe Contour Distance (feet)
Move Whistlestop and Adapt Whistlestop Alternatives									
Nearest receptor	75.1	65.7	75.6	+0.5	66 L_{dn}	73 L_{dn}	None	58	27
LT-1	68.8	51.9	68.9	+ 0.1	64 L_{dn}	69 L_{dn}	None		
LT-2	78.1	52.9	78.1	0.0	66 L_{dn}	75 L_{dn}	None		
LT-3	75.1	54.6	75.1	0.0	66 L_{dn}	73 L_{dn}	None		
4th Street Gateway Alternative									
Nearest receptor	78.1	69.3	78.6	+0.5	66 L_{dn}	75 L_{dn}	Moderate	61	28
LT-1	68.8	53.4	68.9	+ 0.1	64 L_{dn}	69 L_{dn}	None		
LT-2	78.1	67.7	78.5	+ 0.4	66 L_{dn}	75 L_{dn}	Moderate		
LT-3	75.1	53.1	75.1	0.0	66 L_{dn}	73 L_{dn}	None		
Under the Freeway Alternative									
Nearest receptor	79.5	69.3	79.9	+ 0.4	66 L_{dn}	75 L_{dn}	Moderate	83	21
LT-4	79.5	62.4	79.6	+ 0.1	66 L_{dn}	75 L_{dn}	None		

Transit Center

Station platform noise sources would include a public announcement system and chiming sounds in ticket vending machines. Noise associated with these sources would occur for brief periods of time and is not likely to result in an exceedance of FTA or local standards. Sound levels from announcement systems would vary, as they are typically designed to automatically adjust volume levels to a few dB above ambient noise. Chiming sounds from ticket machines are designed to provide an audible prompt to the person using the machine and are not typically audible above ambient levels except in the area directly next to the machine. Noise associated with these sources would occur intermittently and for brief periods of time and would not result in an exceedance of FTA or local standards.

The new building in the project area would require HVAC systems. Although specific sound level data for this type of equipment are not available, typical HVAC equipment can produce sound levels in the range of about 70 dBA at 50 feet, depending on the size of the equipment. However, rooftop HVAC units would attenuate both vertically and horizontally relative to surrounding uses, and also would be shielded by the edge of the building. As such, noise from HVAC equipment is unlikely to be noticeable in the urban setting of the proposed project, given that average measured noise levels are 67 dBA L_{eq} and above in this area of the city. Although this equipment noise is likely to be overshadowed by noise from surrounding transit and traffic noise, the equipment is required to meet City noise standards and should not exceed the applicable noise limits at the property line (65 dBA during daytime hours or 55 dBA during nighttime hours for residential mixed-use properties). Because noise levels from the equipment are not known, the building engineer should confirm that City noise limits would be met. This impact is potentially **significant**. Implementation of Mitigation Measure MM-NOI-OP-2 would reduce this impact to a ***less-than-significant level with mitigation***.

Vehicle Traffic

The proposed project would not affect traffic volumes except for buses. While there would be no increase in traffic volumes, traffic may be recirculated such that there is an increase in traffic volumes on roadways in the vicinity as employees and visitors travel to and from the project area. Traffic noise increases with increasing traffic volumes. A 100-percent increase (i.e., a doubling) in volume of traffic equates to a 3-dB increase in noise. As discussed in the beginning of this section, an increase of 3 dB is just noticeable by the human ear and, as such, an increase of less than 3 dB is not considered to be a substantial increase.

Traffic noise levels were calculated using peak-hour traffic volume data provided by the project traffic consultant and standard acoustical methods.

As shown in Table 3.11-15, traffic noise levels along street segments in the vicinity of the project area would increase by up to 2 dB under both existing with-project conditions and future with-project conditions under all build alternatives. An increase of this magnitude would not be noticeable. Therefore, noise level increases from a redistribution of vehicle traffic are considered to be ***less than significant***. No mitigation is required.

Table 3.11-15. Increase in Traffic Noise Along Project Street Segments

		Existing versus No Project Increase, dB			Future versus No Project Increase, dB		
Street	Segment Location	4th Street Gateway Alternative	Move and Adapt Whistlestop Alternatives	Under Freeway Alternative	4th Street Gateway Alternative	Move and Adapt Whistlestop Alternatives	Under Freeway Alternative
Hetherton Street	2nd Street to 3rd Street	+2	+2	+2	+2	+2	+2
Hetherton Street	3rd Street to 4th Street	0	0	0	0	0	0
Hetherton Street	4th Street to 5th Avenue	0	0	0	0	0	0
Hetherton Street	5th Street to Mission Avenue	0	0	0	0	0	0
Irwin Street	2nd Street to 3rd Street	-2	-2	-2	-2	-2	-2
Irwin Street	3rd Street to 4th Street	0	0	0	0	0	0
Irwin Street	4th Street to 5th Avenue	0	0	0	0	0	0
Irwin Street	5th Street to Mission Avenue	0	0	0	0	0	0
Grand Avenue	2nd Street to 3rd Street	0	0	0	0	0	0
Grand Avenue	3rd Street to 4th Street	0	0	0	0	0	0
Grand Avenue	4th Street to 5th Avenue	0	0	0	0	0	0
Grand Avenue	5th Street to Mission Avenue	0	0	0	0	0	0
Lincoln Avenue	2nd Street to 3rd Street	0	0	0	0	0	0
Lincoln Avenue	3rd Street to 4th Street	0	+1	0	0	0	0
Lincoln Avenue	4th Street to 5th Avenue	0	0	0	0	0	0
Lincoln Avenue	5th Street to Mission Avenue	0	0	0	0	0	0
Tamalpais Avenue	2nd Street to 3rd Street	0	0	0	0	0	0
Tamalpais Avenue	3rd Street to 4th Street	+1	0	0	0	0	0
Lindaro Street	Anderson Drive to 2nd Street	0	0	0	0	0	0
Lindaro Street	2nd Street to 3rd Street	0	0	0	0	0	0
Cijos Street	3rd Street to 4th Street	+1	0	0	+1	0	0
Lootens Place	3rd Street to 4th Street	0	0	0	0	0	0
Tamalpais Avenue	5th Street to Mission Avenue	0	0	0	0	0	0
Tamalpais Avenue	4th Street to 5th Avenue	0	0	0	0	0	0
2nd Street	Hetherton Street to Irwin Street	0	0	0	0	0	0

		Existing versus No Project Increase, dB			Future versus No Project Increase, dB		
Street	Segment Location	4th Street Gateway Alternative	Move and Adapt Whistlestop Alternatives	Under Freeway Alternative	4th Street Gateway Alternative	Move and Adapt Whistlestop Alternatives	Under Freeway Alternative
3rd Street	Hetherton Street to Irwin Street	-2	-2	-2	-2	-2	-2
4th Street	Hetherton Street to Irwin Street	-1	-1	-1	-1	-1	-1
5th Street	Hetherton Street to Irwin Street	0	0	0	0	0	0
Mission Avenue	Hetherton Street to Irwin Street	0	0	0	0	0	0
2nd Street	Irwin Street to Grand Avenue	0	0	0	0	0	0
3rd Street	Irwin Street to Grand Avenue	-4	-4	-4	-4	-4	-4
4th Street	Irwin Street to Grand Avenue	0	0	0	0	0	0
5th Street	Irwin Street to Grand Avenue	0	0	0	0	0	0
Mission Avenue	Irwin Street to Grand Avenue	0	0	0	0	0	0
2nd Street	Lincoln Avenue to Hetherton Street	0	0	0	0	0	0
3rd Street	Lincoln Avenue to Hetherton Street	0	0	0	0	0	0
4th Street	Lincoln Avenue to Hetherton Street	0	0	0	0	0	0
5th Street	Lincoln Avenue to Hetherton Street	0	0	0	0	0	0
Mission Avenue	Lincoln Avenue to Hetherton Street	0	0	0	0	0	0
2nd Street	Lindaro Street to Lincoln Avenue	0	0	0	0	0	0
3rd Street	Lindaro Street to Lincoln Avenue	0	0	0	0	0	0
4th Street	Lootens Place to Lincoln Avenue	0	0	0	0	0	0
5th Street	Lootens Place to Lincoln Avenue	+1	0	0	+1	0	0
Mission Avenue	Nye Street to Mission Avenue	0	0	0	0	0	0

Mitigation Measures

MM-NOI-CNST-1. Use Best Noise Control Practices During Construction

Best practices to minimize construction noise include the following:

- Limiting heavy equipment use to daytime hours not regulated by the City, between 7:00 a.m. and 6:00 p.m. Monday to Friday, and 9:00 a.m. to 6:00 p.m. on Saturday
- Locating stationary equipment (e.g., generators, pumps, cement mixers, idling trucks) as far as possible from noise-sensitive land uses
- Requiring that all construction equipment powered by gasoline or diesel engines have sound-control devices such as exhaust mufflers that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation
- Using equipment powered by electric motors instead of gasoline or diesel powered engines
- Preventing excessive noise by shutting down idle vehicles or equipment
- Using noise-reducing enclosures around noise-generating equipment
- Constructing barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (e.g., terrain, structures) to block sound transmission to noise-sensitive land uses. The barriers should be designed to obstruct the line of sight between the noise-sensitive land use and on-site construction equipment.
- Notifying adjacent residents in advance of construction work

MM-NOI-OP-2: Provide Acoustical Treatments for Mechanical Equipment as Needed to Comply with City Noise Standards

The applicant shall provide acoustical treatments as needed for the proposed HVAC equipment to ensure noise levels do not exceed the nighttime noise limit of 55 dBA L_{eq} at the property line. These limits are in accordance with the noise limitations specified in the City Municipal Code. Any required acoustical treatments can be specified by retaining a qualified acoustical consultant. Treatments may include, but are not limited to:

- Installing stationary equipment as far as possible from offsite noise-sensitive land uses and the property line to reduce noise levels at adjacent parcels
- Constructing enclosures around noise-generating mechanical equipment
- Placing barriers around the equipment
- Using mufflers or silencers on equipment exhaust fans
- Orienting or shielding equipment to protect sensitive uses to the greatest extent feasible

Generation of Excessive Groundborne Vibration or Groundborne Noise Levels

Construction

All Build Alternatives

Construction of the proposed project would involve the use of construction equipment that could generate groundborne vibration. Typical vibration levels associated with construction equipment as a function of distance are shown in Table 3.11-16.

Table 3.11-16. Construction Equipment Vibration Levels by Distance

	Bulldozer, Hoe Ram		Truck	
Distance (feet)	VdB[a]	PPV[b]	VdB[a]	PPV[b]
10	99	0.352	98	0.300
15	94	0.191	92	0.164
20	90	0.124	88	0.106
25	87	0.089	86	0.076
30	85	0.068	83	0.058
35	83	0.054	81	0.046
40	81	0.044	79	0.038
45	79	0.037	78	0.031
50	78	0.031	77	0.027
55	77	0.027	75	0.023
60	76	0.024	74	0.020
63	75	0.022	74	0.019
65	74	0.021	73	0.018
70	74	0.019	72	0.016
75	73	0.017	71	0.015

[a] RMS Velocity Level re 1 micro-inch per second
[b] Peak particle velocity, inch per second

Groundborne vibration from heavy equipment such as a bulldozer or hoe ram could periodically exceed the FTA vibration criterion at nearby residences and historic buildings. As shown in Table 3.11-16, vibration levels from operation of a bulldozer or hoe ram would exceed the FTA criterion for annoyance of 0.04 inch per second PPV at 40 to 45 feet from a sensitive receptor. Vibration from heavy equipment would potentially be perceptible within building structures during short intervals when equipment is operated near structures.

Construction of the Move Whistlestop and Adapt Whistlestop Alternatives would require operation of heavy equipment near (possibly as close as 10 feet) a historic building at 709–711 4th Street. The results in Table 3.11-16 indicate that construction-induced vibration could exceed 0.08 inch per second PPV at 20 to 25 feet from the building structure, which would exceed Caltrans vibration criteria for fragile buildings. Therefore, vibration levels during use of heavy equipment would potentially exceed annoyance thresholds and building damage thresholds under the Move Whistlestop and Adapt Whistlestop Alternatives. This impact is therefore considered to be **significant**. Implementation of Mitigation Measure MM-NOI-CNST-3 would reduce these impacts to a ***less-than-significant level with mitigation***.

Construction of the 4th Street Gateway and Under the Freeway Alternatives would also require use of heavy equipment near building structures, but these structures are of modern construction, and

operation of heavy equipment would not exceed the more stringent vibration standard of 0.5 inch per second PPV at a distance of 10 feet. Therefore, vibration levels during use of heavy equipment would not exceed annoyance thresholds or building damage thresholds under the 4th Street Gateway and Under the Freeway Alternatives and the impact would be ***less than significant***.

Other historic buildings in the vicinity of the build alternatives would be relocated, depending on the selected alternative. The relocation of buildings would be addressed under Mitigation Measure MM-CULT-1, Prepare and Implement Relocation Plans.

Operations

All Build Alternatives

No conditions exist that would result in a significant vibration impact from rubber-tired vehicles. Operation conditions would be similar to existing conditions. As such, this vibration impact would be ***less than significant***.

Mitigation Measures

MM-NOI-CNST-3: Implement Vibration-Reducing Practices During Construction

During construction, the contractor shall employ best practices to reduce construction vibration at adjacent buildings such that vibration at the building façades does not exceed 0.08 inch per second. Measures that can be used to limit construction vibration include, but are not limited to, the following:

- Locating high-vibration-generating equipment as far as possible from buildings
- Using low-vibration equipment within 45 feet of buildings

A vibration control plan shall be prepared that will describe the specific methods that the contractor will use to control vibration. Because of the historic status of the 709–711 4th Street building, the plan shall provide additional detail on how construction vibration near this building will be addressed. The plan may include the following measures:

- A preconstruction survey of the building to document pre-existing damage such as plaster cracks, shifted foundation, and concrete cracks
- Real-time monitoring of ground vibration
- If vibration monitoring indicates an exceedance of 0.08 inch per second during construction, alternative low-vibration construction methods shall be used, such that any subsequent exceedance is avoided.

A designated complaint coordinator shall be responsible for handling and responding to any complaints received during such periods of construction. A reporting program shall be required that documents complaints received, actions taken, and the effectiveness of these actions in resolving disputes.

Section 3.12
Population and Housing

This section describes the environmental and regulatory setting for population and housing. It also describes impacts on population and housing that would result from implementation of the proposed San Rafael Transit Center Replacement Project (proposed project) and other build alternatives and mitigation for significant impacts where feasible and appropriate. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.12.1 Existing Conditions

3.12.1.1 Regulatory Setting

Federal

There are no relevant federal regulations for population and housing.

State

Regional Housing Need Plan for the San Francisco Bay Area: 2015–2023

The Regional Housing Need Allocation process addresses the need for housing in communities throughout the state. To ensure that adequate housing is available for all income groups, the California Department of Housing and Community Development is responsible for determining the regional need in coordination with the Association of Bay Area Governments (ABAG), which is required to distribute the region's share of statewide need to the cities and counties within its jurisdiction. The objectives of the Regional Housing Need Allocation include increasing the supply, diversity, and affordability of housing; promote infill development and a more efficient land use pattern; promoting an improved intraregional relationship between jobs and housing; protecting environmental resources; and promoting socioeconomic equity. The purpose of the Regional Housing Need Allocation is to allocate a "fair share" of the Bay Area's projected housing need to the cities and counties by household income groups, which are categorized as very low, low, moderate, and above moderate.

Local

City of San Rafael General Plan 2020

The City of San Rafael General Plan 2020 (City of San Rafael 2016) provides a vision for long-range physical and economic development of the City of San Rafael (City), provides strategies and specific implementing actions, and establishes a basis for judging whether specific development proposals and public projects are consistent with the City's plans and policy standards. *The City of San Rafael General Plan 2020* contains a Housing Element, which includes trends are characteristics of the City's population as well as policies to address the City's housing needs for all income levels, and outlines specific development steps and design guidelines to address housing needs. However, because there

are no existing residential units in the project area, and no residential housing is proposed as part of the proposed project, none of the goals and policies listed in the element relate to population and housing for this proposed project.

The City is currently in the process of updating *The City of San Rafael General Plan 2020*. In addition, the Housing Element is not being updated as part of the update process, as it is for the 2015 to 2023 planning period.

San Rafael Downtown Station Area Plan

The City adopted the *San Rafael Downtown Station Area Plan* in June 2012 in accordance with Senate Bill 375, which required certain places to create sustainable communities strategies that combined transportation and land-use elements to help reduce greenhouse gas emissions. The plan provides a long-term strategy for the Downtown San Rafael station area through design guidelines that help to maximize transit ridership, sustain economic development and vitality, and ensure that the regional transit area fits into the context of the surrounding neighborhoods and improves connectivity. The *San Rafael Downtown Station Area Plan* contains the following goals and concepts related to population and housing that are applicable to the proposed project (City of San Rafael 2012):

Goal 4: Supply adequate parking for new housing and businesses while encouraging transit use, walking, and bicycling.

Goal 6: Enable new transit-oriented development characterized by increased activity, a mix of uses, and a strong sense of place.

Concept A: Explore allowing a height and/or [floor area ratio] bonus for developments that provide community benefits in the Plan Area.

Concept B: Explore removing maximum density requirements for residential uses in the Plan Area.

Concept D: Facilitate eventual reuse should the Bettini Transit Center be relocated.

Draft Downtown San Rafael Precise Plan

The City is in the process of updating the *Downtown San Rafael Precise Plan* (City of San Rafael 2020). The *Downtown San Rafael Precise Plan* contains the following principles and policies.

Principle 5: Enable mixed-use development in Downtown to increase housing, strengthen local businesses, and diversify the economy.

Principle 8: Promote housing access at all income levels and establish strategies to prevent homelessness, gentrification, and displacement.

Policy H-7, Protection of the Existing Housing Stock: Continue to protect existing housing from conversion to non-residential uses. Ensure that affordable housing provided though government subsidy programs, incentives, and deed restrictions remains affordable over the required time period, and intervene when possible to help preserve such housing.

Policy H-15, Infill Near Transit: Encourage higher densities on sites adjacent to a transit hub, focusing on the Priority Development Area surrounding the San Rafael Transit Center and future Downtown SMART station.

Policy EDI-3.1, Preventing Displacement: Prevent the displacement of lower income residents from their homes due to rising costs, evictions without cause, and other economic factors that make it difficult for people to stay in San Rafael.

3.12.1.2 Environmental Setting

This section provides a discussion of the existing conditions related to population and housing in the project area, within the jurisdictional boundary of the City, and within the jurisdictional boundary of Marin County.

Project Area

The existing San Rafael Transit Center operates regional and inter-county bus transit services and does not contains any residential units or residents. Approximately eight individuals per day are employed on the site.

Population

The 2020 population of San Rafael was approximately 59,807, and the 2020 population of Marin County was 260,831 (California Department of Finance 2020). Between 2020 and 2040, the City's population is expected to increase by approximately 11.8 percent to 66,880 residents, with an average growth rate of 2.4 percent every 5 years. Table 3.12-1 presents the anticipated growth for both the City and Marin County.

Table 3.12-1. San Rafael and Marin County Population Growth Projections, 2020–2040

Year	City of San Rafael Population	Percent Change		Marin County Population	Percent Change	
		Incremental	Cumulative		Incremental	Cumulative
2020	59,807	—	—	260,831	—	—
2025	61,610	3.0	3.0	269,250	3.2	3.2
2030	64,220	4.2	7.4	274,530	2.0	5.3
2035	65,550	2.1	9.6	278,215	1.3	6.7
2040	66,880	2.0	11.8	282,670	1.6	8.4

Sources: California Department of Finance 2020; ABAG 2019

Housing

This section describes existing housing units and household characteristics in San Rafael and Marin County.

Housing Units

In 2020, there were 24,133 housing units in San Rafael (Table 3.12-2), an increase of 122 housing units compared with 2010. Approximately 95.9 percent of the housing units were occupied in 2020, compared with 94.8 percent in 2010. In Marin County, there were 112,516 housing units in 2020, up from 111,214 housing units in 2010. In 2020, approximately 6.7 percent of the housing units were vacant in Marin County compared with 7.2 percent in 2010 (California Department of Finance 2020).

Table 3.12-2. San Rafael and Marin County Housing Units, 2010 and 2020

	2010	2020
City of San Rafael		
Total Housing Units	24,011	24,133
Increase in Housing Units	—	122
Occupied Housing Units	22,764	23,154
Change in Occupied Housing Units		+390
Percent Occupied	94.8	95.9
Percent Vacant	5.2	4.1
Marin County		
Total Housing Units	111,214	112,516
Increase in Housing Units	—	1,302
Occupied Housing Units	103,210	104,975
Change in Occupied Housing Units		+1,765
Percent Occupied	92.8	93.3
Percent Vacant	7.2	6.7

Source: California Department of Finance 2020

Households

In 2020, there were 23,575 households[1] in San Rafael (ABAG 2019). As shown in Table 3.12-3, ABAG projects that the number of households in San Rafael will increase by approximately 8.4 percent between 2020 and 2040, with an average increase of approximately 1.7 percent every 5 years.

Average Household Size

The average household size in San Rafael was 2.49 people in 2020 (California Department of Finance 2020). The average household size is expected to increase to approximately 2.52 people per household by 2040 (ABAG 2019).

Table 3.12-3. San Rafael and Marin County Household Growth Projections, 2020–2040

Year	City of San Rafael Households	Percent Change		Marin County Households	Percent Change	
		Incremental	Cumulative		Incremental	Cumulative
2020	23,575	—	—	108,195	—	—
2025	24,135	2.4	2.4	109,375	1.1	1.1
2030	25,175	4.3	6.8	111,065	1.5	2.7
2035	25,410	0.9	7.8	111,350	0.3	2.9
2040	25,565	0.6	8.4	111,585	0.2	3.1

Source: ABAG 2019.

[1] Households are based on occupied housing units.

Employment

ABAG estimates that there will be an approximate 3.9-percent increase in the number of jobs in Marin County between 2020 and 2040, increasing from 129,900 to 134,960. The number of jobs in San Rafael is projected to increase by approximately 2.5 percent between 2020 and 2040 (ABAG 2019). In 2019, the unemployment rate was 2.3 percent in Marin County and 2.2 percent in San Rafael (California Employment Development Department 2020). Table 3.12-4 summarizes the projected 5-year incremental increases in the number of jobs in San Rafael and Marin County between 2015 and 2040.

Approximately 37 percent of the jobs in Marin County are in San Rafael. This trend is projected to continue until 2040. In 2019, the City had 41,473 jobs and 29,507 employed residents, a ratio of 1.41 jobs for every employed resident (U.S. Census Bureau 2019a, 2019b). This means that some employees who work in San Rafael live elsewhere and are in-commuting. However, over the past couple of years, Marin County has had a trend of having more employed residents than jobs, which indicates that residents of Marin County commute to other nearby counties for jobs. This trend is expected to continue through 2040.

Table 3.12-4. San Rafael and Marin County Employment Projections, 2020–2040

	2020	2025	2030	2035	2040
City of San Rafael	47,835	48,140	48,650	48,875	49,050
Marin County	129,900	131,120	133,480	134,650	134,960

Source: ABAG 2019

3.12.2 Environmental Impacts

This section describes the impact analysis related to population and housing for the proposed project. The section describes the methods used to determine the impacts of the proposed project and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, where necessary and appropriate. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.12.2.1 Methodology

Identifying a project's impacts on population and housing involves a review of ABAG's Projections 2040, U.S. Census Bureau Data, California Department of Finance Data, California Employment Development Department Data, and *The City of San Rafael General Plan 2020*, then measuring the proposed project's population growth impact against the data. As the proposed transit center would be in the City of San Rafael and would serve the larger Marin County population, the study area for the impact analysis is the City of San Rafael and Marin County.

3.12.2.2 Thresholds of Significance

The following California Environmental Quality Act Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to existing population and housing.

Would the proposed project:

- 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)?
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

3.12.2.3 Impacts

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)

Construction

All Build Alternatives

Construction of the proposed project would result in a temporary increase in the number of construction-related job opportunities in the local area. However, the opportunities provided by project construction would most likely not result in construction workers relocating their households to the project vicinity because these jobs would be temporary. It is expected that construction workers would be drawn from the construction labor force already residing in San Rafael and the surrounding communities. However, the construction jobs produced by this proposed project would be new jobs, and would slightly alter the balance of jobs to employed residents in San Rafael. This effect would not be permanent, and would not be expected to change the current ratio of 1.67 jobs per employed resident. Accordingly, employment opportunities provided by construction of the proposed project would not generate substantial population growth, and would result in a ***less-than-significant impact***. No mitigation is required.

Operations

All Build Alternatives

Direct Population Growth

The proposed project does not include the development of housing or businesses, and therefore would not directly induce population. The proposed project would provide transit, bicycle, and pedestrian improvements consistent with multiple City planning documents including *The City of San Rafael General Plan 2020*, *San Rafael Climate Change Action Plan 2030* (City of San Rafael 2019), *San Rafael Transit Center Relocation Study* (City of San Rafael et al. 2017), *Short-Range Transit Plan* (Golden Gate Bridge, Highway and Transportation District 2019), *San Rafael Bicycle and Pedestrian Master Plan* (City of San Rafael 2018), and *San Rafael Downtown Station Area Plan*. As mentioned above, approximately eight individuals per day are currently employed in the project area. With implementation of the proposed project, the same eight employees would work in the project area. This would result in no net increase in the number of employees on site, and therefore would be an insignificant increase in the number of jobs available in the City. In addition, the proposed project

would be consistent with ABAG employment projections; therefore, the impact would be ***less than significant.***

Indirect Population Growth

The proposed project would require the extension of certain utilities, which potentially could induce growth in adjacent areas. As explained in Chapter 2, Project Description, the proposed project would require connection to existing sewer, water, and power infrastructure to operate the planned restrooms, kitchenette, and building spaces. In addition, the proposed project would require the removal of existing storm drain infrastructure and would install new inlets, manholes, and bioretention facilities on site. However, in this instance, the proposed project is an infill development, and the project area is already developed with a mix of uses, including commercial or residential uses, and therefore would not induce growth in adjacent areas. Furthermore, the proposed project would not require the construction of any new roads. Therefore, impacts related to indirect population growth are considered ***less than significant***. No mitigation is required.

Mitigation Measures

No mitigation is required.

Displace Substantial Numbers of Existing People or Housing, Necessitating the Construction of Replacement Housing Elsewhere

Move Whistlestop Alternative

This project site crosses several parcels and is currently occupied by the Whistlestop building, a café, a restaurant, parking spaces, the Sonoma-Marin Area Rail Transit (SMART) tracks, and the Citibank with its affiliated parking lot. There are no existing residential structures on the project site. The Move Whistlestop Alternative would not displace existing housing or people, necessitating the construction of replacement housing elsewhere. Therefore, there would be ***no impact***. No mitigation is required.

Adapt Whistlestop Alternative

No existing residential structures are on the project site. The Adapt Whistlestop Alternative's impacts on displacing housing or people would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, there would be ***no impact***.

4th Street Gateway Alternative

This project site is currently occupied by offices and retail (salons, check cashing services, and a bagel shop) and associated parking spaces. The Citibank building and parking lot currently occupy the existing portion of the site south of 4th Street. To the west of the Citibank parcel are the SMART tracks, and adjacent to the tracks are the Whistlestop building and Jackson Café. There are no existing residential structures on the project site. The 4th Street Gateway Alternative's impacts on displacing housing or people would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, there would be ***no impact***.

Under the Freeway Alternative

This alternative would be underneath U.S. Highway 101 where there are park-and-ride lots, maintained and operated by the California Department of Transportation, in the vicinity of the existing transit center. In addition to the California Department of Transportation park-and-ride lots, north of 4th Street, the existing project site is currently occupied by offices, a bicycle shop, parking, and vacant storefronts, and south of 4th Street, the project site is currently occupied by retail and office uses. There are no existing residential structures on the project site. The Under the Freeway Alternative's impacts on displacing housing or people would be the same as those of the Move Whistlestop Alternative outlined above. Therefore, there would be ***no impact***.

Mitigation Measures

No mitigation is required.

Section 3.13
Public Services and Recreation

This section describes the environmental and regulatory setting for public services and recreation, including schools, fire protection and emergency medical services, police protection, and parks. It also describes impacts on public services and recreation that would result from implementation of the San Rafael Transit Center Replacement Project (proposed project) and other build alternatives and mitigation for significant impacts where feasible and appropriate. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.13.1 Existing Conditions

3.13.1.1 Regulatory Setting

There are no relevant federal or state regulations related to public services and recreation that pertain to the proposed project.

Local

The City of San Rafael General Plan 2020

The following goals and policies from *The City of San Rafael General Plan 2020* pertain to public services and recreation and relate to the proposed project (City of San Rafael 2016).

Goal 29: Parks and Recreation

It is the goal for San Rafael to have recreation facilities and programs, parks and playfields for all age groups throughout the community. San Rafael recognizes the essential nature of Parks and Recreational services to its residents. Numerous parks, public spaces, and playing fields are integral to the life of the City. Recreational facilities and playfield are well maintained and consistently upgraded. Attention to community need generates proposals for new facilities.

Policy PR-1. Standards. Maintain, and where possible exceed, a recreation standard of three acres of park and recreation facilities per 1,000 residents.

Policy PR-15. Downtown Recreation. Encourage the creation of recreational facilities and gathering places open to the public, such as plazas, green spaces, and unexpected places such as the alley improvements behind Art Works Downtown.

Goal 30: A Safe Community

It is the goal of San Rafael, as the first priority for city government, to provide excellent fire, public safety and paramedic services and to be prepared in the case of disaster or emergency. San Rafael residents deserve to feel safe and secure wherever they live, work and play.

Policy S-26. Fire and Police Services. Maintain adequate cost-effective fire protection, paramedic and police services. Minimize increases in service needs from new development through continued fire prevention and community policing programs.

Policy S-27. Community Policing and Fire Service. Actively promote Community Policing and Community Fire Servicing in order to facilitate closer relations between police and fire departments and neighborhood groups, businesses and residents.

Policy S-28. Paramedic Services. Continue to seek adequate and cost-effective ways to provide accessible and reasonable emergency medical services.

Policy S-29. Effective Communication System. Ensure that all City agencies with public safety responsibilities are provided with effective, reliable and robust emergency communications systems and equipment. The system and equipment should have adequate capacity and redundancy to ensure these agencies can accomplish their missions. Appropriate consideration should also be given to the communications needs of agencies that may be required to supply mutual aid to or from other jurisdictions.

Policy S-32. Safety Review of Development Projects. Require crime prevention and fire prevention techniques in new development, including adequate access for emergency vehicles.

Policy S-33. Disaster Preparedness Planning. Ensure disaster preparedness in cooperation with other public agencies and appropriate public-interest organizations. Expand abilities of residents to assist in local responses to disasters.

Policy S-37. Functioning Public Utilities Following Earthquake. Locate and construct vital public utilities as well as communication and transportation facilities in a way that maximizes their potential to remain functional during and after an earthquake.

Draft San Rafael General Plan 2040 and Downtown San Rafael Precise Plan

The City of San Rafael (City) is currently working on the Draft *San Rafael General Plan 2040* (City of San Rafael 2020a). This update to *The City of San Rafael General Plan 2020* is accompanied by a Draft *Downtown San Rafael Precise Plan*, which provides a roadmap to growth and development in the Downtown San Rafael neighborhood (City of San Rafael 2020b). Applicable policies from these plans are listed below.

Goal CSI-3: Exceptional Public Safety Services. Provide and maintain exceptional fire, public safety, and paramedic services.

Policy CSI-3.1: Investment in Public Safety Services. Maintain cost-effective police, fire protection, and paramedic facilities, equipment, and services. Manage increases in costs through effective preventative measures, such as fire prevention and community policing.

Policy CSI-3.2: Mitigating Development Impacts. Engage the Police and Fire Departments in the review of proposed development and building applications to ensure that public safety, fire prevention, and emergency access and response needs are considered and effectively addressed.

Policy CSI-3.4: Quality of Life Programming. Maintain programs to proactively address quality of life issues, such as peace disturbances, loitering, littering, and vandalism. Focus on personal contact with residents and businesses and build positive relationships with all segments of the community.

Policy CSI-3.6: Mutual Aid. Maintain mutual aid agreements for police and fire service with other jurisdictions and community service districts to ensure that the capacity exists to adequately respond to local emergencies.

Goal PROS-1: Quality Parks for All to Enjoy. Sustain high quality parks that meet the recreational needs of all those who live and work in San Rafael.

Policy PROS-1.1: Park Classification. Maintain a system of community, neighborhood, pocket, and special use parks. These parks should be complemented by larger region-serving parks and open spaces, and by school recreation areas.

3.13.1.2 Environmental Setting

Fire Protection and Emergency Medical Services

Fire, paramedic, and emergency services in San Rafael are provided by the San Rafael Fire Department. The San Rafael Fire Department employs 69 uniformed emergency shift personnel, a fire chief, two administrative staff, an emergency manager, a household hazardous waste coordinator, and four part-time inspectors (City of San Rafael 2020c). The San Rafael Fire Department operates six fire stations throughout the City. Additionally, the San Rafael Fire Department has joint powers agreements and standard mutual aid agreements with other fire departments in Marin County, which minimize response times in fire emergencies (City of San Rafael 2020c). The closet two fire facilities that would serve all build alternatives are Fire Stations 51 and 52, which are both approximately 0.5 mile away.

During calendar year 2019, the San Rafael Fire Department reported that it responded to 27 residential structure fires and 27 non-residential structure fires. It also responded to 22 vehicle fires, 16 outdoor property fires, 16 wildland fires, and 28 dumpster/rubbish fires. There was a total of 10,980 calls for service, including 7,048 for rescue, emergency medical services, ambulances, and similar services. There were also 664 false alarms, 39 mutual aid responses, 185 hazardous response incidents, and 2,885 other incidents (animal rescue, smoke, etc.) (City of San Rafael 2020c).

The San Rafael Fire Department maintains a response time goal consistent with the National Fire Protection Association Standard 1710 to respond within 5 to 7 minutes following a call for service 90 percent of the time. New equipment and vehicles are periodically acquired to continue to meet this response time standard and to replace old equipment.

Police Protection

The San Rafael Police Department, headquartered at San Rafael City Hall, provides police services to the City. A new 44,000-square-foot Public Safety Center opened in August 2020 across the street from the existing facility. As of October 19, 2019, the San Rafael Police Department had a total of 60 full-time sworn personnel and 22 full-time nonsworn personnel, for a total staff of 82. This equates to 10.2 sworn personnel per 10,000 residents and 13.9 total personnel per 10,000 residents (City of San Rafael 2020c). The closest police facility to the project area is the Public Safety Center, approximately 2,500 feet northwest of the project area.

The San Rafael Police Department is organized into two divisions: the Operations Division, which includes patrol, park rangers, Downtown foot beat, and traffic enforcement; and the Administrative Services Department, which includes records, dispatch personnel, training, crime prevention, community engagement, and detective units (City of San Rafael 2020c).

In 2019, the San Rafael Police Department received 21,735 emergency calls and 76,874 administrative calls. This equates to an average of 1,035 emergency calls a month or about 60 per day. In total, the San Rafael Police Department receives between 800 and 1,000 calls per month. The San Rafael Police Department received a total of 38,877 calls for service in 2019, which was a 0.2-percent decrease from 2018 (City of San Rafael 2020c).

Schools

The City is served by three public school districts: the San Rafael Elementary School District, San Rafael High School District, and Miller Creek School District. The San Rafael Elementary School District and San Rafael High School District are operated collectively by San Rafael City Schools. Between these two districts, there are seven elementary schools, one middle school, one kindergarten through eighth grade school, and three high schools. In the 2018–2019 school year, the San Rafael Elementary School District had an enrollment of 4,614 students and the San Rafael High School District had an enrollment of 2,640 students. The Miller Creek School District operates in northern San Rafael and in nearby unincorporated areas. It contains three elementary schools and one middle school. Students matriculating from the Miller Creek School District attend Terra Linda High School, one of the three high schools in the San Rafael High School District. In the 2019–2020 school year, the Miller Creek School District had an enrollment of 2,024 students. Enrollment in San Rafael's public elementary and middle schools in both districts remained stable during the years 2014 to 2019, with high school enrollment gradually increasing by 11.6 percent in this time.

Enrollment projections prepared by San Rafael City Schools for the San Rafael Elementary School and High School Districts in March 2014 anticipated a 15-percent increase in elementary school enrollment between 2014 and 2019 (about 700 students). This increase did not materialize. The district also forecast an increase of 12 percent in the high schools, which did occur. Forecasts prepared in 2014 anticipated an increase of about 400 students for Kindergarten through fifth grade, 400 students for grades 6 through 8, and 200 high school students between 2019 and 2026 (City of San Rafael 2020c).

The Miller Creek School District prepared its latest projections in 2017. Forecasts for the Miller Creek School District extend to the 2026–2027 school year, projecting relatively stable enrollment numbers during that period (City of San Rafael 2020c).

San Rafael public schools in the vicinity of the project area include James B. Davidson Middle School, Laurel Dell Elementary School, Madrone High School, and San Rafael High School. James B. Davidson Middle School is approximately 0.4 mile southwest of the project area. Laurel Dell Elementary School is approximately 0.5 mile southwest of the project area. Madrone High School and San Rafael High School are approximately 0.4 mile east of the project area.

Parks and Recreation Facilities

The City of San Rafael Recreation and Child Care Services Division of the Library and Recreation Department manages City-owned parks and recreational facilities in San Rafael. *The City of San Rafael General Plan 2020* establishes a goal of 3 acres of park and recreation facilities per 1,000 residents (City of San Rafael 2016). The total area of parkland in the City is calculated by adding the total acres of developed park space to half of the total acres of recreational facilities at public schools. A 2019 report on the existing condition of parks and recreation indicates that there are approximately 244 acres of parks in San Rafael (including parks within the City limits and in the unincorporated areas of San Rafael). According to these data and the most recently reported population statistics, the City currently maintains a ratio of approximately 4.14 acres of parks per 1,000 residents within the city limits (City of San Rafael 2019a), which is above the goal of 3 acres of park and recreation facilities per 1,000 residents.

Existing bicycle paths in the vicinity of the project area include:

- Puerto Suello Bike Path: A class I north-south off-street trail that runs along the east side of Hetherton Street and has a southern terminus at 4th Street
- Mahon Creek Path: A class I east-west off-street trail that runs along San Rafael Creek and through the BioMarin campus
- Class III east-west bike route on 4th Street throughout the project area, with a gap between Hetherton Street and Irwin Street
- Class III north-south bike route on Lincoln Avenue with a northern terminus at 2nd Street
- Class III north-south bike route on Grand Avenue with a southern terminus at 5th Avenue

Parks closest to the project area include Albert Park, approximately 1,600 feet south, and Boyd Memorial Park, approximately 2,000 feet north.

Other Public Facilities

Other public facilities in the vicinity of the project area include the San Rafael Public Library and the San Rafael Community Center. The San Rafael Public Library is approximately 0.5 mile northwest of the project area. Existing library facilities in the City have been identified as insufficient to meet existing populations, and the Draft *San Rafael General Plan 2040* identifies the need to expand or relocate the main branch of the library system to meet demand. The San Rafael Community Center, which offers rental spaces for meetings and events as well as programs, classes, and activities for pre-school aged children, youth, and adults, is approximately 0.3 mile southwest of the project area.

3.13.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Public services and recreation impacts were analyzed for the project area rather than specific build alternatives because the location of each build alternative would experience a nearly equivalent impact for each resource considered here. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.13.2.1 Methodology

The potential impacts associated with public services and recreation are evaluated on a quantitative and qualitative basis through coordination with respective service agencies. The study area for public services and recreation is the City of San Rafael. Significant impacts would occur if the proposed project would adversely affect the ability of service agencies to provide adequate service to the project area or to other existing service areas, resulting in the need for new facilities, the construction of which could cause significant environmental effects.

Identifying the project area's public services involved review of the following documents and sources of information:

- City of San Rafael website
- City of San Rafael planning documents:
  - Review of *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*
- San Rafael Fire Department website

- San Rafael Police Department website

3.13.2.2 Thresholds of Significance

The following California Environmental Quality Act Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts on public services and recreation.

Would the proposed project:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:
  a) Fire Protection?
  b) Police Protection?
  c) Schools?
  d) Parks?
  e) Other Public Facilities?
- 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?
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

3.13.2.3 Impacts

Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities or a 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 Following Public Services

Construction

All Build Alternatives

Fire Protection

Construction of the proposed project would not induce population growth in the City of San Rafael. Therefore, it would not be expected to substantially increase the demand for fire protection services and would not require new or physically altered fire protection facilities.

Project construction could affect emergency access near the project area on a temporary basis. Lane closures and construction-related changes to traffic patterns could delay or obstruct the movement

of emergency vehicles traveling near the project area. Implementation of a Traffic Control Plan for the duration of construction would include detours and clear signage provided to route traffic, including emergency vehicles, around construction areas. As discussed in Chapter 2, Project Description, this plan would follow the guidance contained in the California Manual on Uniform Traffic Control Devices on temporary closures of vehicle lanes, bicycle lanes, and sidewalks and appropriate detours for these facilities. This would ensure that adequate emergency access is maintained during construction. Accordingly, impacts related to construction activities would be ***less than significant***.

Police Protection

As discussed above in regard to fire protection services, construction of the proposed project would not induce population growth in the City. Therefore, the proposed project would not be expected to substantially increase the demand for police protection services and would not require new or physically altered police protection facilities.

Construction activities could temporarily obstruct the movement of emergency vehicles, including police vehicles, in and around the project site. Implementation of a Traffic Control Plan for the duration of construction would provide detours and clear signage to route traffic, including emergency vehicles, around construction areas as necessary and maintain adequate emergency access. As discussed in Chapter 2, Project Description, this plan would follow the guidance contained in the California Manual on Uniform Traffic Control Devices on temporary closures of vehicle lanes, bicycle lanes, and sidewalks and appropriate detours for these facilities. This impact would be ***less than significant***.

Schools

Construction of the proposed project would not directly induce population growth within the City. Construction employees would be expected to commute to the project area from their existing place of residence. Construction of the proposed project would not be expected to create school enrollment as a result of construction bringing new residents to the City. Therefore, the proposed project is not anticipated to result in increased school enrollment or require any new or modified school facilities. ***No impact*** would occur.

Parks

The City of San Rafael General Plan 2020 establishes a goal of 3 acres of park and recreation facilities per 1,000 residents (City of San Rafael 2016). Currently, the City exceeds its target ratio of park area to population, with approximately 4.14 acres of parks per 1,000 residents within the city limits (City of San Rafael 2019a). The nearest parks to the project area include Albert Park, 1,600 feet south, and Boyd Memorial Park, approximately 2,000 feet north. Construction of the proposed project would not restrict access to these or any other existing park facilities and would not physically affect parks. Construction of the proposed project would not induce temporary population growth in the City. Therefore, construction would not increase the use of park facilities in San Rafael and would not result in the deterioration of existing park facilities or in the need for new park facilities in order to maintain appropriate performance indicators.

Existing bicycle paths are described in Section 3.13.1.2, Environmental Setting. Construction of the proposed project may result in temporary conflicts with these existing bicycle facilities. This would be avoided to the extent feasible through the implementation of a Traffic Control Plan that addresses

circulation for transit, bicycles, pedestrians, and private vehicles. As discussed in Chapter 2, Project Description, this plan would follow the guidance contained in the California Manual on Uniform Traffic Control Devices on temporary closures of vehicle lanes, bicycle lanes, and sidewalks and appropriate detours for these facilities.

A ***less-than-significant*** is anticipated.

Other Public Facilities

Other public facilities in the vicinity of the project area include the San Rafael Public Library and the San Rafael Community Center. Construction of the proposed project would not induce population growth in the City and, therefore, would not result in increased demand for these or other nearby public facilities. No new public facilities would be required. ***No impact*** is anticipated.

Consequently, construction of the proposed project would not result in the need for new or altered facilities for fire protection, police protection, schools, parks, or other public services. Overall, the impact would be ***less than significant.***

Operations

All Build Alternatives

Fire Protection

Operation of the new transit center would not be anticipated to increase the demand for fire protection and emergency services compared to existing conditions. The new transit center included in the proposed project would require a comparable amount of fire protection services to the existing transit center because it would be a similar size to the existing facility and would serve a similar ridership. The existing level of fire and emergency services provided by the City would be sufficient to service the new transit center without reducing the accessibility of fire services to other users in the City because operation of the new facility would not result in an increase local population that would increase demand for fire services. Replacement of the existing transit center may require the relocation of fire hydrants, but any affected hydrants would be replaced to meet their existing capacity. The proposed project is not anticipated to result in population growth and would therefore not induce additional demand for fire and emergency services that would result in the need for new or physically altered fire protection facilities. A ***less-than-significant*** impact would occur.

Police Protection

Operation of the proposed project would not result in increased demand for police services that would affect service ratios, response times, or other performance objectives compared to existing conditions. The new transit center included in the proposed project would require a comparable amount of police services to the existing transit center. The proposed project is not anticipated to result in population growth and would therefore not induce demand for police services that would result in the need for new or physically altered police facilities. A ***less-than-significant*** impact would occur.

Schools

Operation of the proposed project is not anticipated to induce population growth within the City because the existing workforce capacity in the City and Marin County would be sufficient to serve the new transit center and no new residents would be added. Therefore, the proposed project would not result in increased school enrollment. For the same reasons, existing school facilities would not be anticipated to deteriorate as a result of the proposed project and new or physically altered school facilities would not be required. ***No impact*** would occur.

Parks

The City of San Rafael General Plan 2020 establishes a goal of 3 acres of park and recreation facilities per every 1,000 residents (City of San Rafael 2016). Currently, the City's park and recreation facilities exceed this ratio, with a ratio of approximately 4.14 acres of parks per 1,000 residents within The city limits (City of San Rafael 2019a). None of the proposed project footprints would result in a loss of park space or other recreational facilities. The proposed project would not be anticipated to accelerate the deterioration of existing park and recreation facilities because it would not induce population growth or increase the number of employees in the City. Therefore, the proposed project would not result in the need for new or physically altered park facilities in order to maintain appropriate performance indicators for park space.

Existing bicycle paths are described in Section 3.13.1.2, Environmental Setting. Proposed bicycle path projects in the project area include a project that would install a Class IV bikeway along West Tamalpais Avenue through the project area and a project that would install a bikeway along 4th Street to create an east to west downtown connection for bicyclists. Under the Move Whistlestop Alternative, Adapt Whistlestop Alternative, and 4th Street Gateway Alternative, modifications would be made to the existing bicycle network. The Move Whistlestop Alternative and Adapt Whistlestop Alternative would construct the City's planned Class IV bicycle facility on Tamalpais Avenue between 2nd Street and 4th Street. Under the 4th Street Gateway Alternative, the existing Class I bicycle path on the west side of Hetherton Street would be removed between 4th Street and 5th Avenue and bicyclists would use 5th Avenue to connect from the Puerto Suello Bike Path to the planned Class IV facility on Tamalpais Avenue. No modifications to the existing bicycle network would be made under the Under the Freeway Alternative. Adequate bicycle access would be maintained under all build alternatives.

Overall, a ***less-than-significant*** impact on parks and recreational facilities would occur.

Other Public Facilities

The proposed project is not anticipated to induce population growth the existing workforce capacity in the City and Marin County would be sufficient to serve the new transit center and no new residents would be added. Therefore, the proposed project would not result in increased demand for these and other nearby public facilities. ***No impact*** is anticipated.

Consequently, operation of the proposed project would not result in the need for new or altered facilities for fire protection, police protection, schools, parks, or other public services. A ***less-than-significant*** impact would occur.

Mitigation Measures

No mitigation is required.

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

All Build Alternatives

As discussed previously, the proposed project would not be anticipated to accelerate the deterioration of existing park and recreation facilities because it would not induce population growth in the City. Demand for parks and recreational facilities would not change and ***no impact*** would occur.

Mitigation Measures

No mitigation is required.

Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities that Might Have an Adverse Physical Effect on the Environment

All Build Alternatives

As discussed previously, none of the build alternative footprints include recreational facilities. None of the build alternatives would result in a loss of park space or other recreational facilities that would require construction of new recreational facilities or expansion of any existing recreational facilities.

The Move Whistlestop Alternative and Adapt Whistlestop Alternative would construct the City's planned Class IV bicycle facility on Tamalpais Avenue between 2nd Street and 4th Street. The 4th Street Gateway Alternative would add Class III bikeways on 5th Avenue between Hetherton Street and Tamalpais Avenue and on Tamalpais Avenue between 4th Street and 5th Avenue. The impacts of constructing these facilities would be minor and are included in the analysis of the Move Whistlestop Alternative, Adapt Whistlestop Alternative, and 4th Street Gateway Alternative throughout this Draft Environmental Impact Report. Under the Move Whistlestop Alternative and Adapt Whistlestop Alternative, there would be no adverse physical effects from the construction of these bicycle facilities.

The Under the Freeway Alternative would not include the construction of any new bicycle facilities.

No other recreational facilities would be constructed or expanded. A ***less-than-significant*** impact would occur.

Mitigation Measures

No mitigation is required.

Section 3.14
Transportation

This section describes the regulatory setting and environmental setting for transportation resources in the vicinity of the proposed San Rafael Transit Center Replacement Project (proposed project). It also describes the impacts on transportation resources that would result from implementation of the proposed project and other build alternatives and mitigation measures that would reduce significant impacts, where feasible and appropriate. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.14.1 Existing Conditions

3.14.1.1 Regulatory Setting

Federal

Americans with Disabilities Act of 1990

The Americans with Disabilities Act of 1990 (revised 2010) is a landmark civil rights law that prohibits discrimination based on disability. Titles I, II, III, and V of the act have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and non-profit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Appendix 3.3-A to Part 36 (Standards for Accessible Design; U.S. Department of Justice 2010), which establishes minimum standards for ensuring accessibility for the disabled when designing and constructing a new facility or altering an existing facility, including roadways, parking lots, and sidewalks. Examples of key guidelines include detectable warnings for pedestrians when entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

State

State Transportation Improvement Program

The California Transportation Commission administers transportation programming, which is the public decision-making process that sets priorities and funds projects that have been envisioned in long-range transportation plans. The California Transportation Commission commits expected revenues for transportation projects over a multi-year period. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program for transportation projects both on and off the State Highway System. The STIP is funded with revenues from the State Highway Account and other funding sources. STIP programming typically occurs every 2 years and the STIP ID for the proposed project is MRN170013.

California Transportation Plan 2050

California Transportation Plan 2050 was adopted in February 2021. The plan, which is overseen by the California Department of Transportation (Caltrans), serves as a blueprint for California's transportation system as defined by goals, policies, and strategies to meet the state's future mobility needs. The eight goals defined in the plan fall into three categories: improving access and safety; fostering a prosperous economy, livable communities, and social equity; and practicing environmental stewardship. Each goal is tied to performance measures. In turn, members from regional and metropolitan planning agencies report these performance measures to Caltrans (Caltrans 2021).

CEQA Section 21099(b)(1) (Senate Bill 743)

The California Environmental Quality Act (CEQA), Section 21099(b)(1), requires that the California Governor's Office of Planning and Research develop revisions to the State CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." CEQA Section 21099(b)(2) states that upon certification of the revised State CEQA Guidelines for determining transportation impacts pursuant to section 21099(b)(1), automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment under CEQA.

In December 2018, the Office of Planning and Research published the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which identifies technical recommendations for assessing vehicle miles traveled (VMT), thresholds of significance, and mitigation measures that agencies can use while assessing transportation impacts for CEQA projects (OPR 2018). Beginning on July 1, 2020, the provisions of Senate Bill (SB) 743, Section 15064.3(c) went into effect statewide. However, CEQA Section 1099(b)(2) states that, "upon 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 this division, except in locations specifically identified in the Guidelines."

Although the Governor's Office of Planning and Research provides recommendations for adopting new VMT analysis guidance, lead agencies have the final say in designing their methodology. Lead agencies must select their preferred method of estimating and forecasting VMT, their preferred significance thresholds for baseline and cumulative conditions, and the mitigation strategies they consider feasible. Lead agencies must prove that their selected analysis methodology aligns with SB 743's goals to promote infill development, reduce greenhouse gases, and reduce VMT.

Regional and Local

Metropolitan Transportation Commission Plan Bay Area 2040

The Metropolitan Transportation Commission (MTC) is the transportation planning, financing, and coordinating agency for the nine-county San Francisco Bay Area, including Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, Santa Clara, San Mateo, and San Francisco Counties. The MTC *Plan Bay Area 2040* is a state-mandated, integrated long-range transportation and land use plan created

in a joint effort by MTC and the Association of Bay Area Governments (ABAG). *Plan Bay Area 2040* was adopted in 2017 as a long-range Regional Transportation Plan and Sustainable Communities Strategy for the nine-county area. *Plan Bay Area 2040* also provides a roadmap for accommodating projected household and employment growth in the Bay Area by 2040 as well as a transportation investment strategy for the region. *Plan Bay Area 2040* details how the Bay Area can make progress toward the region's long-range transportation and land use goals while meeting greenhouse gas reduction targets set by the California Air Resources Board (MTC and ABAG 2017).

Plan Bay Area 2040 neither funds specific transportation projects nor changes local land use policies. Importantly, individual jurisdictions retain all local land use authority. However, *Plan Bay Area 2040* does set a roadmap for future transportation investments and identifies how to accommodate expected growth. Preparation of *Plan Bay Area 2050* was initiated in 2019 and the new plan is anticipated to be adopted by ABAG and MTC in the fall of 2021 (ABAG and MTC 2020).

Transportation Authority of Marin

The Transportation Authority of Marin (TAM) is a Joint Powers Agency established between Marin County and all cities within the county, including the City of San Rafael (City), to address Marin County's unique transportation issues and to fulfill the legislative requirements of California Propositions 111 and 116 (approved in June 1990). As the Congestion Management Agency for Marin County, TAM maintains the Congestion Management Plan (CMP) (TAM 2019).

As identified by TAM in the *2019 CMP Update* (TAM 2019), regional roadways within the project site vicinity that are part of the CMP network include both 2nd Street and 3rd Street between U.S. Highway 101 (US-101) and Marquard Avenue. Eleven of the proposed project's study area intersections are included in these segments of the CMP network. The CMP arterial LOS thresholds are consistent with those provided in the *Highway Capacity Manual* (HCM) (Transportation Research Board 2016). Even though SB 743 no longer considers traffic congestion a significant impact on the environment under CEQA, per the adopted CMP, local agencies (e.g., counties, cities, and towns) must consider the results of changing land use designations on the arterial LOS within the designated CMP network (TAM 2019).

City of San Rafael General Plan 2020

The City of San Rafael General Plan 2020 contains goals, policies, and programs that guide the City's land use and development policy. The plan addresses various state-mandated elements including, but not limited to, Circulation and Infrastructure; and Land Use, Community Design and Neighborhoods (City of San Rafael 2016).

The Circulation Element of *The City of San Rafael General Plan 2020* contains a range of policies and implementation programs designed to maintain or improve transportation circulation within the City. Additionally, the Sustainability Element includes policies and implementation programs designed to maintain or improve use of alternative modes of transportation within the City to meet designated sustainability goals. Relevant policies and programs provided by the Circulation Element and the Sustainability Element include the following:

> **Policy C-1. Regional Transportation Planning.** Actively coordinate with other jurisdictions, regional transportation planning agencies, and transit providers to expand and improve local and regional transportation choice. Work cooperatively to improve transit and paratransit services, achieve needed highway corridor improvements, and improve the regional bicycling network. As part of this effort, support implementation of Marin County's 25- Year Transportation Vision.

Program C-1a. Participation in CMA, MTC and Other Regional Transportation Planning Efforts. Continue to participate in and monitor activities of regional transportation planning agencies, including but not limited to the Transportation Authority of Marin and the Metropolitan Transportation Commission, and actively support implementation of Marin County's 25-Year Transportation Vision.

Policy C-3. Seeking Transportation Innovation. Take a leadership role in looking for opportunities to be innovative and experiment with transportation improvements and services.

Program C-3a. Transportation Technology. Use the most effective technologies in managing the City's roadways and congestion. For example, support timed connections at transit hubs, and promote the use of transportation information systems.

Policy C-4. Safe Roadway Design. Design of roadways should be safe and convenient for motor vehicles, transit, bicycles and pedestrians. Place highest priority on safety. In order to maximize safety and multimodal mobility, the City Council may determine that an intersection is exempt from the applicable intersection level of service standard where it is determined that a circulation improvement is needed for public safety considerations, including bicycle and pedestrian safety, and/or transit use improvements.

Program C-4a. Street Pattern and Traffic Flow. Support efforts by the City Traffic Engineer to configure or re-configure street patterns so as to improve traffic flow and turning movements in balance with safety considerations and the desire not to widen roads.

Program C-4b. Street Design Criteria to Support Alternative Modes. Establish street design criteria to the extent permitted by State law to support alternative transportation modes to better meet user needs and minimize conflicts between competing modes.

Program C-4c. Appropriate LOS Standards. At the time City Council approves a roadway improvement and safety exemption from the applicable LOS standard, the appropriate LOS will be established for the intersection.

Policy C-5. Traffic Level of Service Standards.

A. Intersection LOS. In order to ensure an effective roadway network, maintain adequate traffic levels of service (LOS) consistent with standards for signalized intersections in the A.M. and P.M. peak hours, i.e., LOS D Citywide except as noted for the Mission Avenue/Irwin Street (LOS F), and 3rd Street/Union Street (LOS E).

B. Exemptions. Signalized intersections at Highway 101 and Interstate 580 on-ramps and off-ramps are exempt from LOS standards because delay at these locations is affected by regional traffic and not significantly impacted by local measures.

C. Evaluation of Project Merits. In order to balance the City's objectives to provide affordable housing, maintain a vital economy and provide desired community services with the need to manage traffic congestion, projects that would exceed the level of service standards set forth above may be approved if the City Council finds that the benefits of the project to the community outweigh the resulting traffic impacts.

Program C-5a. LOS Methodology. Use appropriate methodologies for calculating traffic Levels of Service, as determined by the City Traffic Engineer.

Program C-5c. Exception Review. When the City Council finds that a project provides significant community benefits yet would result in a deviation from the LOS standards, the City Council may approve such a project through adoption of findings, based on substantial evidence, that the specific economic, social, technological and/or other benefits of the project to the community substantially outweigh the project's impacts on circulation, and that all feasible mitigation measures have been required of the project.

Policy C-8. Eliminating and Shifting Peak Hour Trips. Support efforts to limit traffic congestion through eliminating low occupancy auto trips or shifting peak hour trips to off-peak hours. Possible

means include telecommuting, walking and bicycling, flexible work schedules, car and vanpooling and other Transportation Demand Management approaches.

Policy C-9. Access for Emergency Services. Provide safe routes for emergency vehicle access so that that emergency services can be delivered when Highway 101 or 580 are closed or congested with traffic.

C-9b. Roadway Monitoring. Support local traffic monitoring and control approaches, such as closed-circuit cameras and high-tech traffic signal systems that can be used to relieve congestion around incident sites or support emergency vehicle access.

Policy C-11. Alternative Transportation Mode Users. Encourage and promote individuals to use alternative modes of transportation, such as regional and local transit, carpooling, bicycling, walking and use of low-impact alternative vehicles. Support development of programs that provide incentives for individuals to choose alternative modes.

Program C-11e. Reduction of Single Occupancy Vehicles. Encourage developers of new projects in San Rafael, including City projects, to provide improvements that reduce the use of single occupancy vehicles. These improvements could include preferential parking spaces for carpools, bicycle storage and parking facilities, and bus stop shelters.

Policy C-14. Transit Network. Encourage the continued development of a safe, efficient, and reliable regional and local transit network to provide convenient alternatives to driving.

Program C-14a. Transit Network. Support Countywide efforts to sustain and expand Marin County's transit network. Work with neighborhoods, employers, transit providers, transportation planning agencies and funding agencies to improve and expand regional transit to and from adjacent counties, increase local transit services, and provide responsive paratransit services.

Policy C-16. Transit Information. Encourage the development and dissemination of local and regional transit information to facilitate greater use of transit systems. This includes service, educational and promotional information. Support efforts to provide transit information in languages other than English as needed.

Program C-16a. Transit Information Dissemination. Encourage development and distribution of transit information through printed materials, kiosks, web sites, radio and television broadcasts, and other means. Provide transit information on the City's website, at City offices open to the public and through other dissemination means. Include transit access information on City meeting notices and in notices for City-permitted events, and encourage merchants to provide.

Policy C-17. Regional Transit Options. Encourage expansion of existing regional transit connecting Marin with adjacent counties, including basic service, express bus service, new commuter rail service, and ferry service.

Program C-17a. SMART. Support the following design features for SMART commuter service within San Rafael:

1. Establish stations in Downtown and in the Civic Center that will serve as multi-modal commuter transit hubs.
2. Design stations and rail crossings safe for pedestrians and with minimal impacts on roadway traffic.
3. Support crossings at-grade through Downtown and strongly advocate for trains that are of a length that they avoid blocking traffic at an intersection.
4. Ensure that new development adjacent to the rail line is set back a safe distance and adequately attenuates noise.
5. Encourage high-density transit-oriented development in the vicinity of the rail stations.
6. Include noise mitigation as described in policy N-9 (Sonoma Marin Area Rail Transit).

7. Provide a north/south bike/pedestrian path on or adjacent to the railroad right-of-way.

Program C-17b. SMART Right-of-Way. Maintain the SMART right-of-way for rail service.

Policy C-18. Local Transit Options. Support improvement and expansion of local transit options including local bus, shuttle and taxi services.

a) **Local Bus Service**. Support efforts to improve bus routing, frequency and stop amenities to meet local needs.

b) **Local Shuttles.** Support efforts to create shuttle services as they become feasible to serve specialized populations and areas of San Rafael. If rail service is developed, support shuttle service connections between rail stations and major employers.

c) **Other Local Transit**. Support Dial-A-Ride and taxi services serving San Rafael.

Program C-18a. Improved Bus Stops. Continue to support efforts to improve bus stops to provide a safe and convenient experience for riders. Allow commercial advertising to fund bus stop upgrades and maintenance.

Program C-18b. Local Shuttle Program. Should there be an increase in density in a potential service area or implementation of the SMART rail line, and if funding becomes available, investigate the feasibility of a local shuttle program to serve San Rafael.

Policy C-19. Paratransit Options. Encourage expansion of paratransit services as needed to serve specialized populations including seniors and persons with disabilities.

Policy C-20. Intermodal Transit Hubs. Support efforts to develop intermodal transit hubs in Downtown and at the Civic Center to provide convenient and safe connections and support for bus, rail, shuttle, bicycle, and pedestrian users, as well as automobile drivers using transit services. Hubs should include secure bicycle parking and efficient drop-off and pick-up areas without adversely affecting surrounding traffic flow. Reference the Downtown Station Area Plan and the Civic Center Station Area Plan, which address and present recommendations for transportation and access improvements to transit within a half mile radius of the two SMART stations.

Program C-20a. Transit Hubs. Work with Marin County, the Marin County Transit District, SMART Commission, the Golden Gate Bridge Transportation District, and other regional agencies to ensure that intermodal transit hubs are designed to be convenient and safe for San Rafael users. Work with SMART on the design of the new rail stations and the transit center interaction with the rail service.

Policy C-26. Bicycle Plan Implementation. Make bicycling and walking an integral part of daily life in San Rafael by implementing the San Rafael's Bicycle and Pedestrian Master Plan.

Program C-26a Implementation. Implement provisions of the Bicycle and Pedestrian Master Plan in conjunction with planned roadway improvements or through development or redevelopment of properties fronting on the proposed routes.

Policy C-27. Pedestrian Plan Implementation. Promote walking as the transportation mode of choice for short trips by implementing the pedestrian element of the City's Bicycle and Pedestrian Master Plan. In addition to policies and programs outlined in the Bicycle and Pedestrian Plan, provide support for the following programs:

Program C-27a. Implementation. Monitor progress in implementing the pedestrian-related goals and objectives of the Bicycle and Pedestrian Master Plan on an annual basis.

Program C-27b. Prioritizing Pedestrian Improvements. Develop a program for prioritizing the maintenance of existing pedestrian facilities based on pedestrian use and connectivity as well as maintenance need, and secure funding sources for its implementation.

Program C-27e. Pedestrian Safety. Consider new projects and programs to increase pedestrian safety.

Program C-27f. Disabled Access. Continue efforts to improve access for those with disabilities by complying with Federal and State requirements of the Americans with Disabilities Act (ADA). Seek to incorporate ADA improvements into street and sidewalk projects. Develop a program identifying street barriers to pedestrian access, and prioritize curb cut and ramp improvements.

Policy C-29. Better Use of Parking Resources. Improve use of existing parking and create new parking opportunities through innovative programs, public/private partnerships and cooperation, and land use policies.

Policy C-30. Downtown Parking. Optimize the use of parking spaces Downtown.

Policy C-32. Parking for Alternative Modes of Transportation. Use preferential parking as an incentive to encourage alternative modes of transportation.

Program C-32a. Preferential Parking. Consider zoning amendments to encourage the use of preferential parking for alternative vehicles such as carpools, low-emission vehicles, and bicycles in parking-impacted business areas.

Policy SU-1. Land Use. Implement General Plan land use policies to increase residential and commercial densities within walking distance of high frequency transit centers and corridors.

Policy SU-2. Promote Alternative Transportation. Decrease miles traveled in single-occupant vehicles.

Program SU-2c. Bus Service. Support Marin Transit and the Transportation Authority of Marin in the planning, funding and implementation of additional transit services that are cost-effective and responsive to existing and future transit demand.

Program SU-2e. Sidewalk and Street Improvements. Continue to implement sidewalk and bicycle improvements in accordance with the adopted Bicycle and Pedestrian Master Plan and the Safe Routes to School program.

Draft San Rafael General Plan 2040

The City is presently working on the Draft *San Rafael General Plan 2040* and released a draft for public review in October 2020 (City of San Rafael 2020a). The Mobility Element of the Draft *San Rafael General Plan 2040* contains a range of policies and implementation programs designed to maintain or improve transportation circulation within the City, upon the document's approval. Relevant policies and programs provided by the Mobility Element include the following:

Policy M-1.1: Regional Transportation Planning. Actively coordinate with other jurisdictions, agencies, and service providers to improve the local and regional transportation system and advocate for the City's interests. Work cooperatively to improve transit and paratransit services, achieve needed highway improvements, and improve the regional bicycle and pedestrian networks.

Program M-1.1A: Participation in Countywide and Regional Transportation Planning. Actively participate in the planning activities of the Transportation Authority of Marin, the Metropolitan Transportation Commission, SMART, and other transportation agencies and support implementation of cost-effective regional plans and programs.

Program M-1.1B: Public Information About Transportation. Provide timely information and opportunities for public input on transportation issues and projects through workshops, neighborhood meetings, social media, staff reports, and other means.

Policy M-2.2. Safety. Design a transportation system that is safe and serves people using all modes of travel. Higher levels of congestion may be accepted at particular intersections if necessary to ensure the safety of all travelers, including pedestrians, bicycles, motorists, and transit users.

Program M-2.2B. Street Pattern and Traffic Flow. Support efforts by the City Traffic Engineer to configure or re-configure street patterns to improve traffic flow and turning movements while prioritizing safety.

Policy M-2.4: Transportation Efficiency. Undertake improvements that manage lane capacity, traffic flow, and intersections more efficiently.

Program M-2.4B: Reducing Vehicle Idling. Support transportation network improvements to reduce vehicle idling, including synchronized signal timing.

Policy M-2.5. Traffic Level of Service. Maintain traffic LOS standards that ensure an efficient roadway network and provide a consistent basis for evaluating the transportation effects of proposed development projects on local roadways. These standards shall generally be based on the performance of signalized intersections during the a.m. and p.m. peak hours. Arterial LOS standards may be used in lieu of (or in addition to) intersection LOS standards in cases where intersection spacing and road design characteristics make arterial LOS a more reliable and effective tool for predicting future impacts.

A. Intersection LOS. LOS "D" shall be the citywide standard for intersections, except for intersections noted in the General Plan.

B. Arterial Standards. LOS "D" shall be the citywide standard for arterials, except for roadways noted in the General Plan.

C. Downtown Standards. Intersections and arterials within the boundaries of the Downtown San Rafael Precise Plan are not subject to LOS standards, recognizing their unique context, operation, and physical constraints, as well as their multi-modal character. Proactive measures shall be taken to address and manage Downtown congestion, evaluate and reduce the impacts of new development on the transportation network, and ensure the long-term functionality of streets and intersections. Traffic shall be monitored and evaluated to identify the need for improvements to ensure that Downtown streets adequate serve both local and regional traffic.

D. Additional Provisions for Roads Operating at LOS "E" or "F." Where the adopted standard is LOS "E" or "F," measures should be taken to avoid further degradation of traffic conditions. Projects impacting roads operating at LOS "F" may still be subject to requirements to offset those impacts as a condition of approval.

Program M-2.5B. Level of Service Exceptions. Exceptions to LOS planning thresholds may be granted where both of the following circumstances apply:

A. The improvements necessary to attain the standards would conflict with other land use, environmental, community character, emission reduction, safety, housing, or economic development priorities.

B. Based on substantial evidence, the City Council finds that:

(i) The specific economic, social, technological, and/or other benefits of the project to the community substantially outweigh the project's impacts on circulation.

(ii) All feasible mitigation measures have been required of the project including measures to reduce vehicle delay and measures to reduce Vehicle Miles Traveled (VMT); and

(iii) The project is consistent with and advances the Guiding Principles of General Plan 2040, including foundational principles such as maintaining great neighborhoods and a sense of community, and aspirational principles such as improving housing affordability, preparing for climate change, and sustaining a healthy tax base.

Policy M-2.7. Proposed Mobility Improvements. Use Table 10-1 (Proposed Mobility Improvements) as the basis for transportation network improvements over the next 20 years. The improvements shown are intended to balance the City's goals of managing congestion, reducing vehicle miles traveled, and enhancing mobility and safety. Specific improvements will be implemented as conditions require and will be refined during the design phase. Table 10-1 may be

amended as needed to reflect other design solutions and priorities, subject to City Council approval. Improvements will be implemented through the Capital Improvements Program using a variety of funding sources and may be subject to further environmental review.

Policy M-2.8: Emergency Access. Identify alternate ingress and egress routes (and modes of travel) for areas with the potential to be cut off during a flood, earthquake, wildfire, or similar disaster.

Policy M-3.1: VMT Reduction. Achieve State-mandated reductions in Vehicle Miles Traveled by requiring development and transportation projects to meet specific VMT metrics. In the event a proposed project does not meet these metrics, require measures to reduce the additional VMT associated with the project, consistent with thresholds approved by the City Council.

Policy M-3.3: Transportation Demand Management. Encourage, and where appropriate require, transportation demand measures that reduce VMT and peak period travel demand. These measures include, but are not limited to, transit passes and flextime, work schedules, pedestrian and bicycle improvements, ridesharing, and changes to project design to reduce trip lengths and encourage cleaner modes of travel.

Program M-3.3B: Support for TDM. Work cooperatively with governmental agencies, non-profits, businesses, institutions, schools, and neighborhoods to provide and support TDM programs.

Policy M-3.5: Alternative Transportation Modes. Support efforts to create convenient, cost-effective alternatives to single passenger auto travel. Ensure that public health, sanitation, and user safety is addressed in the design and operation of alternative travel modes.

Policy M-3.7: Design Features that Support Transit. For projects located in or near transit hubs such as Downtown San Rafael, incorporate design features that facilitate walking, cycling, and easy access to transit.

Policy M-4.1: Sustaining Public Transportation. Support a level of transit service frequency and routing that promotes transit usage, avoids overcrowding, and makes transit an attractive alternative to driving.

Program M-4.1C: Partnerships. Encourage partnerships between local transit service providers to avoid redundancy, maximize coverage and efficiency, and improve transfers between transit systems.

Program M-4.1D: Transit for Tourism. Support efforts to provide effective transit options for visitors to West Marin and other County tourist destinations, in order to reduce regional traffic flow through San Rafael.

Program M-4.1E: Transit Information. Encourage the development and dissemination of information to facilitate transit use. This includes real-time, multi-lingual information on bus arrivals, departures, transfers, and routes. In addition, the City should include information on transit access on notices of City meetings and provide links to transit websites from its own website.

Program M-4.1F: Public Health. Work with transit service providers to effectively respond to service and design challenges associated with rider safety during and after public health emergencies.

Policy M-4.2: Regional Transit Options. Encourage expansion of regional transit connecting Marin with adjacent counties, including basic and express bus service, rail, and ferry service.

Program M-4.2A: Regional Bus Service. Support expansion of regional bus service to and from other Bay Area counties, including expanded express bus service along the 101 and 580 corridors, and continued bus and shuttle service to the region's airports.

Policy M-4.3: SMART Improvements. Maximize the potential benefits of Sonoma Marin Area Rail Transit (SMART) while minimizing potential conflicts between SMART trains, adjacent land uses, bicycle and pedestrian movement, and vehicle traffic circulation. City plans and programs related to

SMART should be periodically evaluated based on changes in funding, operating costs, ridership, and other factors impacting service levels.

Program M-4.3A: Rail Safety. Work with SMART to improve safety measures along the SMART tracks, reduce train noise, and avoid the blockage of intersections by trains.

Program M-4.3B: Passenger Pickup and Drop-Off. Work with SMART on plans to improve passenger pick-up and drop-off, connectivity between trains and buses, and provisions for passenger parking (see also Policy M-7.9 on parking for transit users).

Program M-4.3C: Arrival Experience. Create a welcoming experience for passengers arriving at the Downtown San Rafael and Civic Center stations, including wayfinding signage, easy transfers, and clearly marked, well lit pathways to nearby destinations.

Program M-4.3D: Service Reliability. Work with SMART to avoid disruptions of service during power outages and provide backup power to sustain operations during and after emergencies.

Program M-4.3E: Downtown Crossings. Continue to work with SMART to reduce congestion related to grade-level train crossings in Downtown San Rafael. Encourage SMART to assess the potential cost, as well potential funding sources, to elevate the tracks through Downtown.

Policy M-4.4: Local Transit Options. Encourage local transit systems that connect San Rafael neighborhoods, employment centers, and other destinations.

Program M-4.4A: Local Bus Service. Support Marin Transit and Golden Gate Transit efforts to improve bus routing, frequency, and equipment, and to keep bus fares affordable.

Program M-4.4B: Improved Bus Stops. Support efforts to improve bus stops and shelters to provide a safe and pleasant experience for riders. Allow commercial advertising to fund bus shelter upgrades and maintenance.

Program M-4.4C: Local Shuttle Programs. Support efforts to create financially feasible shuttle, jitney, and circulator bus services to connect passengers arriving at the San Rafael Transit Center and SMART stations to their destinations.

Policy M-4.6: Paratransit Options. Encourage expansion of paratransit and flexible route services as needed to serve specialized populations including seniors, students, and persons with disabilities.

Program M-4.6A: Other Local Transit. Support Dial-A-Ride, taxi, and transportation network company (TNC) services serving San Rafael.

Program M-4.6B: Paratransit Service. Support continued Whistlestop Wheels service and expanded regional paratransit services where needed.

Policy M-4.7: Intermodal Transit Hubs. Support efforts to develop intermodal transit hubs in Downtown and North San Rafael to provide safe, convenient connections for all travelers. Such hubs should include secure bicycle parking, EV charging stations, and efficient drop-off and pick-up areas and create a positive experience for those arriving in San Rafael.

Program M-4.7A: Transit Center Relocation. Complete the relocation process for the San Rafael Transit Center. Design of the facility should consider the effects on local street congestion and the safety of those walking or bicycling to and from the facility. Continue to work with transit service providers to coordinate schedules, transfers, and routing in a manner that is convenient for San Rafael travelers.

Program M-4.7B: First Mile/Last Mile Trips. Work with TAM, transit agencies, neighborhood groups, and the local business community to improve options for “first mile/ last mile” trips connecting regional transit hubs to nearby destinations.

Program M-4.7C: Implementation of Other Plans. Implement the recommendations of the Downtown Precise Plan, the Downtown Station Area Plan, and the Civic Center Station Area Plan for coordination of transit services and improvement of connections between travel modes.

Program M-5.1B: Emergency Access Considerations. Ensure that road redesign projects, including bicycle and pedestrian improvements, maintain evacuation capacity and emergency vehicle response time, particularly along designated evacuation routes.

Policy M-6.1: Encouraging Walking and Cycling. Wherever feasible, encourage walking and cycling as the travel mode of choice for short trips, such as trips to school, parks, transit stops, and neighborhood services. Safe, walkable neighborhoods with pleasant, attractive streets, bike lanes, and sidewalks should be part of San Rafael's identity.

Program M-6.1A: Bicycle and Pedestrian Master Plan Implementation. Maintain San Rafael's Bicycle and Pedestrian Master Plan (BPMP) and update the Plan as required to ensure eligibility for grant funding. The BPMP should be a guide for investment in pedestrian and bicycle infrastructure, and for programs to make walking and cycling a safer, more convenient way to travel.

Program M-6.1B: Station Area Plans. Implement the pedestrian and bicycle improvements in the 2012 Downtown Station Area Plan and the 2012 Civic Center Station Area Plan.

Policy M-6.2: Pedestrian and Bicycle Safety. Identify, prioritize, and implement pedestrian and bicycle safety improvements in order to reduce collisions and injuries, and eliminate fatalities.

Program M-6.2A: Implementation of Safety Measures. Implement pedestrian and bicycle safety measures as described in the 2018 BPMP, including ADA compliant curb ramps, curb extensions in business districts, median refuge islands, active warning beacons, painted bike "boxes" at intersections, and signal phasing adjustments in areas with high bicycle volumes.

Program M-6.2B: Vision Zero. Consistent with the BPMP, support a "Vision Zero" approach to safety among pedestrians and cyclists, with the goal of eliminating severe injuries and fatalities.

Program M-6.2D: Safe Routes Programs. Work collaboratively with local schools to implement Safe Routes to School programs. Explore similar programs to promote safe routes to parks, work, services, and transit, as well as safe routes for seniors.

Policy M-6.3: Connectivity. Develop pedestrian and bicycle networks that connect residents and visitors to major activity and shopping centers, existing and planned transit, and schools. Work to close gaps between existing facilities. Funding and prioritization for projects should consider relative costs and benefits, including such factors as safety, number of potential users, and impacts on parking.

Program M-6.3A: Implementation of Pathway Improvements. Implement the major pedestrian and bicycle pathway, intersection, and lane improvements included in adopted City plans.

Program M-6.3C: Bicycle Parking. Create additional bicycle parking and storage capacity at the SMART stations and in Downtown San Rafael.

Policy M-6.7: Universal Design. Design and construct bicycle and pedestrian facilities to serve people of all ages and abilities, including children, seniors, families, and people with limited mobility.

Program M-6.7A: ADA Compliance. Continue efforts to improve access for those with disabilities, including compliance with Federal and State accessibility requirements.

Program M-6.7B: Best Practices. Continue to construct bicycle and pedestrian facilities according to the most up-to-date local, state, and national best practices and design guidelines.

Policy M-7.1: Optimizing Existing Supply. Optimize the use of the existing parking supply. Expand the supply where needed through innovative programs, public/private partnerships, and land use policies.

Policy M-7.4: Downtown Parking. Maintain a sufficient number of Downtown parking spaces to meet demand and support local businesses.

Policy M-7.9: Parking for Transit Users. Support regional efforts to fund and construct commuter parking along transit routes, near commuter bus pads, and near inter-modal commuter hubs in order

to support use of transit. Parking areas should include secure parking for carpools, bicycles and other alternative modes and should minimize neighborhood impacts.

Program M-7.9A: Commuter Parking. Regularly evaluate the need for parking around the SMART stations and San Rafael Transit Center, as well as ways to meet that need.

City of San Rafael Bicycle and Pedestrian Master Plan Update

The *San Rafael Bicycle & Pedestrian Master Plan* (City of San Rafael 2018) update documents the conditions for bicycling and walking as of 2018 and outlines steps to improve safety, act on community needs, and improve the mobility options for San Rafael residents, workers, and visitors.

Proposed projects identified in the *San Rafael Bicycle & Pedestrian Master Plan* that are in the vicinity of the project area include those shown in Table 3.14-1.

Table 3.14-1. Proposed Bicycle and Pedestrian Projects in Central San Rafael

ID	Corridor/ Primary	Begin/At	End	Class/Type	Notes
D-1	Downtown east-west connection [commercial connector]	4th Street/ 2nd Street	Union Street	(to be determined)	Study the feasibility of an east-west bikeway through Downtown San Rafael that can comfortably accommodate people of all ages and bicycling ability.
D-2	West Tamalpais Ave. [north/ south greenway]	2nd Street	Mission Avenue	Class IV	Convert West Tamalpais Avenue into a one-way street in the southbound direction; create a Class IV protected bikeway between West Tamalpais and SMART right-of-way.
D-8	2nd Street	US-101 under-crossing	Not applicable	Under-crossing	Study potential pedestrian improvements for US-101 undercrossing on 2nd Street, including walkway, lighting, and public art.
D-9	2nd Street	US-101 on-ramp	Not applicable	Intersection	Study pedestrian crossing improvements for 2nd Street at the US-101 on-ramp.
D-10	2nd Street	US-101 off-Ramp	Not applicable	Intersection	Study pedestrian crossing improvements for 2nd Street at the US-101 off-ramp.
D-13	Anderson Drive	Lindaro Street	Not applicable	Intersection	Create diagonal path through intersection to connect the Mahon Creek Connector to the Albert Park Path.
D-18	Francisco Boulevard West	2nd Street	Andersen Drive	Class I	Extend SMART pathway from Downtown SMART station to existing Cal Park Hill Pathway.
D-19	Andersen Drive [north/ south greenway]	Francisco Boulevard West	Not applicable	Intersection	Realign Andersen Drive for at-grade rail crossing.

ID	Corridor/ Primary	Begin/At	End	Class/Type	Notes
D-20	US-101 under-crossing	Not applicable	Not applicable	Intersection	Study potential lighting and public art at US-101 undercrossing, including at 3rd Street.
D-29	3rd Street	Heatherton Street	Not applicable	Intersection	Eliminate the left-turn pocket from 3rd Street onto Hetherton Street and add a leading pedestrian interval.

Source: City of San Rafael 2018

Downtown Parking/Wayfinding Study

Building from the 2012 *San Rafael Downtown Station Area Plan* vision for the 0.5-mile radius around the Downtown Sonoma-Marin Area Rail Transit (SMART) station, the goal of the *Downtown Parking/Wayfinding Study* is to develop policy goals to support a vibrant gateway area through parking and wayfinding in anticipation of future needs related to the SMART station. The study considers existing parking demands, future parking demand projections, future parking opportunities, and best management practices to provide specific parking and wayfinding recommendations. The recommendations are not enforceable, but rather provide guidance for the City as it plans for and manages parking in the Downtown area. Based on the projections, the study finds that the Downtown area will continue to operate with excess parking in both the near-term and the long-term conditions. Related to the proposed project, the study includes recommendations for new pedestrian bicycle parking in proximity of the SMART station (City of San Rafael 2017).

San Rafael Municipal Code

The San Rafael Municipal Code, which includes the Zoning Ordinance, contains sections related to transportation and parking. The City's parking standards, set forth in Chapter 14.18 of the Zoning Ordinance, outline requirements for off-street vehicle parking for new construction, additions, and change in occupancy. Chapter 5.8.1 of the Municipal Code sets forth trip reduction and travel demand requirements for large employers (100 or more employees) at the site (City of San Rafael 2020b).

3.14.1.2 Environmental Setting

This section describes the existing condition of the roadway, bicycle and pedestrian facilities, and transit service within the study area (Figure 3.14-1). It also presents information regarding existing traffic volumes and operations at study intersections.

Street System

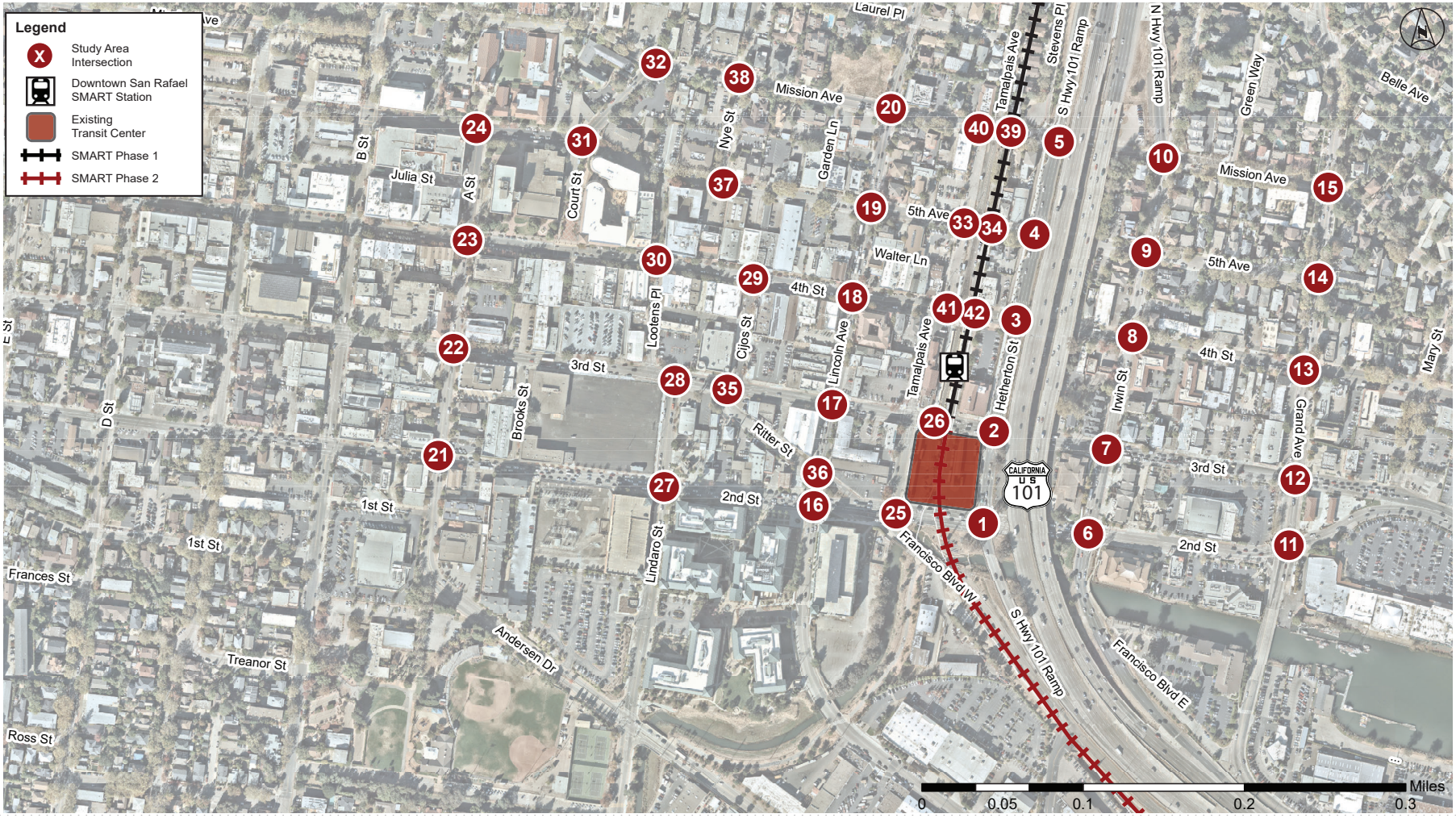
Traffic volumes in the study area were obtained from traffic counts conducted in 2020 prior to the COVID-19 pandemic impacts on both the morning and afternoon peak hours. A detailed summary of the traffic volumes and LOS at intersections in the study area under existing (Year 2020) conditions can be found in the Transportation Summary Report prepared for the proposed project (Appendix C).

The results of the existing traffic conditions in the study area are presented in Table 3.14-2, below.

Table 3.14-2. Existing Traffic Conditions – Corridor Travel Times

Route	a.m. Peak Hours	p.m. Peak Hours
3rd Street - Grand to A	03:38	04:03
2nd Street - A to Grand	03:56	05:11
4th Street westbound - Grand to A	03:46	05:26
4th Street eastbound - A to Grand	03:55	05:42
Irwin Street - US-101 to Mission	02:18	03:40
Hetherton Street - US-101 to 2nd Street	02:14	03:14

Source: Transportation Study Report (Appendix C)
Travel times provided in minutes:seconds format.



Source: Kimley-Horn, 2021.

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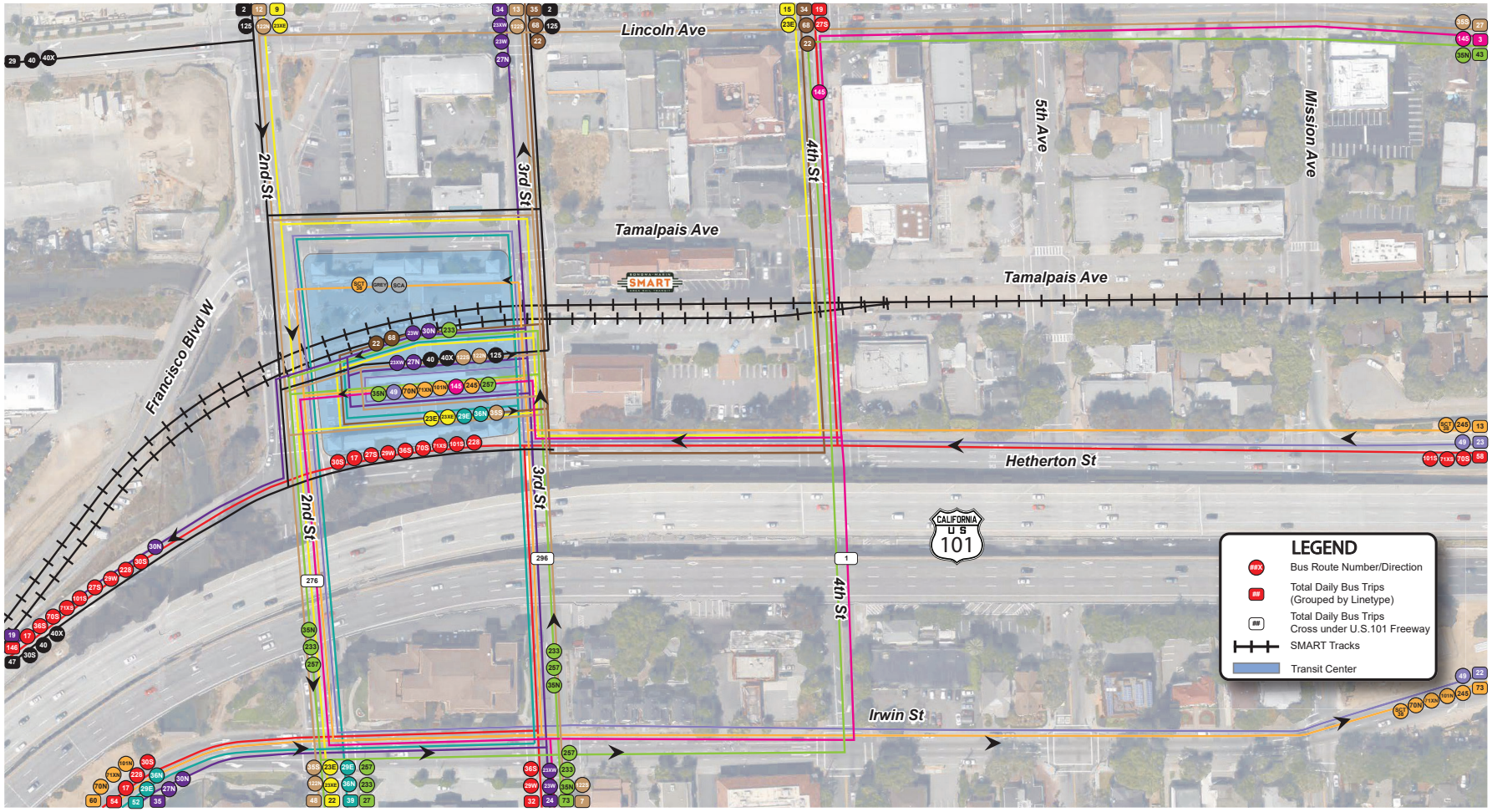
ICF

3.14-1

Transportation Analysis Study Intersections



Source: Kimley-Horn, 2021.

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3.14-2

San Rafael Transit Center Bus Routing

Route Temporarily Suspended
Updated schedules at goldengate.org

Commute Routes

Regional Routes

Limited Service

Bus Route Number

Bus Route Terminus

Ferry Routes

Other Ferry Routes

Bus Stop

Bus Pad

Park & Ride

Bike Rack

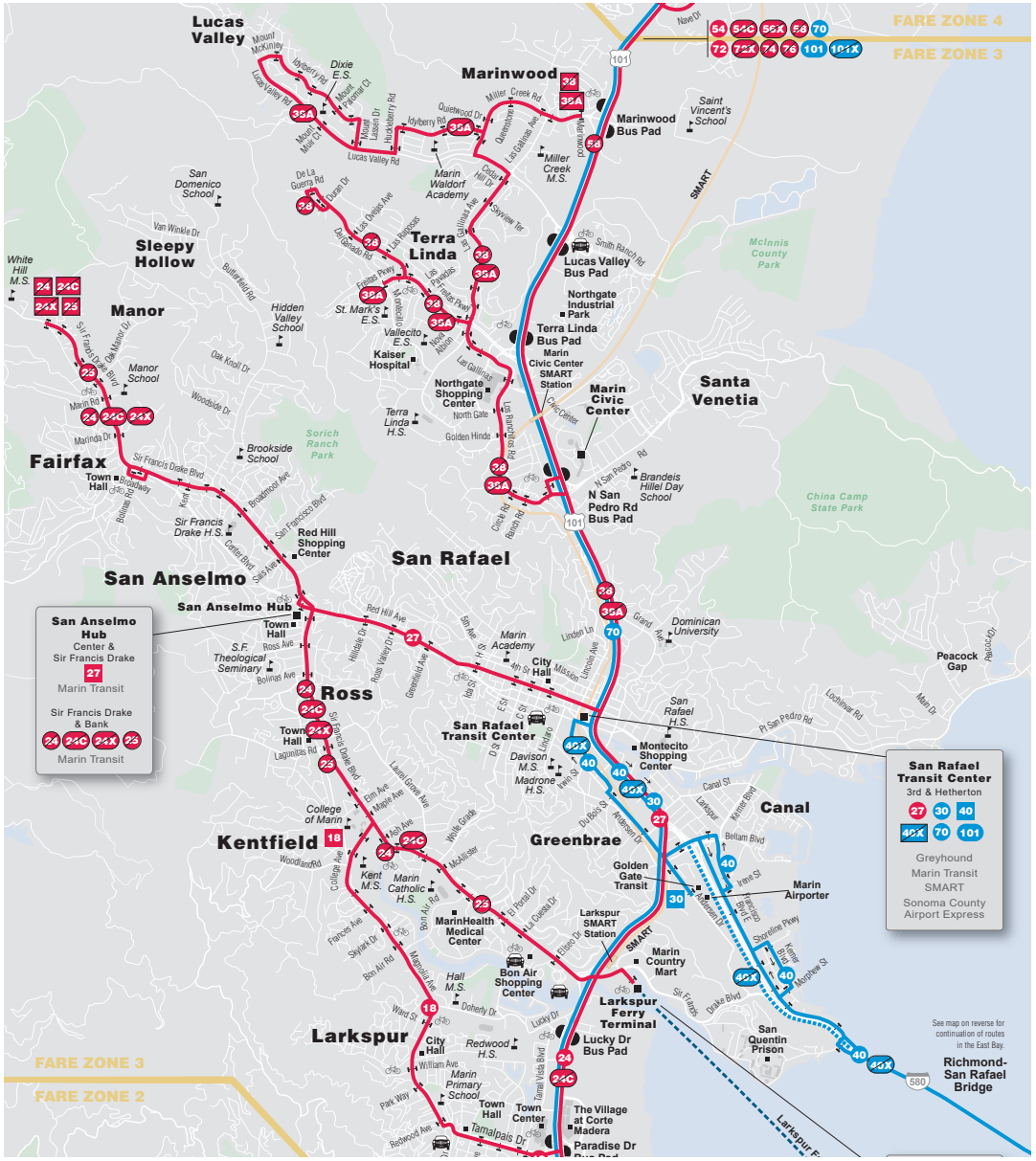
Fare Zone Boundary

Novato
Redwood & Grant

Transfer Point

511 Call 511 toll free for trip-planning assistance

rev 200913



Source: Kimley-Horn, 2021.

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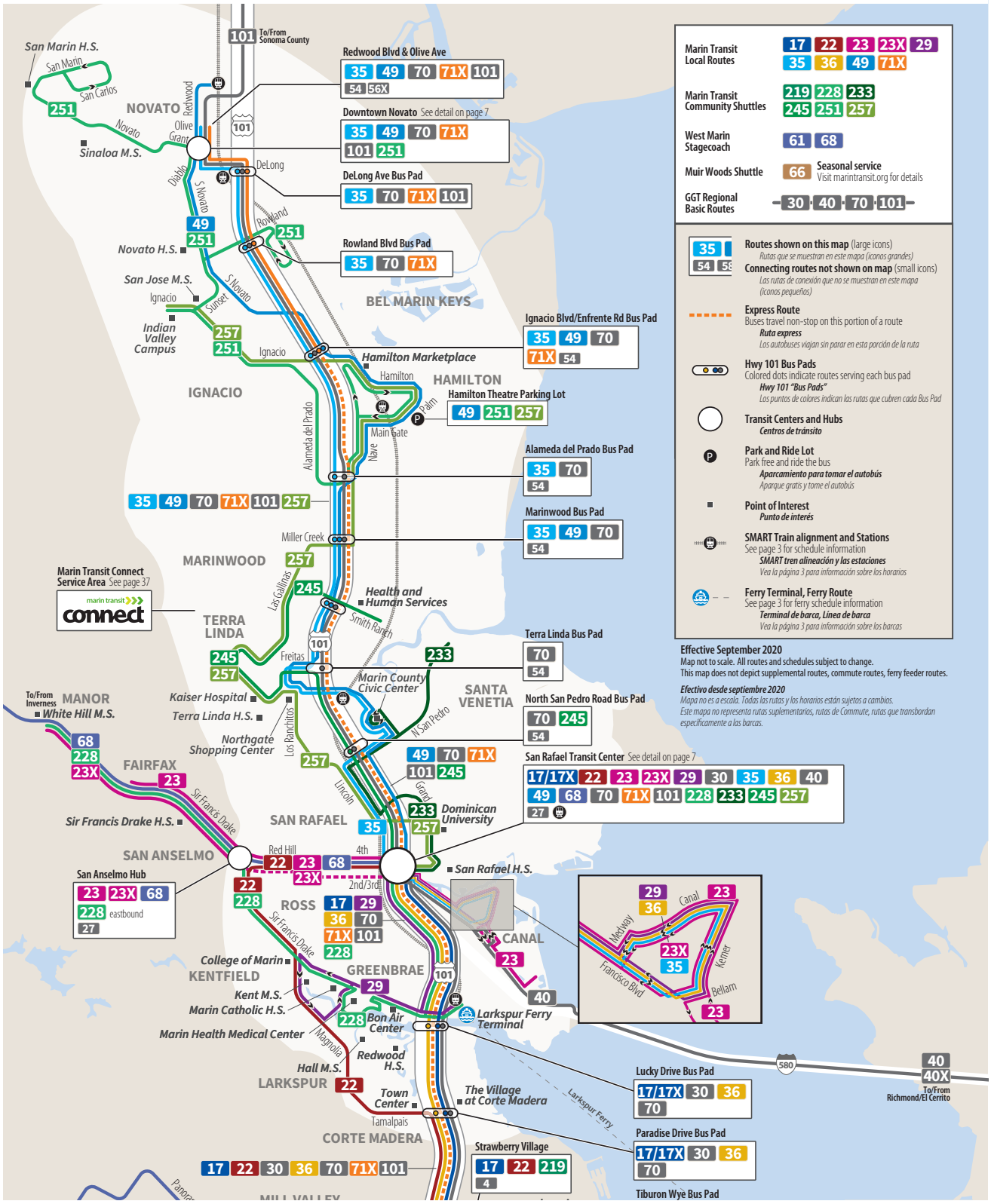
ICF

3.14-3
Golden Gate Transit System Map



Source: Kimley-Horn, 2021.

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3.14-4

Marin Transit System Map

Existing Transit Services

The existing transit center facility is serviced by Golden Gate Transit, Marin County Transit District (Marin Transit), SMART, Sonoma County Transit, Sonoma County Airport Express, and Greyhound. The existing transit center has 17 bus bays on site with amenities including bus shelters with benches and trash receptacles, wayfinding, driver facilities, customer service kiosks, retail space, and real-time arrival and departure displays. Although most bus bays are located off-street, there are on-street bus bays on Hetherton Street. Existing pick-up/drop-off space is on West Tamalpais Avenue. Prior to the extension of SMART to Larkspur, the transit center included space for taxis off-street. Taxis were relocated to West Tamalpais Avenue with the SMART extension project.

The analysis in Section 3.14.2.3, Impacts, is based on existing transit conditions before the COVID-19 pandemic. Existing bus routing at the transit center is shown on Figure 3.14-2 and reflects conditions prior to March 2020. Since the pandemic, some services, such as Sonoma County Transit, no longer serve the transit center.

Golden Gate Transit

Golden Gate Transit primarily serves Marin and Sonoma Counties, and also provides commute service to San Francisco and Contra Costa County. Golden Gate Transit provides service to San Rafael Transit Center through the following routes: Route 27, Route 30, Route 40/40X, Route 70, and Route 101. Figure 3.14-3 shows the Golden Gate Transit service map for Marin County.

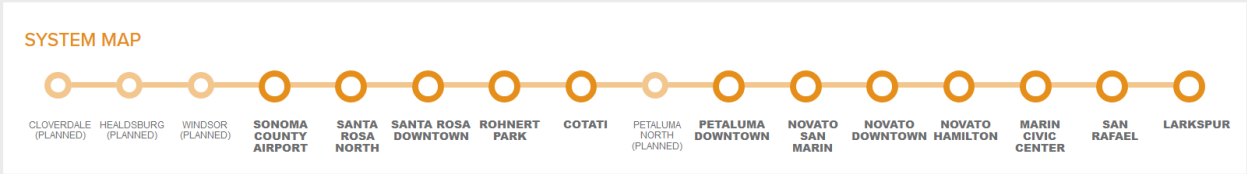
Marin Transit

Marin Transit primarily serves Marin County and provides service to San Rafael Transit Center through the following routes: Route 17, Route 22, Route 23/23X, Route 29, Route 35, Route 36, Route 49, Route 68, Route 71/71X, Route 122, Route 125, Route 145, Route 228, Route 233, Route 245, and Route 257. Figure 3.14-4 shows the Marin Transit service map.

SMART

SMART is a passenger-rail service linking Marin and Sonoma Counties. The San Rafael SMART station is at 3rd Street between West and East Tamalpais Avenue. This stop serves as a transfer point for bus riders at San Rafael Transit Center. SMART service terminates to the south at Larkspur Ferry Terminal and to the north at Sonoma County Airport. Figure 3.14-5 shows the existing and planned SMART system stations.

Figure 3.14-5. SMART System Map



Sonoma County Transit

Sonoma County Transit provides transit locally within Sonoma County, and also provides select routes connecting to regional destinations. The agency provided one route (Route 38) that

terminated at San Rafael Transit Center; this route has been suspended during the COVID-19 pandemic and Sonoma County Transit has yet to establish a reopening date.

Sonoma County Airport Express

Sonoma County Airport Express provides scheduled transportation from Sonoma County to San Francisco International Airport (SFO) and Oakland International Airport (OAK). The airport express has scheduled stops at San Rafael Transit Center. This service was temporarily suspended during the COVID-19 pandemic but was reinstated on May 3, 2021.

Greyhound

Greyhound is an intercity bus carrier serving destinations nationwide. Currently, Greyhound stops at San Rafael Transit Center once a day.

Ridership and Transfer Activity

A summary of daily boardings for Golden Gate Transit and Marin Transit services at San Rafael Transit Center is provided in Table 3.14-3. The transit center experiences 4,440 daily boardings on weekdays, not including ridership on airport coach service, Greyhound buses, and Sonoma County Transit Route 38. The busiest routes at the transit center are Marin Transit Routes 35 and 36. Golden Gate Transit Routes 40, 70, and 101 and Marin Transit Route 17 also have strong ridership at the transit center.

Table 3.14-3. Daily San Rafael Transit Center Bus Ridership

Route	Average Daily Boardings
Marin Transit Route	
17	384
22	192
23	234
23X	43
29	140
35	835
36	515
49	204
68	39
71X	167
122	47
125	3
145	45
228	79
233	34
245	79
257	65

Route	Average Daily Boardings
Golden Gate Transit Route	
27	86
30	181
31	18
40	366
44	7
70	336
101	341
Total	4,440

Source: Marin Transit 2017; District 2019

The Transportation Summary Report prepared for the proposed project found that on a daily basis, 35 percent of daily bus boardings at the transit center are transfers. This percentage is based only on transfers that can be tracked through fares; this includes either recorded uses of paper transfer tickets or transfers recorded in the Clipper system. Riders not utilizing transfer tickets or Clipper to make transfer movements are not captured in this analysis.

The largest driver of transfer activity is transfers between east-west bus routes and north-south bus routes providing service along US-101. Route 35 is the greatest generator of transfer activity, accounting for 569 transfers to or from that route. Transfer activity at the transit center peaks between 4 p.m. and 5 p.m., with 167 transfers occurring during that hour alone. Morning peak activity occurs between 7 a.m. and 9 a.m., with an average of 136 transfers occurring per hour during that period. The high level of transfers suggests the need to ensure that the transit center facilitates this activity. Strong transfer pairs should be located near each other to minimize transfer times. The transit center operates on a pulse system,[1] with multiple routes having coordinated arrival and departure times within a 5-minute pulse period.

To complete the Transportation Summary Report for the proposed project, on-board survey data were used to assess modes of access for passengers not making a transfer. With the limited number of surveys received, this information should be considered approximate. Half of all passengers boarding a bus at the transit center arrive by walking, making pedestrian connections to the transit center a critical element of a new transit center. Six percent of passengers access the transit center by bicycle; providing adequate bicycle parking and providing connectivity to the San Rafael bicycle network would support improved access for these riders.

At the time of the transit ridership data collection for this proposed project (2017), SMART had recently opened its initial operating segment and had yet to extend to Larkspur. At the time, the SMART system observed an average of 2,100 weekday boardings; detailed station level ridership information was not made available. Anecdotally, the Downtown San Rafael Station is known to be one of the busiest in the system. It is anticipated that SMART transfer activity has changed since the period of data collection in 2017. With the extension of SMART to Larkspur, Route 31 was eliminated, which, at the time of the data collection, was the route with the highest level of transfer

[1] A pulse transit system establishes timed transfers between multiple routes in one location (or, in some cases, multiple locations) where buses wait for each other in order to allow passengers to transfer between them. In a pulse transit system, a transfer will often only mean a few minutes' wait.

activity with SMART at the San Rafael Transit Center. It is expected that SMART transfer activity to other routes will increase as SMART ridership increases.

Existing Pedestrian Facilities

The transit center is within Downtown San Rafael, which has high levels of pedestrian activity. The 4th Street corridor represents the primary commercial corridor in the Downtown area, with a number of businesses and shopping destinations, particularly west of Lincoln Avenue. Other important generators of pedestrian activity in the area include San Rafael High School (on the north side of 3rd Street east of US-101) and the BioMarin campus at the southwest corner of Lincoln Avenue and 2nd Street.

Most roadways in the study area, with the exception of portions of the south side of 2nd Street and the east side of Hetherton Street, include sidewalks. Crosswalks are provided at nearly all legs of each intersection, except for at certain locations along 2nd Street and 3rd Street. The crosswalk across the south leg of the Hetherton Street and 3rd Street intersection was recently removed by the City and replaced by a new crosswalk across the east leg of the same intersection. Signalized crosswalks are currently provided across both 4th Street and 5th Avenue at West and East Tamalpais Avenue.

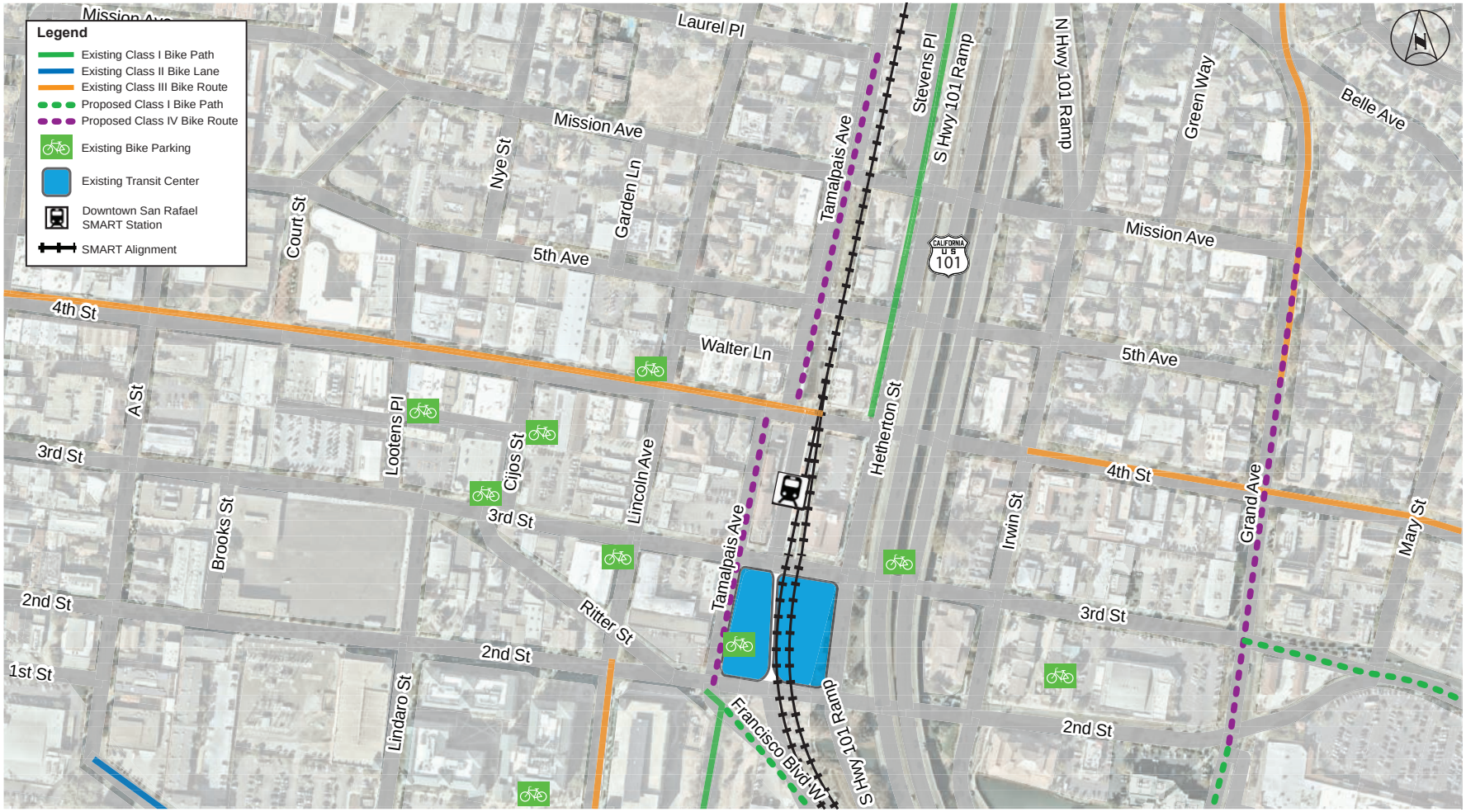
Intersection pedestrian counts were collected for the preparation of the proposed project Transportation Summary Report in January 2020 during the morning peak hours (7 a.m. to 9 a.m.) and the evening peak hours (4 p.m. to 6 p.m.) concurrent with the vehicle data collection. The busiest intersections for pedestrian travel in the study area were recorded as 3rd Street and Tamalpais Avenue (229 pedestrians in the morning peak hours and 276 pedestrians in the evening peak hours) and 4th Street and Lincoln Avenue (151 pedestrians in the morning peak hours and 312 pedestrians in the evening peak hours) A detailed description of pedestrian volumes for all study intersections during peak hours is summarized in the Transportation Summary Report.

Existing Bicycle Facilities

The following bicycle facilities are close to the project area and are shown on Figure 3.14-6:

- Puerto Suello Bike Path: A class I north-south off-street trail that runs along the east side of Hetherton Street and has a southern terminus at 4th Street
- Mahon Creek Path: A class I east-west off-street trail that runs along San Rafael Creek and through the BioMarin campus
- Class III east-west bicycle route on 4th Street throughout the study area, with a gap between Hetherton Street and Irwin Street
- Class III north-south bicycle route on Lincoln Avenue with a northern terminus at 2nd Street
- Class III north-south bicycle route on Grand Avenue with a southern terminus at 5th Avenue

Existing bicycle parking at the existing transit center consists of two racks with a capacity for eight bicycles each. Additionally, there are 10 U-shaped bicycle racks and four bicycle lockers along the east side of West Tamalpais Avenue, immediately north of 4th Street.



Source: Kimley-Horn, 2021.

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3.14-6

Existing and Planned Bike Network

3.14.2 Environmental Impacts

Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.14.2.1 Methodology

With the implementation of SB 743 in July 2020, automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, is no longer considered a significant impact on the environment. Instead, lead agencies must prove that their selected analysis methodology aligns with SB 743's goals to promote infill development, reduce greenhouse gases, and reduce VMT.

The Transportation Study Report prepared for the proposed project included a review of existing local regulations related to transportation, VMT, and how proposed changes in roadway conditions would potentially affect hazards and emergency access in the study area. Forecasting software was used to model future conditions of the no-build and build alternatives under Existing (Year 2020) and Year 2040 conditions. The modeling completed in the Transportation Summary Report was used to determine when changes associated with the proposed project may conflict with applicable transportation plans, policies, or regulations and to determine if the implementation of the proposed project would affect VMT in the study area. A detailed description of modeling completed for the transportation analysis can be found in the Transportation Summary Report completed for the proposed project (Appendix C).

Existing Conditions Data Collection

The transportation analysis of existing conditions is based on data collected by the project team and information provided by Golden Gate Transit, Marin Transit, the City of San Rafael, TAM, and SMART.

The project team collected turning movement volumes during a.m. and p.m. peak hours, including bicycle and pedestrian volumes, at 42 study intersections in January 2020. These represent conditions prior to the impact of the coronavirus pandemic.

All transit information documented and analyzed in this report reflects pre-COVID-19 conditions. Golden Gate Transit, Marin Transit, and SMART provided information on existing transit routes and schedules for pre-COVID-19 conditions.

MTC provided Clipper transfer data, which were supplemented by farebox data provided by Golden Gate Transit and Marin Transit to determine transfer activity at the existing transit center.

Golden Gate Transit and Marin Transit provided on-board survey data, which were used to determine activity patterns at the existing transit center and modes of access and egress.

3.14.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to transportation and traffic.

Would the proposed project:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
- Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access?

State CEQA Guidelines Section 15064.3, Subdivision (b), refers to guidelines relating to analyzing potential impacts using VMT as a threshold of significance. These guidelines went into effect in the City of San Rafael on July 1, 2020. Therefore, a detailed discussion of LOS and traffic congestion is not included in this analysis but is provided in the Transportation Summary Report prepared for the proposed project (Appendix C). LOS and traffic congestion are only discussed in this analysis when changes associated with the proposed project may conflict with any applicable transportation plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating congestion impacts.

3.14.2.3 Impacts

Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities

Construction

All Build Alternatives

For all build alternatives, construction would occur within dense urban settings surrounded by a mix of land uses including commercial, retail, civic/institutional, and residential uses. Construction can be expected to occur at any of the four build alternative locations. Section 3.14.1.1, Regulatory Setting, provides a summary of the applicable plans, ordinances, and policies establishing performance of the circulation system for the regional, county, and City jurisdictions where the build alternatives would be located.

To reduce construction-related impacts, such as access disruption and traffic congestion, on adjacent land uses and roadways, a Traffic Control Plan, as described in Chapter 2, Project Description, would be implemented. The Traffic Control Plan would minimize obstructions at all major thoroughfares, which would help to ensure continued traffic access to the project area and nearby properties. The Traffic Control Plan would be developed in coordination with the City of San Rafael, emergency providers, and transit in the region and include provisions for construction truck marshaling to prevent congestion from construction traffic on roads leading to and from the project area. As necessary, this plan would include detours and provisions for clear signage. Therefore, with regard to potentially conflicting with a program, plan, ordinance, or policy addressing the circulation system during construction, including transit, roadway, bicycle, and pedestrian facilities, a ***less-than-significant*** impact would occur.

Operations

Move Whistlestop Alternative

As shown in Table 3.14-4, the Move Whistlestop Alternative would be generally consistent with existing transportation regulations and policies included in *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*. This is because the Move Whistlestop Alternative is a transit-supportive project that would construct new transit facilities adjacent to the existing transit center. The proposed transit facilities would not directly result in increased transit service compared to service at the existing transit center. However, the proposed facilities would improve the efficiency of bus operations and create operational flexibility for movements into and out of the transit center. Therefore, the improvements may simplify future expansion of transit service; however, no expansion of transit services is currently planned. While not a part of this proposed project, future improvements in transit service would be anticipated to result in trips shifting from automobile to public transit, thereby reducing vehicle traffic on the regional roadway network.

Once operational, the Move Whistlestop Alternative would generally result in a reduction in the average delay at the congested intersections under Year 2020 conditions. This reduction in average intersection delay would be consistent with policies and programs of *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040* identified in Table 3.14-4. Additionally, despite some localized traffic delay under Year 2020 conditions, operations of all build alternatives would generally improve travel time along corridors in the study area and would be consistent with traffic standards identified in *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*.

As shown in Table 3.14-4, the Move Whistlestop Alternative would be consistent with the regional plans of the MTC, TAM, and the City, and would support transit services in Marin County. While the findings of the Transportation Summary Report (Appendix C) did identify some minor inconsistencies with Policy C-5 of *The City of San Rafael General Plan 2020* for this alternative under Year 2040 conditions, including increased delays at 5th Street and Court Street during p.m. hours, congestion in the project vicinity under the Move Whistlestop Alternative would be similar or improved under 2040 conditions. Additionally, Policy M.2-5 of the Draft *San Rafael General Plan 2040* would supersede Policy C-5 upon approval and would exempt intersections and arterials within the boundaries of Downtown San Rafael from LOS or congestion consistency analysis.

The Transportation Summary Report (Appendix C) also found minor inconsistencies with Policy C-29 (Better Use of Existing Parking) of *The City of San Rafael General Plan 2020* and Policy M-7.1 (Optimize Existing [Parking] Supply) of the Draft *San Rafael General Plan 2040*; however, parking availability in the project vicinity would be optimized according to existing use patterns following the completion of project construction and would benefit from improved transit access associated with project implementation. Therefore, the Move Whistlestop Alternative would not substantially conflict with any applicable transportation plan, policy, or regulation, and the impact would be ***less than significant***. No mitigation is required.

Adapt Whistlestop Alternative

Impacts from the Adapt Whistlestop Alternative related to transportation regulations and policies shown in Table 3.14-4 would generally be consistent with impacts associated with the Move Whistlestop Alternative, described above.

As described in detail in the Transportation Summary Report (Appendix C) prepared for the proposed project, the Adapt Whistlestop Alternative would not include any geometric changes or forecasted roadway conditions that would significantly conflict with transportation regulations and policies identified in *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*. While the findings of the Transportation Summary Report did identify some minor inconsistencies with Policy C-5 of *The City of San Rafael General Plan 2020* for this alternative under Year 2040 conditions, including increased delays at 5th Street and Court Street during p.m. hours, congestion in the project vicinity under the Adapt Whistlestop Alternative would be similar or improved under 2040 conditions. Additionally, Policy M.2-5 of the Draft *San Rafael General Plan 2040* would supersede Policy C-5 upon approval and would exempt intersections and arterials within the boundaries of Downtown San Rafael from LOS or congestion consistency analysis..

The Transportation Summary Report also found minor inconsistencies with Policy C-29 (Better Use of Existing Parking) of *The City of San Rafael General Plan 2020* and Policy M-7.1 (Optimize Existing [Parking] Supply) of the Draft *San Rafael General Plan 2040*, similar to the Move Whistlestop Alternative; however, parking availability in the project vicinity would be optimized according to existing use patterns following the completion of project construction and would benefit from increases in transit access associated with project implementation. Therefore, the Adapt Whistlestop Alternative would not substantially conflict with any applicable transportation plan, policy, or regulation, and the impact would be ***less than significant***. No mitigation is required.

4th Street Gateway Alternative

According to the findings of the Transportation Summary Report (Appendix C), the 4th Street Gateway Alternative would result in multiple inconsistencies with *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*. These inconsistencies would result from increased intersection delays, longer corridor travel times, and gridlock conditions under Year 2040 conditions that would conflict with Policy C-5 of *The City of San Rafael General Plan 2020* and therefore result in a **significant** impact related to the implementation of this plan. Additionally, the forecasted Year 2040 conditions associated with the 4th Street Gateway Alternative would be inconsistent with Program M-2.4B of the Draft *San Rafael General Plan 2040*. The 4th Street Gateway Alternative would be inconsistent with Program M-2.4B, as it would substantially increase vehicle idling time in the project vicinity under Year 2040 conditions. The 4th Street Gateway Alternative would also be partially inconsistent with Program M-2.2B and Policy M-2.5 of the Draft *San Rafael General Plan 2040,* due to the substantial increases in vehicle idling time in the project vicinity under Year 2040 conditions and the removal of the southbound right-turn from Hetherton Street to 4th Street. However, the 4th Street Gateway Alternative remains partially consistent with Program M-2.2B, as it supports efforts of the City Traffic Engineer to prioritize safety in the project vicinity while configuring and reconfiguring street patterns. Additionally, while the 4th Street Gateway Alternative would result in substantial increases in vehicle idling time in the project vicinity under Year 2040 conditions, this alternative would not be subject to LOS standards due to the Policy M-2.5(c) Downtown Standards, resulting in partial consistency with the policy. The alternative's inconsistencies with *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040* would interfere with the implementation of future land use development and long-term roadway improvements identified by these plans. Mitigation for these inconsistency impacts is considered infeasible due to the existing level of development in the City and the planned future development identified in *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*.

Therefore, impacts associated with the 4th Street Gateway Alternative would remain ***significant and unavoidable*** under Year 2040 conditions.

Under the Freeway Alternative

Impacts from the Under the Freeway Alternative on transportation regulations and policies shown in Table 3.14-4 would generally be consistent with impacts associated with the Move Whistlestop Alternative, described above.

As described in detail in the Transportation Summary Report (Appendix C) prepared for the proposed project, the Under the Freeway Alternative would not include any geometric changes or forecasted roadway conditions that would significantly conflict with transportation regulations and policies identified in *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*. While the findings of the Transportation Summary Report did identify some minor inconsistencies with Policy C-5 of *The City of San Rafael General Plan 2020* for this alternative under Year 2040 conditions, including allowing intersections to continue to operate with high levels of delay, the Under the Freeway Alternative would not result in additional delays at intersections under Year 2040 conditions and would generally improve congestion in the project vicinity. Additionally, Policy M.2-5 of the Draft *San Rafael General Plan 2040* would supersede Policy C-5 upon approval and would exempt intersections and arterials within the boundaries of Downtown San Rafael from LOS or congestion consistency analysis.

The Transportation Summary Report also found minor inconsistencies with Policy C-29 (Better Use of Existing Parking) of *The City of San Rafael General Plan 2020* and Policy M-7.1 (Optimize Existing [Parking] Supply) of the Draft *San Rafael General Plan 2040*, similar to the Move Whistlestop Alternative; however, the Under the Freeway Alternative contains additional minor inconsistencies in relation to Program-4.3 (Arrival Experience) and Policy M-4.7 (Intermodal Transit Hub), and substantial inconsistencies with Policy M-7.9 (Parking for Transit Users) and Program M-7.9A (Commuter Parking) of the Draft *San Rafael General Plan 2040*.

As described in Section 3.1, Aesthetics, the Under the Freeway Alternative would create a transit center that does not have the same pedestrian-scale feeling as the other three build alternatives. While implementation of the planned aesthetic treatments for the Under the Freeway Alternative would improve the aesthetics associated with the area under the freeway, this alternative would result in a lower positive experience for transit users arriving in the City, resulting in only partial consistency with Program M-4.3 (Arrival Experience) and Policy M-4.7 (Intermodal Transit Hub) of the Draft *San Rafael General Plan 2040*. Additionally, the Under the Freeway Alternative would be located in an area under the freeway that is currently being utilized as a Caltrans park-and-ride lot and as additional parking for the existing SMART stations and San Rafael Transit Center. Replacement parking has yet to be located for the lots that would be lost due to this alternative, and any replacement parking identified may not be in Downtown San Rafael, resulting in **significant** impacts related to the implementation of Policy M-7.9 (Parking for Transit Users) and Program M-7.9A (Commuter Parking) of the Draft *San Rafael General Plan 2040*. Mitigation for these parking policy inconsistencies and/or replacement parking within Downtown San Rafael may be infeasible due to the existing level of development in the City and the planned future development identified in *The City of San Rafael General Plan 2020* and Draft *San Rafael General Plan 2040*. Therefore, impacts associated with inconsistency with parking policies for the Under the Freeway Alternative would remain **significant and unavoidable** under Year 2040 conditions.

Mitigation Measures

No feasible mitigation measures have been identified.

Level of consistency key: ○ = Not consistent; ◐ = Partially consistent; ● = Consistent

Table 3.14-4. Consistency with Applicable Transportation Goals and Policies

Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
MTC's Plan Bay Area 2040	Plan Bay Area 2040 provides a roadmap for accommodating projected household and employment growth in the Bay Area by 2040 as well as a transportation investment strategy for the region. Plan Bay Area 2040 details how the Bay Area can make progress toward the region's long-range transportation and land use goals while meeting greenhouse gas reduction targets set by the California Air Resources Board. Plan Bay Area 2040 does not fund specific transportation projects or changes local land use policies.	●	●	●
City of San Rafael General Plan 2020 (Transportation Policies)	Policy C-1. Regional Transportation Planning. Actively coordinate with other jurisdictions, regional transportation planning agencies, and transit providers to expand and improve local and regional transportation choice. Work cooperatively to improve transit and paratransit services, achieve needed highway corridor improvements, and improve the regional bicycling network. As part of this effort, support implementation of Marin County's 25-Year Transportation Vision.	●	●	●
	Program C-1a. Participation in CMA, MTC and Other Regional Transportation Planning Efforts. Continue to participate in and monitor activities of regional transportation planning agencies, including but not limited to the Transportation Authority of Marin and the Metropolitan Transportation Commission, and actively support implementation of Marin County's 25-Year Transportation Vision.	●	●	●
	Program C-3a. Transportation Technology. Use the most effective technologies in managing the City's roadways and congestion. For example, support timed connections at transit hubs, and promote the use of transportation information systems.	●	●	●
	Policy C-4. Safe Roadway Design. Design of roadways should be safe and convenient for motor vehicles, transit, bicycles and pedestrians. Place highest priority on safety. In order to maximize safety and multimodal mobility, the City Council may determine that an intersection is exempt from the applicable intersection level of service standard where it is determined that a circulation improvement is needed for public safety considerations, including bicycle and pedestrian safety, and/or transit use improvements.	●	●	●

Level of consistency key: ○ = Not consistent; ◐ = Partially consistent; ● = Consistent

Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Program C-4a. Street Pattern and Traffic Flow. Support efforts by the City Traffic Engineer to configure or re-configure street patterns so as to improve traffic flow and turning movements in balance with safety considerations and the desire not to widen roads.	●	◐	●
	Program C-4b. Street Design Criteria to Support Alternative Modes. Establish street design criteria to the extent permitted by State law to support alternative transportation modes to better meet user needs and minimize conflicts between competing modes.	●	◐	●
	Policy C-5. Traffic Level of Service Standards.			
	A. Intersection LOS. In order to ensure an effective roadway network, maintain adequate traffic levels of service (LOS) consistent with standards for signalized intersections in the a.m. and p.m. peak hours, i.e., LOS D Citywide except as noted for the Mission Avenue/Irwin Street (LOS F), and 3rd Street/Union Street (LOS E).			
	B. Exemptions. Signalized intersections at Highway 101 and Interstate 580 on-ramps and off-ramps are exempt from LOS standards because delay at these locations is affected by regional traffic and not significantly impacted by local measures.	◐	○	◐
	C. Evaluation of Project Merits. In order to balance the City's objectives to provide affordable housing, maintain a vital economy and provide desired community services with the need to manage traffic congestion, projects that would exceed the level of service standards set forth above may be approved if the City Council finds that the benefits of the project to the community outweigh the resulting traffic impacts.			
	Policy C-8. Eliminating and Shifting Peak Hour Trips. Support efforts to limit traffic congestion through eliminating low occupancy auto trips or shifting peak hour trips to off-peak hours. Possible means include telecommuting, walking and bicycling, flexible work schedules, car and vanpooling and other Transportation Demand Management approaches	●	●	●

Level of consistency key: ○ = Not consistent; ◐ = Partially consistent; ● = Consistent

Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy C-9. Access for Emergency Services. Provide safe routes for emergency vehicle access so that that emergency services can be delivered when Highway 101 or 580 are closed or congested with traffic.	●	◐	●
	Policy C-11. Alternative Transportation Mode Users. Encourage and promote individuals to use alternative modes of transportation, such as regional and local transit, carpooling, bicycling, walking and use of low-impact alternative vehicles. Support development of programs that provide incentives for individuals to choose alternative modes.	●	●	●
	Program C-11e. Reduction of Single Occupancy Vehicles. Encourage developers of new projects in San Rafael, including City projects, to provide improvements that reduce the use of single occupancy vehicles. These improvements could include preferential parking spaces for carpools, bicycle storage and parking facilities, and bus stop shelters.	●	●	●
	Policy C-14. Transit Network. Encourage the continued development of a safe, efficient, and reliable regional and local transit network to provide convenient alternatives to driving.	●	●	●
	Program C-14a. Transit Network. Support Countywide efforts to sustain and expand Marin County's transit network. Work with neighborhoods, employers, transit providers, transportation planning agencies and funding agencies to improve and expand regional transit to and from adjacent counties, increase local transit services, and provide responsive paratransit services.	●	●	●
	Policy C-16. Transit Information. Encourage the development and dissemination of local and regional transit information to facilitate greater use of transit systems. This includes service, educational and promotional information. Support efforts to provide transit information in languages other than English as needed.	●	●	●
	Program C-16a. Transit Information Dissemination. Encourage development and distribution of transit information through printed materials, kiosks, web sites, radio and television broadcasts, and other means. Provide transit information on the City's website, at City offices open to the public and through other dissemination means. Include transit access information on City meeting notices and in notices for City-permitted events, and encourage merchants to provide.	●	●	●

Level of consistency key: ○ = Not consistent; ◐ = Partially consistent; ● = Consistent

Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy C-17. Regional Transit Options. Encourage expansion of existing regional transit connecting Marin with adjacent counties, including basic service, express bus service, new commuter rail service, and ferry service.	●	●	●
	Program C-17a. SMART. Support the following design features for SMART commuter service within San Rafael: 1. Establish stations in Downtown and in the Civic Center that will serve as multi-modal commuter transit hubs. 2. Design stations and rail crossings safe for pedestrians and with minimal impacts on roadway traffic. 3. Support crossings at-grade through Downtown and strongly advocate for trains that are of a length that they avoid blocking traffic at an intersection. 4. Ensure that new development adjacent to the rail line is set back a safe distance and adequately attenuates noise. 5. Encourage high-density transit-oriented development in the vicinity of the rail stations. 6. Include noise mitigation as described in policy N-9 (Sonoma Marin Area Rail Transit). 7. Provide a north/south bike/pedestrian path on or adjacent to the railroad right-of-way.	●	●	●
	Policy C-18. Local Transit Options. Support improvement and expansion of local transit options including local bus, shuttle and taxi services. a) Local Bus Service. Support efforts to improve bus routing, frequency and stop amenities to meet local needs. b) Local Shuttles. Support efforts to create shuttle services as they become feasible to serve specialized populations and areas of San Rafael. If rail service is developed, support shuttle service connections between rail stations and major employers. c) Other Local Transit. Support Dial-A-Ride and taxi services serving San Rafael.	●	●	●
	Program C-18a. Improved Bus Stops. Continue to support efforts to improve bus stops to provide a safe and convenient experience for riders. Allow commercial advertising to fund bus stop upgrades and maintenance.	●	●	●

Level of consistency key: ○ = Not consistent; ◐ = Partially consistent; ● = Consistent

Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy C-19. Paratransit Options. Encourage expansion of paratransit services as needed to serve specialized populations including seniors and persons with disabilities.	●	●	●
	Policy C-20. Intermodal Transit Hubs. Support efforts to develop intermodal transit hubs in Downtown and at the Civic Center to provide convenient and safe connections and support for bus, rail, shuttle, bicycle, and pedestrian users, as well as automobile drivers using transit services. Hubs should include secure bicycle parking and efficient drop-off and pick-up areas without adversely affecting surrounding traffic flow. Reference the Downtown Station Area Plan and the Civic Center Station Area Plan, which address and present recommendations for transportation and access improvements to transit within a half mile radius of the two SMART stations.	●	●	●
	Program C-20a. Transit Hubs. Work with Marin County, the Marin County Transit District, SMART Commission, the Golden Gate Bridge Transportation District, and other regional agencies to ensure that intermodal transit hubs are designed to be convenient and safe for San Rafael users. Work with SMART on the design of the new rail stations and the transit center interaction with the rail service.	●	●	●
	Policy C-26. Bicycle Plan Implementation. Make bicycling and walking an integral part of daily life in San Rafael by implementing the San Rafael's Bicycle and Pedestrian Master Plan.	●	●	●
	Program C-26a Implementation. Implement provisions of the Bicycle and Pedestrian Master Plan in conjunction with planned roadway improvements or through development or redevelopment of properties fronting on the proposed routes.	●	●	●
	Policy C-27. Pedestrian Plan Implementation. Promote walking as the transportation mode of choice for short trips by implementing the pedestrian element of the City's Bicycle and Pedestrian Master Plan. In addition to policies and programs outlined in the Bicycle and Pedestrian Plan, provide support for the following programs.	●	●	●
	Program C-27f. Disabled Access. Continue efforts to improve access for those with disabilities by complying with Federal and State requirements of the Americans with Disabilities Act (ADA). Seek to incorporate ADA improvements into street and sidewalk projects. Develop a program identifying street barriers to pedestrian access, and prioritize curb cut and ramp improvements.	●	●	●

Level of consistency key: ○ = Not consistent; ◐ = Partially consistent; ● = Consistent

Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy C-29. Better Use of Parking Resources. Improve use of existing parking and create new parking opportunities through innovative programs, public/private partnerships and cooperation, and land use policies.	◐	◐	◐
	Policy C-30. Downtown Parking. Optimize the use of parking spaces Downtown.	●	●	●
	Policy C-32. Parking for Alternative Modes of Transportation. Use preferential parking as an incentive to encourage alternative modes of transportation.	●	●	●
	Policy SU-1. Land Use. Implement General Plan land use policies to increase residential and commercial densities within walking distance of high frequency transit centers and corridors.	●	●	●
	Policy SU-2. Promote Alternative Transportation. Decrease miles traveled in single-occupant vehicles.	●	●	●
	Program SU-2c. Bus Service. Support Marin Transit and the Transportation Authority of Marin in the planning, funding and implementation of additional transit services that are cost-effective and responsive to existing and future transit demand.	●	●	●
	Program SU-2e. Sidewalk and Street Improvements. Continue to implement sidewalk and bicycle improvements in accordance with the adopted Bicycle and Pedestrian Master Plan and the Safe Routes to School program.	●	●	●
Draft San Rafael General Plan 2040	Policy M-1.1: Regional Transportation Planning. Actively coordinate with other jurisdictions, agencies, and service providers to improve the local and regional transportation system and advocate for the City's interests. Work cooperatively to improve transit and paratransit services, achieve needed highway improvements, and improve the regional bicycle and pedestrian networks.	●	●	●
	Program M-1.1A: Participation in Countywide and Regional Transportation Planning. Actively participate in the planning activities of the Transportation Authority of Marin, the Metropolitan Transportation Commission, SMART, and other transportation agencies and support implementation of cost-effective regional plans and programs.	●	●	●
	Program M-1.1B: Public Information About Transportation. Provide timely information and opportunities for public input on transportation issues and projects through workshops, neighborhood meetings, social media, staff reports, and other means.	●	●	●

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Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy M-2.2. Safety. Design a transportation system that is safe and serves people using all modes of travel. Higher levels of congestion may be accepted at particular intersections if necessary to ensure the safety of all travelers, including pedestrians, bicycles, motorists, and transit users.	●	●	●
	Program M-2.2B. Street Pattern and Traffic Flow. Support efforts by the City Traffic Engineer to configure or re-configure street patterns to improve traffic flow and turning movements while prioritizing safety.	●	◘	●
	Policy M-2.4: Transportation Efficiency. Undertake improvements that manage lane capacity, traffic flow, and intersections more efficiently.	●	◘	●
	Program M-2.4B: Reducing Vehicle Idling. Support transportation network improvements to reduce vehicle idling, including synchronized signal timing.	●	○	●

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Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy M-2.5. Traffic Level of Service. Maintain traffic LOS standards that ensure an efficient roadway network and provide a consistent basis for evaluating the transportation effects of proposed development projects on local roadways. These standards shall generally be based on the performance of signalized intersections during the a.m. and p.m. peak hours. Arterial LOS standards may be used in lieu of (or in addition to) intersection LOS standards in cases where intersection spacing and road design characteristics make arterial LOS a more reliable and effective tool for predicting future impacts. A. Intersection LOS. LOS "D" shall be the citywide standard for intersections, except for intersections noted in the General Plan. B. Arterial Standards. LOS "D" shall be the citywide standard for arterials, except for roadways noted in the General Plan. C. Downtown Standards. Intersections and arterials within the boundaries of the Downtown San Rafael Precise Plan are not subject to LOS standards, recognizing their unique context, operation, and physical constraints, as well as their multi-modal character. Proactive measures shall be taken to address and manage Downtown congestion, evaluate and reduce the impacts of new development on the transportation network, and ensure the long-term functionality of streets and intersections. Traffic shall be monitored and evaluated to identify the need for improvements to ensure that Downtown streets adequate serve both local and regional traffic. D. Additional Provisions for Roads Operating at LOS "E" or "F." Where the adopted standard is LOS "E" or "F," measures should be taken to avoid further degradation of traffic conditions. Projects impacting roads operating at LOS "F" may still be subject to requirements to offset those impacts as a condition of approval.	●	◐	●

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Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy M-2.7. Proposed Mobility Improvements. Use Table 10-1 (Proposed Mobility Improvements) as the basis for transportation network improvements over the next 20 years. The improvements shown are intended to balance the City's goals of managing congestion, reducing vehicle miles traveled, and enhancing mobility and safety. Specific improvements will be implemented as conditions require and will be refined during the design phase. Table 10-1 may be amended as needed to reflect other design solutions and priorities, subject to City Council approval. Improvements will be implemented through the Capital Improvements Program using a variety of funding sources and may be subject to further environmental review.	●	●	●
	Policy M-3.1: VMT Reduction. Achieve State-mandated reductions in Vehicle Miles Traveled by requiring development and transportation projects to meet specific VMT metrics. In the event a proposed project does not meet these metrics, require measures to reduce the additional VMT associated with the project, consistent with thresholds approved by the City Council.	●	●	●
	Policy M-3.3: Transportation Demand Management. Encourage, and where appropriate require, transportation demand measures that reduce VMT and peak period travel demand. These measures include, but are not limited to, transit passes and flextime, work schedules, pedestrian and bicycle improvements, ridesharing, and changes to project design to reduce trip lengths and encourage cleaner modes of travel.	●	●	●
	Policy M-3.5: Alternative Transportation Modes. Support efforts to create convenient, cost-effective alternatives to single passenger auto travel. Ensure that public health, sanitation, and user safety is addressed in the design and operation of alternative travel modes.	●	●	●
	Policy M-3.7: Design Features that Support Transit. For projects located in or near transit hubs such as Downtown San Rafael, incorporate design features that facilitate walking, cycling, and easy access to transit.	●	●	●
	Policy M-4.1: Sustaining Public Transportation. Support a level of transit service frequency and routing that promotes transit usage, avoids overcrowding, and makes transit an attractive alternative to driving.	●	●	●

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Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Program M-4.1C: Partnerships. Encourage partnerships between local transit service providers to avoid redundancy, maximize coverage and efficiency, and improve transfers between transit systems.	●	●	●
	Program M-4.1D: Transit for Tourism. Support efforts to provide effective transit options for visitors to West Marin and other County tourist destinations, in order to reduce regional traffic flow through San Rafael.	●	●	●
	Program M-4.1E: Transit Information. Encourage the development and dissemination of information to facilitate transit use. This includes real-time, multi-lingual information on bus arrivals, departures, transfers, and routes. In addition, the City should include information on transit access on notices of City meetings and provide links to transit websites from its own website.	●	●	●
	Program M-4.1F: Public Health. Work with transit service providers to effectively respond to service and design challenges associated with rider safety during and after public health emergencies.	●	●	●
	Policy M-4.2: Regional Transit Options. Encourage expansion of regional transit connecting Marin with adjacent counties, including basic and express bus service, rail, and ferry service.	●	●	●
	Program M-4.2A: Regional Bus Service. Support expansion of regional bus service to and from other Bay Area counties, including expanded express bus service along the 101 and 580 corridors, and continued bus and shuttle service to the region's airports.	●	●	●
	Policy M-4.3: SMART Improvements. Maximize the potential benefits of Sonoma Marin Area Rail Transit (SMART) while minimizing potential conflicts between SMART trains, adjacent land uses, bicycle and pedestrian movement, and vehicle traffic circulation. City plans and programs related to SMART should be periodically evaluated based on changes in funding, operating costs, ridership, and other factors impacting service levels.	●	●	●
	Program M-4.3A: Rail Safety. Work with SMART to improve safety measures along the SMART tracks, reduce train noise, and avoid the blockage of intersections by trains.	●	●	●
	Program M-4.3B: Passenger Pickup and Drop-Off. Work with SMART on plans to improve passenger pick-up and drop-off, connectivity between trains and buses, and provisions for passenger parking (see also Policy M-7.9 on parking for transit users).	●	●	●

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Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Program M-4.3C: Arrival Experience. Create a welcoming experience for passengers arriving at the Downtown San Rafael and Civic Center stations, including wayfinding signage, easy transfers, and clearly marked, well lit pathways to nearby destinations.	●	●	◐
	Program M-4.3E: Downtown Crossings. Continue to work with SMART to reduce congestion related to grade-level train crossings in Downtown San Rafael. Encourage SMART to assess the potential cost, as well potential funding sources, to elevate the tracks through Downtown.	●	●	●
	Policy M-4.4: Local Transit Options. Encourage local transit systems that connect San Rafael neighborhoods, employment centers, and other destinations.	●	●	●
	Program M-4.4A: Local Bus Service. Support Marin Transit and Golden Gate Transit efforts to improve bus routing, frequency, and equipment, and to keep bus fares affordable.	●	●	●
	Program M-4.4B: Improved Bus Stops. Support efforts to improve bus stops and shelters to provide a safe and pleasant experience for riders. Allow commercial advertising to fund bus shelter upgrades and maintenance.	●	●	●
	Program M-4.4C: Local Shuttle Programs. Support efforts to create financially feasible shuttle, jitney, and circulator bus services to connect passengers arriving at the San Rafael Transit Center and SMART stations to their destinations.	●	●	●
	Policy M-4.6: Paratransit Options. Encourage expansion of paratransit and flexible route services as needed to serve specialized populations including seniors, students, and persons with disabilities.	●	●	●
	Program M-4.6A: Other Local Transit. Support Dial-A-Ride, taxi, and transportation network company (TNC) services serving San Rafael.	●	●	●
	Program M-4.6B: Paratransit Service. Support continued Whistlestop Wheels service and expanded regional paratransit services where needed.	●	●	●
	Policy M-4.7: Intermodal Transit Hubs. Support efforts to develop intermodal transit hubs in Downtown and North San Rafael to provide safe, convenient connections for all travelers. Such hubs should include secure bicycle parking, EV charging stations, and efficient drop-off and pick-up areas and create a positive experience for those arriving in San Rafael.	●	●	◐

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Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Program M-4.7A: Transit Center Relocation. Complete the relocation process for the San Rafael Transit Center. Design of the facility should consider the effects on local street congestion and the safety of those walking or bicycling to and from the facility. Continue to work with transit service providers to coordinate schedules, transfers, and routing in a manner that is convenient for San Rafael travelers.	●	●	●
	Program M-4.7B: First Mile/ Last Mile Trips. Work with TAM, transit agencies, neighborhood groups, and the local business community to improve options for "first mile/ last mile" trips connecting regional transit hubs to nearby destinations.	●	●	●
	Program M-4.7C: Implementation of Other Plans. Implement the recommendations of the Downtown Precise Plan, the Downtown Station Area Plan, and the Civic Center Station Area Plan for coordination of transit services and improvement of connections between travel modes.	●	●	●
	Program M-5.1B: Emergency Access Considerations. Ensure that road redesign projects, including bicycle and pedestrian improvements, maintain evacuation capacity and emergency vehicle response time, particularly along designated evacuation routes.	●	●	●
	Policy M-6.1: Encouraging Walking and Cycling. Wherever feasible, encourage walking and cycling as the travel mode of choice for short trips, such as trips to school, parks, transit stops, and neighborhood services. Safe, walkable neighborhoods with pleasant, attractive streets, bike lanes, and sidewalks should be part of San Rafael's identity.	●	●	●
	Program M-6.1A: Bicycle and Pedestrian Master Plan Implementation. Maintain San Rafael's Bicycle and Pedestrian Master Plan (BPMP) and update the Plan as required to ensure eligibility for grant funding. The BPMP should be a guide for investment in pedestrian and bicycle infrastructure, and for programs to make walking and cycling a safer, more convenient way to travel.	●	●	●
	Program M-6.1B: Station Area Plans. Implement the pedestrian and bicycle improvements in the 2012 Downtown Station Area Plan and the 2012 Civic Center Station Area Plan.	●	●	●

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Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy M-6.2: Pedestrian and Bicycle Safety. Identify, prioritize, and implement pedestrian and bicycle safety improvements in order to reduce collisions and injuries, and eliminate fatalities.	●	●	●
	Program M-6.2A: Implementation of Safety Measures. Implement pedestrian and bicycle safety measures as described in the 2018 BPMP, including ADA compliant curb ramps, curb extensions in business districts, median refuge islands, active warning beacons, painted bike "boxes" at intersections, and signal phasing adjustments in areas with high bicycle volumes.	●	●	●
	Program M-6.2B: Vision Zero. Consistent with the BPMP, support a "Vision Zero" approach to safety among pedestrians and cyclists, with the goal of eliminating severe injuries and fatalities.	●	●	●
	Policy M-6.3: Connectivity. Develop pedestrian and bicycle networks that connect residents and visitors to major activity and shopping centers, existing and planned transit, and schools. Work to close gaps between existing facilities. Funding and prioritization for projects should consider relative costs and benefits, including such factors as safety, number of potential users, and impacts on parking.	●	●	●
	Program M-6.3A: Implementation of Pathway Improvements. Implement the major pedestrian and bicycle pathway, intersection, and lane improvements included in adopted City plans.	●	●	●
	Program M-6.3C: Bicycle Parking. Create additional bicycle parking and storage capacity at the SMART stations and in Downtown San Rafael.	●	●	●
	Policy M-6.7: Universal Design. Design and construct bicycle and pedestrian facilities to serve people of all ages and abilities, including children, seniors, families, and people with limited mobility.	●	●	●
	Program M-6.7A: ADA Compliance. Continue efforts to improve access for those with disabilities, including compliance with Federal and State accessibility requirements.	●	●	●
	Program M-6.7B: Best Practices. Continue to construct bicycle and pedestrian facilities according to the most up-to-date local, state, and national best practices and design guidelines.	●	●	●

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Plan	Policy/Program	Move Whistlestop and Adapt Whistlestop Alternatives	4th Street Gateway Alternative	Under the Freeway Alternative
	Policy M-7.1: Optimizing Existing Supply. Optimize the use of the existing parking supply. Expand the supply where needed through innovative programs, public/private partnerships, and land use policies.	◐	◐	◐
	Policy M-7.4: Downtown Parking. Maintain a sufficient number of Downtown parking spaces to meet demand and support local businesses.	●	●	●
	Policy M-7.9: Parking for Transit Users. Support regional efforts to fund and construct commuter parking along transit routes, near commuter bus pads, and near inter-modal commuter hubs in order to support use of transit. Parking areas should include secure parking for carpools, bicycles and other alternative modes and should minimize neighborhood impacts.	●	●	○
	Program M-7.9A: Commuter Parking. Regularly evaluate the need for parking around the SMART stations and San Rafael Transit Center, as well as ways to meet that need.	●	●	○

Conflict or Be Inconsistent with CEQA Guidelines §15064.3, Subdivision (b)

State CEQA Guidelines Section 15064.3, Subdivision (b), specifies applicable criteria for analyzing transportation impacts. Specifically, it states the following:

> Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements.

Construction

All Build Alternatives

Construction of the build alternatives would result in construction-related lane closures that could temporarily interfere with traffic circulation in the project area and cause roadway users to use alternate routes or circumvent the project area. The potential for construction to interfere with circulation and preferred routes in the project area would temporarily and intermittently result in minor increases in VMT in the project vicinity. As described in Chapter 2, Project Description, a Traffic Control Plan would be implemented to minimize obstructions at all major thoroughfares, which would help to ensure continued traffic access to the project area and reduce potential for traffic detours to result in increased VMT. As necessary, this plan would include detours and provisions for clear signage in areas identified in the Traffic Control Plan where temporary obstructions warrant changes to traffic circulation. A ***less-than-significant*** impact would occur.

Operations

All Build Alternatives

As discussed previously in regard to potential impacts related to programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, the proposed transit facilities would not directly result in increased transit service compared to service at the existing transit center. While not a part of this proposed project, future improvements in transit service would be anticipated to result in trips shifting from automobile to public transit, thereby reducing vehicle traffic on the regional roadway network and reducing overall VMT. This reduction in VMT associated with a shift from automobile to transit would inherently be greater than any VMT increase that may result from additional bus service or pick-up/drop-off activity at the transit center. While there would be localized vehicle traffic (and associated VMT) traveling to/from the proposed transit center, the existing transit center is close to the proposed new transit center alternative sites and would result in a negligible change in VMT to the new facilities. Consistent with the provisions of State CEQA Guidelines Section 15064.3, Subdivision (b), the proposed project would not increase VMT; therefore, the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

Substantially Increase Hazards Due to a Geometric Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)

Construction

Move Whistlestop and Adapt Whistlestop Alternatives

During construction, the introduction of construction equipment, materials, and personnel has the potential to temporarily increase hazards in the project area, as these uses tend to be incompatible with typical Downtown travel and activities. All construction activities associated with these build alternatives would comply with all construction standard provisions, including federal, state, and local railroad and roadway safety standards established by the Federal Transit Administration, Caltrans, and all applicable City and county agencies responsible for maintenance of train and vehicle traffic. As a result, during construction these build alternatives would not substantially increase hazards due to design features or incompatible uses, and impacts would be ***less than significant***.

4th Street Gateway Alternative

The 4th Street Gateway Alternative would redistribute traffic making southbound right turns from Hetherton Street to 4th Street. This would result from the removal of the right-turn movement at that location and the removal of transit traffic along East Tamalpais Avenue between 3rd Street and 4th Street. The 4th Street Gateway Alternative construction impacts would be the same as those of the Move Whistlestop and Adapt Whistlestop Alternatives outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The Under the Freeway Alternative would not include any geometric changes to the network other than the location of transit center driveways. The Under the Freeway Alternative construction impacts would be the same as those of the Move Whistlestop and Adapt Whistlestop Alternatives outlined above. Therefore, the impact would be ***less than significant***.

Operations

Move Whistlestop and Adapt Whistlestop Alternatives

Operations of the Move Whistlestop and Adapt Whistlestop Alternatives' transit center and associated transit movements would also comply with all geometric standard provisions, including federal, state, and local railroad and roadway safety standards, and all applicable City and county agency regulations responsible for maintenance of train and vehicle traffic. Operation conditions of the Move Whistlestop and Adapt Whistlestop Alternatives would redistribute existing traffic on Tamalpais Avenue between 3rd Street and 4th Street to other roadways in the project area and would convert this section of Tamalpais Avenue to transit-only. Therefore, the Move Whistlestop and Adapt Whistlestop Alternatives would be consistent with the operation of the existing transit center and would not substantially increase hazards due to design features or incompatible uses, resulting in ***less-than-significant*** impacts.

4th Street Gateway Alternative

The 4th Street Gateway Alternative would redistribute traffic making southbound right-turns from Hetherton Street to 4th Street. This would result from the removal of the right-turn movement at that location and the removal of transit traffic along East Tamalpais Avenue between 3rd Street and 4th Street. The 4th Street Gateway Alternative operation impacts would be the same as those of the Move Whistlestop and Adapt Whistlestop Alternatives outlined above. Therefore, the impact would be ***less than significant***.

Under the Freeway Alternative

The Under the Freeway Alternative would not include any geometric changes to the network other than the location of transit center driveways. The Under the Freeway Alternative operation impacts would be the same as those of the Move Whistlestop and Adapt Whistlestop Alternatives outlined above. Therefore, the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

Result in Inadequate Emergency Access

Construction

All Build Alternatives

Construction of all build alternatives would result in construction-related lane closures that could temporarily interfere with the emergency response access in the vicinity of the project area. The potential for construction to interfere with the emergency response actions outlined in these plans would be temporary and intermittent. As described in Chapter 2, Project Description, a Traffic Control Plan would be implemented to minimize obstructions at all major thoroughfares, which would help to ensure continued emergency access to the project area and nearby properties. The Traffic Control Plan would be developed in coordination with emergency providers that provide services to the project area and include provisions for construction truck marshaling to prevent congestion from construction traffic on roads leading to and from the project area. As necessary, this plan would include detours and provisions for clear signage, including for emergency vehicles to use during emergency response. A ***less-than-significant*** impact would occur.

Operations

Move Whistlestop, Adapt Whistlestop, and Under the Freeway Alternatives

Operation impacts of the Move Whistlestop, Adapt Whistlestop, and Under the Freeway Alternatives are not anticipated to increase delays at existing SMART at-grade crossings in the project vicinity and therefore would have no impact on emergency access in this regard. The Move Whistlestop, Adapt Whistlestop, and Under the Freeway Alternatives operations would not increase SMART train frequency, gate-downtime, or the number of at-grade crossings in the project area. Additionally, emergency vehicles traveling on streets that cross the SMART at-grade crossings would experience similar access and delays under proposed project conditions compared to existing conditions.

Despite some localized traffic delay impacts under Year 2020 and Year 2040 conditions, emergency vehicle response times are a function of travel along the entire path from their base to the incident location. The proposed project is a transit-supportive project that would not increase VMT as a result of new trips and would generally reduce congestion in the Downtown San Rafael area. This broad-based congestion improvement is expected to more than offset the localized traffic delays identified under Year 2020 and Year 2040 conditions, resulting in a net improvement in emergency response times. As a result of these changes associated with Move Whistlestop, Adapt Whistlestop, and Under the Freeway Alternatives operations, impacts related to emergency vehicle access and emergency response times would be ***less than significant***.

4th Street Gateway Alternative

In regard to operations of the 4th Street Gateway Alternative, the existing roadway network surrounding the existing and proposed transit center enables emergency vehicle access to all areas. Emergency vehicles often identify and use multiple routes dependent on the time of day and traffic conditions. Peak-hour traffic congestion generally does not result in delays for emergency vehicles, which have the right-of-way and often utilize multilane major arterials, such as 2nd Street, 3rd Street, 4th Street, Hetherton Street, and Irwin Street for access in Downtown San Rafael. Additionally, operations of the 4th Street Gateway Alternative are not anticipated to increase delays at existing SMART at-grade crossings in the project area and therefore would have no impact on emergency access in this regard. Therefore, despite some localized traffic delay impacts under Year 2020 and Year 2040 conditions, emergency vehicle access in the vicinity of the 4th Street Gateway Alternative site would experience ***less-than-significant*** impacts.

Mitigation Measures

No mitigation is required.

Section 3.15
Tribal Cultural Resources

This section evaluates the potential impacts on tribal cultural resources related to the construction and operation of the San Rafael Transit Center Replacement Project (proposed project) and other build alternatives. This section also describes the existing conditions at the project area as well as the regulatory framework for this analysis. The impacts of the proposed project are generally analyzed at a project level. Impacts resulting from implementation of the proposed project are described. Mitigation measures, where applicable, are also described. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.15.1 Existing Conditions

3.15.1.1 Regulatory Setting

This section provides a summary of the tribal cultural resources plans and policies of the City of San Rafael (City) as well as regional and state agencies that have policy and regulatory control over the project site.

State

Archaeological, paleontological, and historical sites are protected under to a variety of state policies and regulations, as enumerated under the California Public Resources Code (PRC). Tribal cultural resources, which are recognized as nonrenewable resources, receive additional protection under the California Environmental Quality Act (CEQA).

- PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet the listing criteria of the National Register of Historic Places, including significant tribal cultural resources. It further specifically requires the California Department of Transportation to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer before altering, transferring, relocating, or demolishing state-owned historical resources that are listed or eligible for listing in the National Register of Historic Places or registered or eligible for registration as California Historical Landmarks.
- PRC Sections 5097.9–5097.991 provide protection to Native American historical and cultural resources as well as sacred sites. These sections also identify the powers and duties of the Native American Heritage Commission (NAHC) and require notification of descendants when Native American human remains are discovered. They also provide for the treatment and disposition of human remains and associated grave goods.
- PRC Section 21084.2 outlines the key points of Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014), which establishes a formal consultation process for California Native American tribes as part of CEQA. This section equates significant impacts on tribal cultural resources with significant environmental impacts.

Assembly Bill 52

Tribal cultural resources were originally identified as a distinct CEQA environmental category with the adoption of AB 52 in September 2014. For all projects that are subject to CEQA and received a notice of preparation, notice of negative declaration, or mitigated negative declaration on or after July 1, 2015, AB 52 requires the lead agency on a proposed project to consult with the geographically affiliated California Native American tribes. The legislation creates a broad new category of environmental resources, "tribal cultural resources," which must be considered under CEQA. AB 52 requires a lead agency to not only consider the resource's scientific and historical value but also whether it is culturally important to a California Native American tribe.

AB 52 defines tribal cultural resources as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are included in or determined to be eligible for inclusion in the California Register of Historical Resources; included in a local register of historical resources, as defined in PRC Section 5020.1(k); or determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to the criteria of PRC Section 5024.1(c) (CEQA Section 21074).

The California Register of Historical Resources criteria for the listing of resources, as defined in PRC Section 5024.1(c), are the following:

1. The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. The resource is associated with the lives of persons important in our past.
3. The resource embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
4. The resource has yielded, or may be likely to yield, information important in prehistory or history.

AB 52 also sets up an expanded consultation process. For projects initiated after July 1, 2015, lead agencies are required to provide notice of the proposed projects to any tribe that is traditionally and culturally affiliated with the geographic area that requested to be informed by the lead agency, following PRC Section 21018.3.1(b). If, within 30 days, a tribe requests consultation, the consultation process must begin before the lead agency can release a draft environmental document. Consultation with the tribe may include a discussion regarding the type of review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and alternatives and mitigation measures recommended by the tribe. The consultation process will be deemed concluded when either (1) the parties agree to mitigation measures or (2) any party concludes, after a good-faith effort, that an agreement cannot be reached. Any mitigation measures agreed to by the tribe and lead agency must be recommended for inclusion in the environmental document. If a tribe does not request consultation, or to otherwise assist in identifying mitigation measures during the consultation process, a lead agency may still consider mitigation measures if the agency determines that a project will cause a substantial adverse change to a tribal cultural resource.

Local

Marin County Ordinance 1589

The Marin County Code of Ordinances includes Ordinance 1589, which outlines procedures related to protecting archaeological resources in the county. Such protection procedures include the following:

- Requirement of a permit to excavate an Indian midden (Section 5.32.020)
- Designation of a liaison agency between institutions of higher learning or an association and the department of public works for the purpose of the study of Indian relics of archaeological significance (Section 5.32.030)
- Requirement of permits to excavate Indian middens to follow formats approved by the director of public works and to note that the excavation is for either archaeological or nonarchaeological purposes (Section 5.32.040)
- Requirement for the director of public works or designee to send the application for excavation to the liaison agency and, within 5 days of receipt, for the liaison agency to inform the director of public works if the midden is of archaeological significance; only non-archaeological midden sites will be issued a permit (Section 5.32.050)
- If the midden requesting permit for excavation is certified to have archaeological significance, allowance for the director of public works to issue a permit with certain conditions (Section 5.32.060)
- Requirement for actions done under an issued permit to follow the permit's terms and conditions (Section 5.32.070)
- Requirement that persons in violation of the chapter's provisions are guilty of a misdemeanor and shall incur punishments as listed under Section 1.04.270; violations that occur on multiple days will each be considered as separate violations per day (Section 5.32.090)

The conditions of Section 5.32.050 are:

A. Prior to nonarchaeological excavation or removal of materials from the middens, the permittee shall not excavate for a period of sixty days in order to allow archaeological excavation of the site.

B. The permittee or owner of the property shall be required to grant a license for the excavation, identification, and classification of artifacts and proper scientific analysis of materials having historical or archaeological significance to recognized institutions of higher learning or associations having as their major purpose the study of Indian relics and other sites having archaeological value. The terms of the license shall be such as are agreed to by the prospective licensee and property owner. (Ord. 1825 § 2, 1971: Ord. 1589 § 6, 1967)

Chapter 2.19 of the San Rafael Municipal Code, Archaeological Resources Projection

The City's municipal code outlines the duties of the Planning Commission, which oversees the implementation of an ordinance regarding archaeological resources.

2.19.010 - Purpose.

Certain lands and geographic areas within the city of San Rafael contain significant archeological resources, which include deposits and remains of the local Native Americans and other early inhabitants. These deposits and remains represent an important part of the early history of San Rafael and the culture of the Native American community. Without proper regulations and monitoring, continued excavation and grading activities within the city could significantly impact these resources.

In recognizing the importance of protecting significant archeological resources, the city of San Rafael has determined to:

(a) Establish a procedure for identifying, when possible, archeological resources and potential impacts to such resources prior to authorizing excavation and grading activities; (b) Provide valuable information and direction to property owners in the community in order to make them aware of these resources; (c) Implement measures that would preserve and protect valuable archeological resources, when there is a potential for encountering such resources; (d) Establish a procedure which would ensure that appropriate advisory agencies and organizations are contacted and consulted, when there is a probability that archeological resources could be encountered during an activity involving grading, excavation, and/or construction; (e) Establish and implement specific protection and preservation measure in the event archeological resources are encountered during grading, excavation and/or construction. (Ord. 1772 § 2 (part), 2001)

2.19.020 - Archeological sensitivity map.

Geographic areas of archeological sensitivity shall be depicted on a citywide map. This map shall be prepared by an archeologist and shall be maintained by and kept on file with the city department of community development. This map shall:

(a) Identify sensitivity level based on the criteria adopted by council resolution; (b) Be used as a reference by the city whenever considering or analyzing projects involving excavation and grading; and (c) Be reviewed and updated periodically as new information becomes available. (Ord. 1772 § 2 (part), 2001)

2.19.030 - Procedures and regulations for archeological resource protection.

Specific procedures and regulations shall be implemented by the city to ensure the protection of archeological resources as adopted by council resolution. (Ord. 1772 § 2 (part), 2001)

The City of San Rafael General Plan 2020 and Draft San Rafael General Plan 2040

In 2004, the City adopted *The City of San Rafael General Plan 2020* in order to guide future planning efforts and development in the city. *The City of San Rafael General Plan 2020* includes the following goal and policies related to the protection of built and archaeological resources (City of San Rafael 2016):

Goal 28, Protected Cultural Heritage: It is the goal for San Rafael to have protected and maintained historic buildings and archaeological resources as part of San Rafael's cultural heritage.

CA-15. Protection of Archaeological Resources. Recognize the importance of protecting significant archaeological resources by: identifying, when possible, archaeological resources and potential impacts on such resources; providing information and direction to property owners in order to make them aware of these resources; implementing measures to preserve and protect archaeological resources.

CA-15a. Archeological Resources Ordinance. Continue to implement the existing Archeological Resources Ordinance.

The City is in the process of updating *The City of San Rafael General Plan 2020*. Published in October 2020, the Draft *San Rafael General Plan 2040* includes goals and policies under the Community Design and Preservation Element relating to cultural resources. The plan includes the Goal CDP-5,

"Protect and maintain the city's historic and archaeological resources," and the following policies (City of San Rafael 2020:5-25–5-33):

- Policy CDP-5.1: Preserve buildings and areas recognized in the city's architectural survey
- Policy CDP-5.2: Maintain and update the city's historic resource inventory
- Policy CDP-5.3: Encourage historic or architectural conservation districts
- Policy CDP-5.4: Develop financial incentives for historic resource stewardship and maintenance
- Policy CDP-5.5: Encourage adaptive reuse redevelopment
- Policy CDP-5.6: Ensure integrity protections to historic resources
- Policy CDP-5.7: Maintain historic properties
- Policy CDP-5.8: Encourage local preservation advocacy
- Policy CDP-5.9: Encourage historic preservation education
- Policy CDP-5.10: Utilize historic resources for economic benefits
- Policy CDP-5.11: Acknowledge the sustainability component of historic preservation
- Policy CDP-5.12: Ensure a culturally inclusive approach to historic preservation efforts
- Policy CDP-5.13: Protect archaeological resources
- Policy CDP-5.14: Protect Native American resources through coordination with Native American community ambassadors

3.15.1.2 Environmental Setting

Information about the existing environmental setting, ethnographic lifeways, and the post-contact history of Native Americans who traditionally inhabited the vicinity of the project area is provided in Section 3.4, Cultural Resources.

3.15.2 Environmental Impacts

This section describes the impact analysis related to tribal cultural resources for the proposed project. It describes the methods and thresholds used to determine whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, as applicable. Four different build alternatives, the Move Whistlestop Alternative, the Adapt Whistlestop Alternative, the 4th Street Gateway Alternative, and the Under the Freeway Alternative—which are all in Downtown San Rafael within 500 feet of the existing transit center—are being evaluated. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.15.2.1 Methodology

Archaeological Resources in the Project Area

To identify the presence of previously recorded archaeological resources, including those potentially considered tribal cultural resources, ICF conducted a record search on May 21, 2020, at the Northwest Information Center (NWIC) in Rohnert Park, California, a part of the California Historic Resource Information System. Three previously recorded archaeological resources were identified within the study area, which is limited to the footprints of the four alternatives being considered, during the records search. All three resources (P-21-000113/CA-MRN-84, P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H) are prehistoric shell middens that have been leveled down to the ground surface. Some historical artifacts have been observed in two of the sites (P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H). These are described in Table 3.15-1.

Table 3.15-1. Previously Recorded Archaeological Resources within the Study Area

P-Number	Trinomial	Description
P-21-000113	CA-MRN-84	Originally recorded by N.C. Nelson in 1907 as the site of a "quite large" shellmound that "exists no longer." At the time, Richard Thompson remembered unearthing mortars, pestles, charmstones, and bone needles (Baker and Shoup 2014). 2014 shovel test and augur survey observed black shell midden-type soil at the northwest corner of 3rd and Irwin Streets; however, subsequent testing was restricted and inconclusive (Kaptain and Jones 2012; Shoup 2014).
P-21-000114	CA-MRN-85	Originally recorded by Nelson in 1907; he took ethnographic accounts of the mound, now covered by a house on a perceptible rise of shell material, that was said to have been 20 feet high and rich in artifacts and human remains. A survey in 2008 noted dark gray midden, shell, and no human remains. Testing in 2008 and 2014 found 40–60 centimeters of shell midden containing prehistoric artifacts (Shoup and Baker 2014a). Historic-era artifacts were also recorded mixed into some trenches. The extent of the buried midden is better understood to the east and west; north and south areas are on private property (Kaptain and Jones 2012; Roop 1991; Shoup 2014).
P-21-002833	CA-MRN-711/H	Testing in 2011 and 2014 discovered a highly disturbed prehistoric deposit along Hetherton Street consisting of chert debitage and cores, an obsidian biface fragment (circa 614 years before present), patches of disturbed shell midden, human bone, and historic artifacts. A small lens of an intact shell midden was discovered near the eastern side of 5th Avenue and Hetherton Street. Likely redeposited elements or sparse scatters related to less-intense prehistoric uses (Shoup and Baker 2014b). 2014 monitoring along Tamalpais Avenue was negative, suggesting that the site does not extend this far west (Shoup 2014).

The NWIC record search results are included in Appendix G.

Native American Consultation

To determine sensitivity for Native American resources within the project area, consultation with NAHC and local Native American groups was conducted.

NAHC was contacted on October 16, 2018, with a request for the following information:

- CEQA Tribal Consultation List (AB 52)
- Identification by NAHC of any Native American resources within the subject lands that are listed in the Sacred Lands File

A response from NAHC was received on October 29, 2018, and stated that a search of the Sacred Lands File did not identify any sites; however, the letter specified that the area is sensitive for potential tribal resources.

The response from NAHC included the following list of individuals and tribal representatives who might have an interest in the proposed project:

- Gene Buvelot, Federated Indians of Graton Rancheria
- Greg Sarris, Chairperson, Federated Indians of Graton Rancheria

These individuals were contacted to initiate consultation under AB 52 if desired. Certified letters were mailed via priority mail on November 7, 2018. No responses were received from any of the contacts.

3.15.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to tribal cultural resources.

Would the proposed project:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

3.15.2.3 Impacts

Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code § 21074 as Either a Site, Feature, Place, Cultural Landscape that Is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that Is Listed or Eligible for Listing in the California Register of Historical Resources, or in a Local Register of Historical Resources as Defined in Public Resources Code Section 5020.1(k) or a Resource Determined by the Lead Agency, in Its Discretion and Supported by Substantial Evidence, to Be Significant Pursuant to Criteria Set Forth in Subdivision (c) of Public Resources Code § 5024.1

Construction

Construction of any of the build alternatives would likely affect tribal cultural resources. Two pre-contact archaeological sites (P-21-000113/CA-MRN-84 and P-21-000114/CA-MRN-85) are to the east of the freeway and one pre-contact archaeological site is just west of the freeway (P-21-002833/CA-MRN-711/H). Such resources have the potential to be considered tribal cultural resources. The presence of these resources suggests that ground disturbance associated with project construction has the potential to encounter as-yet-undocumented pre-contact archaeological resources, which can also be considered tribal cultural resources, and would result in potentially significant impacts. These impacts would be reduced to a less-than-significant level with the implementation of the mitigation measures outlined below.

All build alternatives would involve the removal of existing storm drain infrastructure and the installation of new inlets, manholes, and bioretention facilities. Utilities, including traffic signal poles, streetlights, and fire hydrants, would need to be relocated and/or removed.

Move Whistlestop Alternative/Adapt Whistlestop Alternative/4th Street Gateway Alternative

Project activities near these build alternative project sites would occur within the site boundary of P-21-002833/CA-MRN-711/H. These build alternatives would extend along Hetherton Street and would affect site P-21-002833/CA-MRN-711/H, a pre-contact midden containing human bone and Native American artifacts; historical artifacts were also found at the site during testing (Shoup and Baker 2014b). Subsurface testing at P-21-002833/CA-MRN-711/H identified a buried component including a small lens of an intact shell midden and patches of disturbed shell midden from 0–60 centimeters below surface (Shoup and Baker 2014b). The site has not been clearly demarcated, although its western border is believed to lie between Hetherton Street and Tamalpais Avenue (Shoup 2014).

Construction of these build alternatives would include ground disturbance within the resource boundary of P-21-002833/CA-MRN-711/H, a pre-contact midden deposit, which has the potential to be considered a tribal cultural resource. This impact would be **significant**. However, implementation of Mitigation Measures MM-CULT-CNST-4, MM-CULT-CNST-5, MM-CULT-CNST-6,

and MM-CULT-CNST-7 (as described in Section 3.4, *Cultural Resources*) would ensure that impacts related to tribal cultural resources would be ***less than significant with mitigation***.

Under the Freeway Alternative

The footprint of the Under the Freeway Alternative extends from Hetherton Street on the west side of the freeway to Irwin Street on the east side and overlaps archaeological sites P-21-000113/CA-MRN-84, P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H.

Site P-21-000113/CA-MRN-84, a pre-contact shellmound, was originally large, but by the early 1900s was nonexistent, according to N.C. Nelson. Early explorations into the mound recovered various pre-contact artifacts including mortars, pestles, charmstones, and bone needles, but no human remains were noted (Baker and Shoup 2014). Historical artifacts were also observed during testing. Survey and testing in 2014 observed small amounts of shallow, black shell midden-type soil at the northwest corner of 3rd and Irwin Streets (Kaptain and Jones 2012; Shoup 2014).

Site P-21-000114/CA-MRN-85, another pre-contact shellmound, is located along Irwin Street near 5th Avenue and contained artifacts and human remains. The mound is reported to have stood 20 feet tall, although recent testing found 16 to 24 inches (40 to 60 centimeters) of midden containing pre-contact artifacts (Shoup and Baker 2014a). Historic-era artifacts were also recorded mixed into some trenches. The midden is well defined along its eastern and western sides, while the northern and southern ends are on private property and have not been fully delineated (Kaptain and Jones 2012; Shoup 2014). A 1989 visual survey found shell in flower beds along Irwin Street (Roop 1991).

The Under the Freeway Alternative extends along Hetherton Street and would affect site P-21-002833/CA-MRN-711/H, a pre-contact midden containing human bone and Native American artifacts; historical artifacts were also found at the site during testing (Shoup and Baker 2014b). Subsurface testing at P-21-002833/CA-MRN-711/H identified a buried component including a small lens of an intact shell midden and patches of disturbed shell midden from 0–60 centimeters below surface (Shoup and Baker 2014b). The site has not been clearly demarcated, although its western border is believed to lie between Hetherton Street and Tamalpais Avenue (Shoup 2014).

Construction of the Under the Freeway Alternative would include ground disturbance within the resource boundaries of P-21-000113/CA-MRN-84, P-21-000114/CA-MRN-85, and P-21-002833/CA-MRN-711/H, pre-contact midden deposits, which have the potential to be considered a tribal cultural resource. This impact would be **significant**. However, implementation of MM-CULT-CNST-4, MM-CULT-CNST-5, MM-CULT-CNST-6, and MM-CULT-CNST-7 (as described in Section 3.4, Cultural Resources) would ensure that impacts related to tribal cultural resources would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Operation of the San Rafael Transit Center, under any build alternative, would not include ground disturbance and is therefore not anticipated to result in impacts on any tribal cultural resource.

Mitigation Measures

Four mitigation measures have been proposed (as described in Section 3.4, Cultural Resources) to reduce the impacts on tribal cultural resources to a ***less-than-significant*** level:

MM-CULT-CNST-4: Develop and Implement an Archaeological Testing Plan

MM-CULT-CNST-5: Conduct Cultural Resource Awareness Training Prior to Project-Related Ground Disturbance and Stop Work if Archaeological Deposits are Encountered During Ground-Disturbing Activities

MM-CULT-CNST-6: Develop and Implement a Tribal Cultural and Archaeological Monitoring Plan

MM-CULT-CNST-7: Comply With State Laws Relating to Human Remains

Section 3.16
Utilities and Service Systems

This section provides background information on utilities and service systems, including water supply, wastewater and stormwater systems, solid waste, and energy. The analysis considers increased demand on water supply, wastewater and stormwater treatment and disposal systems, and solid waste collection and disposal systems that may result from the San Rafael Transit Center Replacement Project (proposed project) and other build alternatives. In addition, the analysis considers whether the proposed project would result in the wasteful use of energy, which is covered in more detail in Section 3.5, Energy. Detailed information regarding stormwater and drainage is covered in Section 3.9, Hydrology and Water Quality. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.16.1 Existing Conditions

3.16.1.1 Regulatory Setting

State

California Energy Commission

The California Energy Commission regulates the provision of natural gas and electricity within the state. The California Energy Commission is the state's primary energy policy and planning agency and has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the state response to energy emergencies.

California Integrated Waste Management Board

The California Integrated Waste Management Board is the state agency designated to oversee, manage, and track California's 76.5 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency. The California Integrated Waste Management Board develops laws and regulations to control and manage waste; enforcement authority is typically delegated to the local government. The board works jointly with local government to implement regulations and fund programs.

Pursuant to the California Integrated Solid Waste Management Act of 1989, all cities in California are required to reduce the amount of solid waste disposed of in landfills. Contracts that include work that will generate solid waste, including construction and demolition debris, have been targeted for participation in source-reduction, reuse, and recycling programs. Contractors are urged to manage solid waste to divert waste away from disposal in landfills (particularly Class III landfills) and to maximize source reduction, reuse, and recycling of construction and demolition debris.

Wastewater

In the project area, wastewater is regulated by the agencies listed below.

- State Water Resources Control Board
- San Francisco Bay Regional Water Board
- California Department of Pesticide Regulation
- California Department of Toxic Substances Control

Local

City of San Rafael General Plan 2020

The Land Use, Infrastructure, and Sustainability Elements of *The City of San Rafael General Plan 2020* contain the following policies and programs that are applicable to the proposed project (City of San Rafael 2016a).

Policy LU-2. Development Timing. For health, safety and general welfare reasons, new development should only occur when adequate infrastructure is available consistent with the following findings:

e. Sewer, water, and other infrastructure improvements will be available to serve new development by the time the development is constructed.

Program LU-2a Development Review. Through the development and environmental review processes, ensure that policy provisions are evaluated and implemented. The City may waive or modify any policy requirement contained herein if it determines that the effect of implementing the same in the issuance of a development condition or other approvals would be to preclude all economically viable use of a subject property.

Policy I-3 Availability of Utilities. Promote the availability of reliable and reasonably priced utilities necessary for businesses and residences to prosper.

Program I-3a Capacity Management. Work with the Central Marin Sanitation Agency and San Rafael Sanitation District to ensure completion of a Capacity Management Alternative Study to determine the scope of needed improvements, costs, and expected benefits to avoid excess of water treatment capacity.

Program I-3b Water Supply Impacts. Work with Marin Municipal Water District to meet the projected water demand and to ensure reduction of existing and projected water supply impacts.

Policy I-10 Sewer Facilities. Existing and future development needs should be coordinated with responsible districts and agencies to assure that facility expansion and/or improvement meets Federal and State standards and occurs in a timely fashion.

Policy SU-5 Reduce Use of Non-Renewable Resources. Reduce dependency on nonrenewal resources.

Program SU-5d Water Efficiency Programs. Develop and implement water efficiency and conservation programs to achieve a 30% reduction in water use by 2020, including water efficient landscape regulations, PACE financing, water audits, upgrades upon resale, education and outreach. Program SU-5e Water Recycling. Support the extension of recycled water distribution infrastructure. Require the use of recycled water where available.

Policy SU-10 Zero Waste. Reduce material consumption and waste generation, increase resource re-use and composting of organic waste, and recycle to significantly reduce and ultimately eliminate landfill disposal.

Program SU-10a Zero Waste. Implement and monitor the progress of actions contained in the Zero Waste Goal and Zero Waste Strategic Plan.

Program SU-10e Recycling. Encourage efforts to promote recycling, such as encouraging businesses to recycle building and other materials, promoting composting by restaurants, institutions and residences, and supporting Marin Conservation Corps' work to promote recycling.

Program SU-10g Recycling for Apartments and Nonresidential Buildings. Encourage recycling facilities and programs for apartment and nonresidential buildings. Consider the cost and benefits of expanding recycling facilities and programs for apartment and nonresidential buildings.

Program SU-10h Demolition Waste. Study ways to actively encourage greater recycling and reuse of demolition waste.

Policy SU-13 Monitor Sustainability Objectives and Indicators. Monitor success in achieving sustainability objectives and greenhouse gas reductions.

Program SU-13b Future Development and Capital Improvements. Evaluate future development applications and the City's Capital Improvement Program against compliance with the Sustainability Element and the GHG Emissions Reduction Strategy.

Draft San Rafael General Plan 2040

The City of San Rafael (City) is in the process of updating *The City of San Rafael General Plan 2020*. Published in October 2020, the public review draft *San Rafael General Plan 2040* includes goals and policies relevant to utilities under the following elements: Land Use Element; Neighborhoods Element; Parks, Recreation, and Open Space Element; Safety and Resilience Element; and Community Services and Infrastructure Element. See below for relevant goals and policies (City of San Rafael 2020a):

Land Use Element

- **Policy LU-1.2: Development Timing.** Allow new development only when adequate infrastructure is available, consistent with the following:… c) Sewer, water, and other infrastructure improvements needed to serve the proposed development have been evaluated and confirmed to be in place or to be available to serve the development by the time it is constructed.

Neighborhoods Element

- **Policy NH-2.6:** Neighborhood Sustainability. Adapt existing buildings, energy, and transportation systems to reduce the neighborhood's carbon footprint, improve energy self-sufficiency, phase out gas-powered utilities and vehicles, reduce overhead wires and service lines, increase awareness of natural systems, and improve environmental health.

Parks, Recreation, and Open Space Element

- **Policy PROS-3.9: Utilities in Open Space.** Discourage large-scale utility infrastructure such as electric transmission lines, large wind turbines, and cellular phone towers in local open space areas. Where such facilities already exist, or where there are no other siting options, utilities should be located and designed to minimize harm to avian life and the area's environmental and visual quality.

Safety and Resilience Element

- **Policy S-1.3: Location of Public Improvements.** Avoid locating public improvements and utilities in areas with high hazard levels. When there are no feasible alternatives, require effective mitigation measures to reduce the potential for damage.

- **Policy S-2.4: Post-Earthquake Inspections.** Require post-earthquake inspections of critical facilities and other impacted buildings and restrict entry into compromised structures as appropriate. Following a major earthquake, inspections shall be conducted as necessary in conjunction with other non-city public agencies and private parties to ensure the structural integrity of water storage facilities, storm drainage structures, sewer lines and treatment facilities, transmission and telecommunication facilities, major roadways, bridges, elevated freeways, levees, canal banks, and other important utilities and essential facilities.

Community Services and Infrastructure Element

- **Goal CSI-4: Reliable, Efficiently Managed Infrastructure.** Support reliable, cost-effective, well-maintained, safe and resilient infrastructure and utility services.
- **Policy CSI-4.9: Wastewater Facilities.** Ensure that wastewater collection, treatment and disposal infrastructure is regularly maintained and meets projected needs. Improvements should be programmed to meet state and federal standards, respond to sea level rise and seismic hazards, repair and replace aging or leaking pipes, and protect environmental quality.
- **Policy CSI-4.12: Recycled Water.** Encourage additional wastewater recycling by the Las Gallinas Valley Sanitary District, initiation of wastewater recycling by the Central Marin Sanitation Agency, additional recycled water distribution by MMWD, and additional use of reclaimed water where supply ("purple pipe") is available.
- **Policy CSI-4.2: Adequacy of City Infrastructure and Services.** As part of the development review process, require applicants to demonstrate that their projects can be adequately served by the City's infrastructure. All new infrastructure shall be planned and designed to meet the engineering standards of the City and various local service and utility providers.
- **Policy CSI-4.14: Utility Undergrounding.** Continue to pursue undergrounding of overhead utility lines, and support maintenance and replacement programs to reduce wildfire hazards.
- **Policy CSI-4.9: Wastewater Facilities.** Ensure that wastewater collection, treatment and disposal infrastructure is regularly maintained and meets projected needs. Improvements should be programmed to meet state and federal standards, respond to sea level rise and seismic hazards, repair and replace aging or leaking pipes, and protect environmental quality.
- **Policy CSI-4.17: Reducing Landfilled Waste Disposal.** Reduce landfilled waste disposal and related greenhouse gas emissions by reducing material consumption; requiring curbside collection and composting of organic materials; increasing recycling, re-use, and resource recovery; and encouraging the use of recyclable goods and materials.
- **Policy CSI-4.18: Waste Reduction Advocacy and Education.** Work with other cities and the County of Marin to advocate for programs and legislation to reduce waste and share waste reduction responsibilities with the manufacturers of consumer products.

Draft Downtown San Rafael Precise Plan

As part of the updated general plan process, the City is preparing the *Downtown San Rafael Precise Plan*. The City released a public review draft of the document in December 2020. The *Downtown San Rafael Precise Plan* includes Chapter 8, Implementation, relevant to utilities (City of San Rafael 2020b).

Chapter 8, Implementation

- **Recommended Action C. Utility Infrastructure.** Downtown has sufficient capacity in its utility infrastructure systems to support the additional uses proposed by the Precise Plan. The Plan recommends the implementation of planned infrastructure upgrades, and to consider strategies to adapt to climate change and its related impacts.

San Rafael Climate Change Action Plan 2030

The *San Rafael Climate Change Action Plan 2030* was adopted in 2019, and is a tool to develop programs and actions needed to reduce greenhouse gas emissions. San Rafael's first ever Climate Change Action Plan was adopted in 2009 and since then the plan has been updated to the 2030 document. The plan includes energy and water conservation strategies to reduce San Rafael's impacts on climate change (City of San Rafael 2019b).

California Green Building Standards Code

In 2019, Ordinance No. 1974 of the San Rafael Municipal Code amended the building code regulations adopting the 2019 edition of the California Green Building Standards (CalGreen) Code. The purpose of the code is to improve public health and safety through effective building construction and design and also to do so in a sustainable way emphasizing energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality (City of San Rafael 2019c).

Marin Municipal Water District

Marin Municipal Water District (MMWD) wrote Title 13, Water Service Condition and Water Conservation Measures, Chapter 13.02, Water Conservation and Dry Year Water Use Reduction Program, to provide a water conservation plan to maximize the water supply during periods of relatively normal rainfall and minimize the effect of a shortage of water on the district's consumers during an extended dry-weather period (drought) for all new construction as well as certain remodels and landscape rehabilitations.

Ordinance Number 426, amending Title 13, became effective on February 1, 2016, and added an element to Title 13 requiring applicants for new water service or applicants requesting an expansion of water service for a substantial remodel of a residential or commercial project to install a graywater recycling system on site. This requirement supports ongoing efforts to reduce demand on the potable water system (MMWD 2016).

3.16.1.2 Environmental Setting

All build alternatives are within Downtown San Rafael. Each alternative is within 500 feet north of the existing San Rafael Transit Center and is bordered by a mix of office and retail uses. Although there are multiple build alternatives, due to the close proximity of all build alternatives and similar site features, they are hereafter referred to as the "proposed project." Each project site would slightly vary in site area and location, but would remain relatively the same for utilities unless otherwise noted.

Water Supply

MMWD supplies water to the eastern corridor of Marin County from north of the Golden Gate Bridge up to but not including Novato. MMWD services the incorporated cities and town of San Rafael, Mill Valley, Fairfax, San Anselmo, Ross, Larkspur, Corte Madera, Tiburon, Belvedere, and Sausalito. MMWD's service area covers approximately 147 square miles and 190,000 customers, using approximately 61,800 active service connections. Surface water supplies come from local reservoirs and supplies imported from the Sonoma County Water Agency (MMWD 2017).

MMWD operates seven reservoirs, including Alpine, Bon Tempe, Kent, Lagunitas, and Phoenix Lake, and two reservoirs, Nicasio and Soulajule, outside of the MMWD area. In total, these reservoirs have a capacity of 79,566 acre-feet (25,927 million gallons) and an estimated yield of 29,020 acre-feet (9,456 million gallons) per year. Therefore, MMWD has limited storage capacity, with existing storage capacity able to serve 2 years of demand. During droughts, MMWD has historically been able to meet water demands during extreme droughts through rationing, conservation, and increased imports from the Sonoma County Water Agency. MMWD prepared the *Water Resources Plan 2040* to evaluated different resiliency alternatives for water supply planning decisions moving forward. The plan researched five different alternatives to improve MMWD's water supply availability and reliability and will focus on implementing one alternative in the future. Currently, MMWD has sufficient supply to meet demands until 2040. However, as climate change continues to alter storm patterns and potential flooding, MMWD will need to evaluate and improve upon water supply storage capabilities (MMWD 2017).

Wastewater

The San Rafael Sanitation District serves the Central San Rafael area, which includes the project area. The district maintains 32 pump station and 13 miles of pressurized sewer pipes, and cleans 132 miles of sewer pipelines. The water is then transported for treatment to the Central Marin Sanitation Agency, which is the largest wastewater treatment facility in Marin County and meets and exceeds all federal and state regulatory requirements (City of San Rafael n.d., 2016b). The Central Marin Sanitation Agency is a joint powers agency made of Ross Valley Sanitary District, Sanitary District No. 2 of Marin County, the City of Larkspur, and the San Rafael Sanitation District (CMSA 2019). On average, this treatment facility treats approximately 6 billion gallons of wastewater each year from households and businesses in central Marin County, which then gets released, equating to approximately 6 billion gallons each year that is released back into San Francisco Bay (City of San Rafael 2016b). In the 2019 fiscal year, the Central Marin Sanitation Agency treated 13.3 million gallons per day and 4.8 billion gallons of wastewater (CMSA 2019).

Stormwater

The San Rafael stormwater system is designed to convey stormwater away from urban areas to local creeks and rivers, and ultimately to the San Francisco Bay. The City is in a Phase II Small Municipal Separate Storm Sewer System. See Section 3.9, Hydrology and Water Quality, for further information regarding stormwater.

Solid Waste

Marin Sanitary Service provides weekly garbage, recycling, and composting services to commercial customers in San Rafael and would service the project area. Marin Sanitary Service also operates the Resource Recovery and Recycling Plant and a transfer station where waste from commercial collectors is hauled by transfer trucks to Redwood Landfill. The project area is serviced by the Redwood Landfill in northern Marin County, which is permitted to accept 2,310 tons of material daily (Waste Management 2021). Redwood Landfill, Inc. applied to the Marin County Environmental Health Services Department for a Revised Solid Waste Facilities Permit to expand capacity of a 222.5-acre landfill. The project was approved and increased capacity of the landfill to 26.1 million cubic yards, facilitating expected capacity until at least 2037 (County of Marin 2020).

Natural Gas and Electricity

Pacific Gas and Electric provides natural gas and electric services to the project area (MCE 2021). With a relatively mild Mediterranean climate and strict energy-efficiency and conservation requirements, California has lower energy consumption rates than other parts of the country. According to the U.S. Energy Information Administration, California's total energy consumption is the second-highest in the nation but per-capita energy consumption in 2018 ranked the fourth-lowest due to energy efficiency programs and the mild climate of California (U.S. Energy Information Administration 2020).

See Section 3.5, Energy, for additional details regarding energy at and near the project area.

3.16.2 Environmental Impacts

3.16.2.1 Methodology

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. As such, utilities and service systems were analyzed for the proposed project in general terms, as utilities are expected to have the same effects in each build alternative. Impacts on water supply, wastewater and stormwater systems, solid waste, and energy were evaluated based on reviewing *The City of San Rafael General Plan 2020*, MMWD, and Central Marin Sanitation Agency document and plans.

3.16.2.2 Thresholds of Significance

The following California Environmental Quality Act Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to utilities and service systems.

Would the proposed project:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?
- 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?
- 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?
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

3.16.2.3 Impacts

Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment, or Stormwater Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects

All Build Alternatives

Construction

The proposed project would entail the construction of 17 bus bays, a customer service facility, and other transit, pedestrian, and bicycle improvements.

Construction is estimated to take up to 18 months and would include mobilization, demolition, utility work, vertical structures work, finishing, and inspections. The proposed transit center facilities would require connection to existing sewer, water, and power infrastructure to operate the planned restrooms, Golden Gate Bridge, Highway and Transportation District (District) offices, staff kitchen, customer support area, and public lobby. The proposed facility would also require modifications to existing stormwater infrastructure. In addition, the proposed project would provide wireless internet capabilities for District operation facilities and passengers.

Water

Water would be required for construction during the following activities: dust control, concrete mixing, equipment and site cleanup, irrigation for the establishment of plants and landscaping, and water line testing and flushing. Given the scale of the proposed project, additional water demand during the temporary, short-term construction phase is expected to be minimal and existing water facilities would adequately cover this temporary demand for water. Temporary onsite water tanks and water trucks would provide water for fire water support, dust suppression, and construction needs through an agreement with municipal or private suppliers. Drinking water and water for sanitation facilities would be trucked into the project area.

Stormwater

The construction of the proposed project would not substantially modify the existing stormwater drainage patterns at the project area. The project area is in an urban area, is fully paved, and would not add any additional impervious surface area to the project sites. Although the proposed project would require the removal of existing storm drain infrastructure and the installation of new inlets, manholes, and bioretention facilities, the stormwater volume and sheet flow direction and volume would not be altered. As the proposed project would disturb more than 1 acre, it would require coverage under the state's Construction General Permit. Coverage under this permit requires developing and complying with a stormwater pollution prevention plan, which would include best management practices and recommendations that would prevent environmental effects related to stormwater drainage. The stormwater pollution prevention plan would include erosion control best management practices. See Section 3.9, Hydrology and Water Quality, for further discussion of drainage in the project area.

Wastewater

Construction of the proposed project would not generate a substantial amount of wastewater. During construction, a local sanitation company would provide and maintain appropriate sanitation facilities (i.e., portable toilets). If necessary, additional temporary facilities would be placed at specific construction locations.

Electricity, Natural Gas, and Telecommunications

Construction of the proposed project would require electricity for construction equipment and generator use. The proposed project would require new connections to existing electricity, natural gas, and telecommunication lines in the vicinity of the project area. However, due to the urban nature of the proposed project, new connections would suffice to fill project need and no additional electric power, natural gas, or telecommunications facilities would need to be constructed to accommodate the proposed project. See Section 3.5, Energy, for additional details regarding energy uses in the project area.

Based on the analysis above, construction of the proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; therefore, this impact would be ***less than significant***. No mitigation is required.

Operations

Operation of the proposed project would generate minimal water, wastewater, stormwater, and energy needs. As the proposed project would be replacing the existing transit center, the overall increased demand for these services would be minimal. The proposed project would utilize the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) green building certification system as a tool for evaluating and measuring achievements in sustainable design. The proposed project's new construction and substantial renovation goal would be to achieve, at a minimum, LEED® Gold certification for the customer service building, which would represent an improvement in energy efficiency compared to the existing facility. Additionally, the proposed project would include the installation of solar panels on site. There would be the same number of employees on site as for the current transit center, consisting of seven customer service staff and one security guard. Daily commuters would only be generating water and wastewater needs by using water fountains and restroom facilities on site.

Electrical facility needs at the transit center and platforms include ticketing and fare collection machines and real-time transit information signs. Additional electrical requirements and infrastructure may be needed for onsite charging of future battery electric buses at the transit center bus bays. However, because the preferred technology for fleetwide rollout of zero-emission buses has not yet been determined, these utility needs would be incorporated in a future project. Fleetwide rollout of zero-emission buses, along with related infrastructure to support the zero-emission fleet, is a separate planning initiative that is outside the scope of the proposed project. The District would implement the fleetwide rollout in a manner that is consistent with CEQA and any additional energy and utility needs for the fleetwide rollout would be addressed as part of that initiative. No new natural gas or telecommunication facilities would be required to fulfill energy needs for the operation of the proposed project. See Section 3.5, Energy, for additional details regarding operational energy needs.

As the proposed project would not require the relocation, construction, or expansion of water, wastewater treatment, or stormwater drainage facilities, and no natural gas or telecommunication facilities are required, the proposed project would have a ***less than significant*** impact.

Mitigation Measures

No mitigation is required.

Have Sufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry, and Multiple Dry Years

All Build Alternatives

Construction

As discussed above, water quantities used for the proposed project are expected to be minimal. The majority of water use would take place during construction. Water demand during construction would be minimal and temporary and would be served utilizing the same infrastructure and sources as those during project operation. Sufficient water supplies are available to serve the proposed project during construction, and this impact would be ***less than significant***.

Operations

Operation of the proposed project is not anticipated to require an increase in water compared to the existing transit center. There would be an equivalent number of employees on the project area compared to the current number of employees operating the existing transit center. On an annual basis, employees would be expected to consume the same amount of water for daily activities. The proposed project is anticipated to receive the same volume of visitors as the existing facility that would continue to utilize bathroom and water fountain facilities.

The use of water is expected to be minimal, and no new or expanded entitlements to supply the proposed project during construction or operation are anticipated. This impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

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

All Build Alternatives

Construction

As discussed previously, the proposed project would be relocating the existing transit center to another location in Downtown San Rafael and would provide traffic, transit, pedestrian, and bicycle

improvements. Demolition and construction activities for the proposed project would result in a temporary increase in wastewater generation as a result of onsite construction workers. Wastewater generation during construction would be minimal and temporary. In addition, construction workers typically use portable toilets and sinks, which do not flow to the wastewater conveyance system. Therefore, sufficient wastewater treatment capacity is available to serve the proposed project during construction and this impact would be ***less than significant***.

Operations

As the proposed project's uses would be moved from the old transit center to a new project site, and ridership capacity is expected to remain consistent, additional operational wastewater use is not expected for activities such as hand-washing, toilet flushing, and bus washing. There would be a negligible increase in operational wastewater. Furthermore, the proposed project would not include design features that would generate substantial additional wastewater. Therefore, impacts would be ***less than significant***.

Mitigation Measures

No mitigation is required.

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; and Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste

All Build Alternatives

Construction

Demolition and construction activities for the proposed project would result in a temporary increase in solid waste generation. Solid waste generation would occur periodically during construction. However, the increase would be minimal and temporary. In addition, the proposed project would comply with the latest 2019 CALGreen Code, which has been adopted by the City of San Rafael Municipal Code, which was adopted through Ordinance No. 1974. Per CALGreen Code requirements, at least 65 percent of construction waste generated for new construction projects must be diverted. In addition, a construction waste management plan must be prepared (CalRecycle 2020). Through compliance with the CALGreen Code, as verified by the City of San Rafael, the proposed project would not generate solid waste in excess of state or local standards or of the capacity of local infrastructure during construction and would not conflict with solid waste regulations. This impact would be ***less than significant***.

Operation

The Redwood Landfill would serve the proposed project and is approximately 14 miles north of the project area. This landfill has a capacity of 26.1 million cubic yards and is expected to have remaining capacity until at least 2037 (County of Marin 2020). Currently, the Redwood Landfill is permitting to accept 2,310 tons of material daily (Waste Management 2020).

As the proposed project's uses would be moved from the existing transit center to the new project area, maintaining the same number of employees, an increase in solid waste is not anticipated. The proposed project would be required to comply with California Assembly Bill 341, which requires commercial and public entities that generate more than 4 cubic yards of waste to either subscribe to recycling services, self haul, or arrange for periodic pickup of recyclables. Furthermore, as of January 1, 2019, all business that generate 4 or more cubic yards of commercial solid waste per week must also enroll in services to collect organic waste (City of San Rafael 2019a).

Based on the analysis above, the proposed project would not generate solid waste in excess of state or local standards or of the capacity of local infrastructure during operation and would not conflict with solid waste regulations. Therefore, the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

Section 3.17
Wildfire

This section addresses potential wildfire impacts that may result from implementation of the proposed San Rafael Transit Center Replacement Project (proposed project) and other build alternatives. The following discussion addresses existing wildfire hazard conditions of the project area and surroundings, considers applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project implementation, as applicable. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.17.1 Existing Conditions

3.17.1.1 Regulatory Setting

Federal

Federal Wildland Fire Management Policy

The 1995 Federal Wildland Fire Management Report produced the first single comprehensive federal fire policy for the Departments of the Interior and Agriculture. That review was stimulated not only by the 1994 fire season with its 34 fatalities, but also by growing recognition of fire problems caused by fuel accumulation. The resulting 1995 Federal Fire Policy recognized, for the first time, the essential role of fire in maintaining natural systems.

In the aftermath of the uncontrolled spread of the Cerro Grande Prescribed Fire in May of 2000, the Secretaries of the Interior and Agriculture requested a review of the 1995 Federal Fire Policy and its implementation. The subsequent 2001 Federal Fire Policy and its implementation are founded on the following guiding principles:

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, State, tribal, local, interagency, and international coordination and cooperation are essential.

- Standardization of policies and procedures among federal agencies is an ongoing objective.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 provides the legal basis for the Federal Emergency Management Agency's mitigation planning requirements for state, local, and tribal governments as a precursor to mitigation grant assistance. The Disaster Mitigation Act of 2000 requires that local governments prepare a Local Hazard Mitigation Plan that must be reviewed by the State Mitigation Officer, approved by the Federal Emergency Management Agency, and renewed every 5 years. The plan must include a planning process, a risk assessment, a mitigation strategy, and plan maintenance and updating procedures to identify the natural hazards, risks, and vulnerabilities of the area under the jurisdiction of the government. Natural hazards include earthquakes, tsunamis, tornadoes, hurricanes, flooding, and wildfires.

State

2018 Strategic Fire Plan for California

2018 Strategic Fire Plan for California (CAL FIRE 2018) is a cooperative effort between the California Department of Forestry and Fire Protection (CAL FIRE) and the Board of Forestry and Fire Protection. The goals that are critical to achieving the 2018 plan's vision revolve around fire prevention, natural resource management, and fire suppression efforts, as broadly construed. Major components include:

- Improving the availability and use of consistent, shared information about hazard and risk assessment;
- Promoting the role of local planning processes, including general plans, new development, and existing developments, and recognizing individual landowner/homeowner responsibilities;
- Fostering a shared vision among communities and multiple fire protection jurisdictions, including county-based and community-based plans, such as Community Wildfire Protection Plans (CWPP);
- Increasing awareness and actions to improve fire resistance of man-made assets at risk and fire resilience of wildland environments through natural resource management;
- Integrating implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers;
- Determining and seeking the needed level of resources for fire prevention, natural resource management, fire suppression, and related services; and
- Implementing needed assessments and actions for post-fire protection and recovery.

Fire Hazard Severity Zones: California Public Resources Code Sections 4201–4204

In 1965, California Public Resources Code (PRC) Sections 4201–4204 and Government Code Sections 51175–89 directed CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as fire hazard severity zones (FHSZ), define the application of various mitigation strategies to reduce risk associated with wildland fires.

Senate Bill 1241

In 2012, Senate Bill 1241 added Section 66474.02 to Title 7, Division 2, of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels that are designated as Very High FHSZs or located in a State Responsibility Area (SRA), unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290–91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

California Building Code and Fire Code

The California Code of Regulations, Title 24, is a compilation of building standards, including fire safety standards for residential and commercial buildings. The California Building Code standards serve as the basis for the design and construction of buildings in California; the California Fire Code is a component of the California Building Code. Typical fire safety requirements of the California Fire Code include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. The California Fire Code applies to all occupancies in California, except where more stringent standards have been adopted by local agencies.

State Fire Safe Regulations

The State Fire Safe Regulations section of Title 14 are being revised by the Board of Forestry and Fire Protection with basic wildfire protection standards for development in Very High FHSZs of both the SRA and the Local Responsibility Area (LRA) beginning July 1, 2021. These revisions feature stricter fire-safe building improvements and standards including but not limited to prohibiting future development that would be serviced by roads that do not meet current standards (including dead-end roads). Road modifications to meet this new standards include resurfacing, road widening, bridge improvements, and leveling grading and curves, which must all be up to standard between the property line and the nearest fire station (Rural County Representatives of California 2020). Stakeholder meetings are still taking place and updates will not be finalized until later in 2021. These final changes are anticipated to be effective July 1, 2021.

California's Wildfire and Forest Resilience Action Plan

The California Forest Management Task Force was created in 2018 to introduce a more holistic approach to forest management. *California's Wildfire and Forest Resilience Action Plan*, a comprehensive strategy of the Governor's Forest Management Task Force, was released in January 2021 in response to the 2020 fire season breaking numerous state records for the number of largest fires burning simultaneously. The plan is intended to accelerate efforts that "restore the health and resilience of California forests, grasslands and natural places; improve the fire safety of our communities; and sustain the economic vitality of rural forested areas" (California Forest Management Task Force 2021). The following goals are included:

- Goal 1: Increase the pace and scale of forest health projects
- Goal 2: Strengthen protection of communities

- Goal 3: Manage forests to achieve the State's economic and environmental goals
- Goal 4: Drive innovation and measure progress

Local

Marin Operational Area Emergency Operations Plan

The Marin Operational Area (OA) Emergency Operations Plan is intended to address extraordinary emergency situations affecting Marin County, including wildfire disasters. The Marin OA includes all the cities/towns, special districts, and unincorporated areas within the county. Wildland fire hazards exists for approximately 85 percent of Marin County. In the event of a fire disaster, if two or more of the County's local jurisdictions' emergency operations centers are activated, the Marin OA will serve as the main point of contact for information transfer and support requests and will administer mutual aid requests (Marin County Sheriff's Office of Emergency Services 2014).

San Rafael Local Hazard Mitigation Plan

The *San Rafael Local Hazard Mitigation Plan* was adopted by the City of San Rafael (City) in 2017 and was prepared to guide hazard mitigation planning to protect the people and property in San Rafael from natural disasters and hazard events including wildfires (City of San Rafael 2017). Wildfire mitigation actions in this plan include:

42. Funding for Vegetation Management Coordinator Position
43. Create a City of San Rafael specific Community Wildfire Protection Plan (CWPP).
44. Create new strategic fuel interruption zones in WUI [wildland-urban interface] areas and maintain and expand existing fuel interruption zones already in place.
45. Juniper and Bamboo Clearing Program from Residential Properties within WUI.
46. Create new point specific wildfire prevention programs specifically targeting areas where homeless encampments are known to exist.

San Rafael Wildfire Prevention and Protection Action Plan

The San Rafael *Wildfire Prevention and Protection Action Plan* was approved by the City Council in August 2020. The document is intended to serve as a master planning guide to reduce the wildfire risk in the City. The document incorporates lessons learned from past wildfires, ongoing local and county efforts, existing plans, and public input. The plan includes 38 objectives related to vegetation management, safety, public education, wildland-urban interface map updates, fire roads, increasing Police Ranger staffing, improvement of emergency capabilities, improvement of infrastructure, enhancement of coordination between County fire agencies and programs, and more (City of San Rafael 2020a).

City of San Rafael Municipal Code – Fire Ordinance

The Fire Ordinance, Chapter 4.12 Wildland-Urban Interface – Vegetation Management Standards, establishes a wildland-urban interface in the City of San Rafael, which is a designation of a Very High FHSZ, and specific vegetation management standards required to minimize the spread of fires from wildlands to structures and vice versa.

City of San Rafael General Plan 2020

The Safety Element of *The City of San Rafael General Plan 2020*, adopted in 2004, contains the following goals and policies that are applicable to the proposed project (City of San Rafael 2016).

Goal 30: **A Safe Community**. It is the goal of San Rafael, as the first priority for city government, to provide excellent fire, public safety and paramedic services and to be prepared in the case of disaster or emergency. San Rafael residents deserve to feel safe and secure wherever they live, work and play.

S-14. Hazardous Materials Storage, Use and Disposal. Enforce regulations regarding proper storage, use and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.

S-21a. Local Hazard Mitigation Plan. Prepare and adopt a local/multi-hazard mitigation plan, which includes addressing rise in sea level and measures for disaster preparedness and adaptation.

S-26. Fire and Police Services. Maintain adequate cost-effective fire protection, paramedic and police services. Minimize increases in service needs from new development through continued fire prevention and community policing programs.

S-26a. Public Safety Training. Provide and encourage public safety employee training to ensure team members' skills remain current. Encourage and support new employees to join programs, such as Urban Search and Rescue and disaster relief training programs (CERT).

S-26b. Vehicle and Equipment Maintenance. Maintain and upgrade vehicles and equipment as necessary.

S-26c. Fire Prevention and Safe Design. Through the development review process, require review by Fire Department and Police Department for fire prevention and safe design.

S-27c. Community Fire Servicing. Continue to provide health and fire safety outreach programs to community groups.

S-30. Maintenance and Landscaping for Fire Safety. Encourage, where appropriate, special planting, removal and maintenance programs to reduce potential fire hazards in the hills, wildland areas and urban interface areas.

S-30a. Fire Hazard Maps. As part of the City's Fire Hazard Program, maintain maps identifying potential fire hazard areas in San Rafael.

S-30b. Fire Protection Ordinance. Continue to implement Wildlife Urban Interface (WUI) standards within the Ordinance to reduce fire hazards in areas in the urban interface area.

S-31. New Development in Fire Hazard Areas. Design new development located on or adjacent to natural hillsides to minimize fire hazards to life and property.

S-31a. New Development. Through the development review process, require appropriate mitigation measures such as fire preventive site design, landscaping and building materials, and the use of fire suppression techniques such as sprinklering.

S-32. Safety Review of Development Projects. Require crime prevention and fire prevention techniques in new development, including adequate access for emergency vehicles.

S-32a. Safe Buildings. Continue to review development applications to insure that landscaping, lighting, building siting and design, emergency access, adequate water pressure and peakload storage capacity, and building construction materials reduce the opportunity for crime and fire hazards.

S-33c. Neighborhood Disaster Preparedness. Continue to coordinate neighborhood disaster response preparedness planning efforts through Fire and Police Department programs and through

coordination with the American Red Cross, American Heart Association and other community groups. Provide technical assistance as needed to review adequacy of neighborhood disaster plans.

S-35b. Mutual Aid Agreements. Continue to explore the feasibility of mutual aid agreements that provide public safety personnel in times of emergency.

S-38. Building Code and Fire Code Update. Continue updating the Building and Fire Codes as necessary to address earthquake, fire and other hazards and support programs for the identification and abatement of existing hazardous structures.

S-39. Public Safety Facilities. Ensure that public safety facilities are designed and constructed adequately to efficiently operate paramedic, fire and police services, including in times of disaster.

S-40. Outreach. Encourage educational outreach to promote awareness and caution among residents regarding disaster preparedness of possible natural hazards, including soil conditions, earthquakes, flooding, and fire hazards. Establish an outreach program, including establishing programs. Publicize disaster plans by neighborhood.

S-40a. City's Website. Manage and update the Fire Department's website to provide information and links to meet the fire servicing needs of the community.

Draft City of San Rafael General Plan 2040

The City is in the process of updating *The City of San Rafael General Plan 2020*. Published in October 2020, the public review Draft *San Rafael General Plan 2040* includes goals and policies relevant to wildfire under the following elements, which resemble the previous general plan: the Land Use Element; Neighborhoods Element; Conservation and Climate Change Element; Parks, Recreation, and Open Space Element; Safety and Resilience Element; Mobility Element; Community Services and Infrastructure Element; and Equity, Diversity, and Inclusion Element (City of San Rafael 2020b).

Draft Downtown San Rafael Precise Plan

As part of the updated general plan process, the City of San Rafael is preparing the *Downtown San Rafael Precise Plan*. The City released a public review draft of the document in December 2020. The *Downtown San Rafael Precise Plan* includes chapters relevant to wildfire safety and response. Chapter 2, Existing Conditions, discusses the parts of Downtown that are at risk for wildfire. Chapter 3, Design Principles and Guiding Policies, principle 7, discusses strategies for managing wildfire risks. Principal 7's main objective is to "Develop growth and adaptive strategies to increase Downtown's resilience to climate change" (City of San Rafael 2020c).

3.17.1.2 Environmental Setting

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fire. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant. A wildland-urban interface is an area where urban development is in proximity to open space or wildland areas. The potential for wildland fires represents a hazard where development is adjacent to open space or close to wildland fuels or designated FHSZs. The City of San Rafael has a Mediterranean climate, which is typically characterized by mild winters and dry summers with the highest temperatures of the year occurring in July and August. The arid climate of the City and Marin County, especially during the summer and fall, can dry out vegetation and cause dry brush to be prone to fires caused by lightning strikes and spontaneous combustion. Steep hillsides and varied topography within portions of the county also contribute to the risk of wildland fires. Topography in the county is typical of mountains in the Coast

Ranges where they abruptly rise upward from the shoreline to more than 200 feet in elevation. Fires that occur in wildland-urban interface areas may affect natural resources as well as life and property.

CAL FIRE has mapped areas of significant fire hazards in the state through its Fire and Resources Assessment Program. These maps place areas of the state into different FHSZs, based on a hazard scoring system using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban conflagration could result in catastrophic losses (see Figure 3.17-1). As part of this mapping system, land where CAL FIRE is responsible for wildland fire protection and generally located in unincorporated areas is classified as an SRA. Where local fire protection agencies, such as the San Rafael Fire Department (SRFD), are responsible for wildfire protection, the land is classified as an LRA. Due to the urban location of the proposed project in Downtown San Rafael, the proposed project is not within or close to an LRA. The closest FHSZ is classified as a moderate SRA, and is approximately 2 miles west of the project area (California Department of Technology 2020). On a local level, the City has a wildland-urban interface, which are areas where homes have been built near lands prone to wildfire. According to the wildland-urban interface map, the project area is not within the wildland-urban interface. However, the project area is approximately 0.2 mile south of the wildland-urban interface (City of San Rafael 2007).

Urban and wildfire, paramedic, and emergency services in San Rafael are provided by SRFD. See Section 3.13, Public Services, of this draft Environmental Impact Report (EIR) for further information on the SRFD.

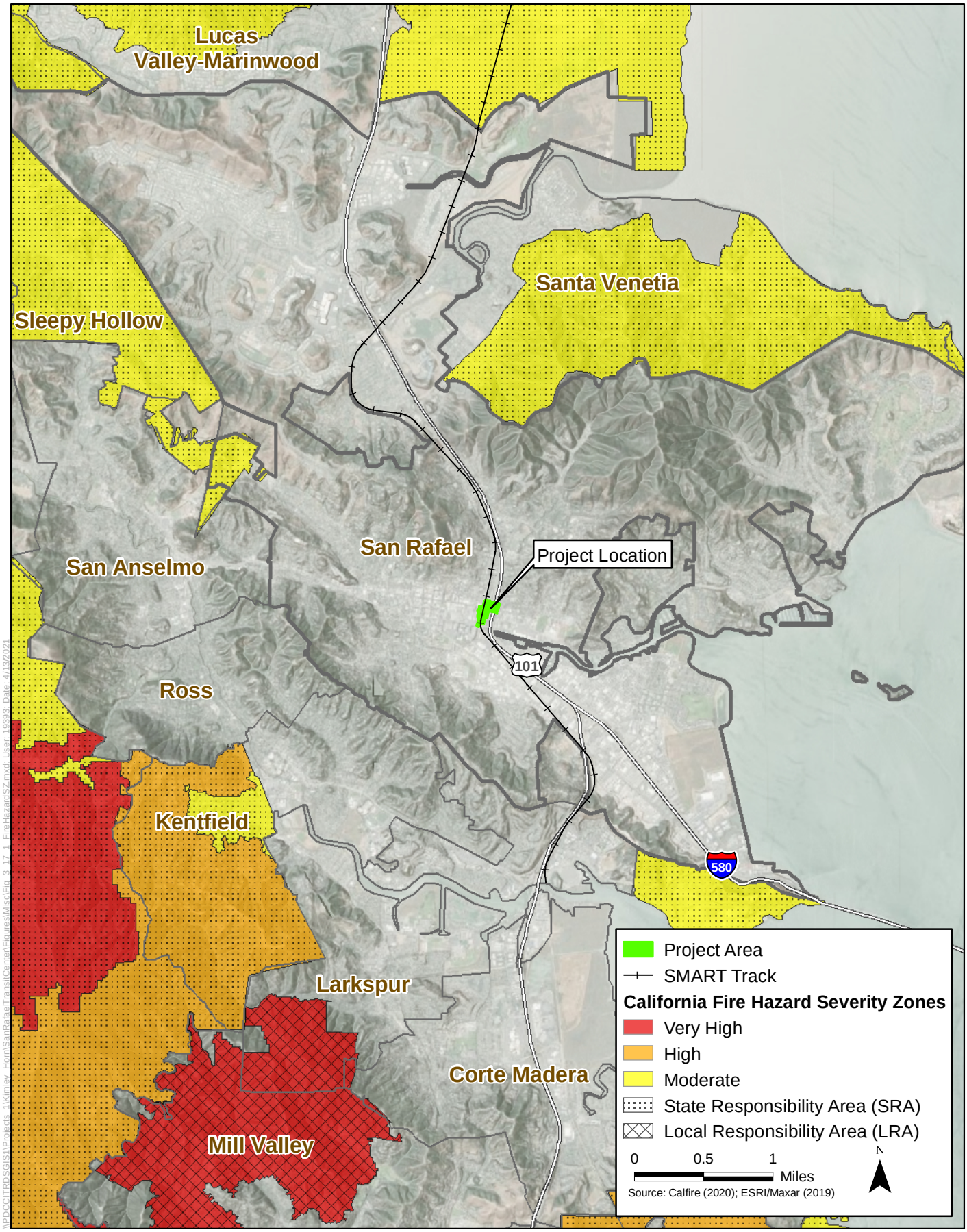


Figure 3.17-1
Fire Hazard Severity Zones near the Project Alternatives

3.17.2 Environmental Impacts

3.17.2.1 Methodology

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Wildfire impacts were analyzed for the proposed project in regard to all alternatives, as the specific location for each alternative would experience a nearly equivalent impact. The study area for wildfire consists of the project area and area within a half-mile radius of the proposed project with consideration of the closest SRA or VHFHSZ zones. Analysis of potential impacts related to wildfire was based on the ability of fire personnel to adequately serve the existing and future population of the four build alternatives, as well as federal, state, and local regulations regarding wildfire. Impacts for the build alternatives are presented together unless they differ substantially among alternatives. Information for this section was obtained through resources available online, including *The City of San Rafael General Plan 2020*, database maps, CAL FIRE resources, planning documents, and the SRFD website.

3.17.2.2 Thresholds of Significance

The following California Environmental Quality Act Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to wildfire.

If located in or near SRAs or lands classified as Very High FHSZs, would the proposed project:

- Substantially impair an adopted emergency response plan or emergency evacuation plan?
- 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?
- 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 on the environment?
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

3.17.2.3 Impacts

Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

Construction

All Build Alternatives

Construction activities for the proposed project would include mobilization, demolition, tree removal, utility work, civil and vertical structures work, and vertical structures finishing and inspection. In addition, improvements to existing utility infrastructure would occur. All construction and development would occur in already-developed urban areas of Downtown.

As mentioned above in Section 3.17.1.2, Environmental Setting, the project area is not in a Very High FHSZ within an LRA or within a Moderate, High, or Very High SRA. The nearest LRA to this site is approximately 3 miles south. The closest SRAs are Moderate zones and are approximately 1.5 miles north and 2 miles northwest of the project area (CAL FIRE 2020). Marin County has adopted an emergency operations plan developed by the Marin County Sheriff's Office of Emergency Services to respond to large-scale disasters throughout the county (Marin County Sheriff's Office of Emergency Services 2014).

During construction and where feasible, staging for the proposed project has the potential to affect adjacent sidewalks and streets in front of construction areas. If this is the case, traffic control would be employed to reroute pedestrians around the sidewalk construction area and signage would be posted to direct pedestrians and drivers. For temporary lane closures due to sidewalk and/or curb ramp repairs, coordination with San Rafael Public Works, SRFD, and the San Rafael Police Department (SRPD) would be conducted. Because traffic control, signage, and coordination with the appropriate agencies (as needed) would be employed, potential impacts on emergency response or evacuation plans or routes would be less than significant.

No revisions to the adopted Marin OA Emergency Operations Plan or local hazard plans would be required as a result of the proposed project. Therefore, construction of the proposed project would not impair or physically interfere with an adopted emergency response or evacuation plan and the impact would be ***less than significant***.

Operations

All Build Alternatives

Operation of the proposed project would not extend beyond the operational activities of the existing transit center. The transit center would be relocated in an effort to improve transit connectivity. For the Move Whistlestop Alternative and the Adapt Whistlestop Alternative, the portion of West Tamalpais Avenue between 3rd and 4th Streets would be closed for vehicles but would be accessible by emergency vehicles. The proposed project would continue to accommodate existing bus service volumes on a daily basis. Maintenance for the buses would be performed off site, and the new location would continue to operate at the same capacity in Downtown. Therefore, operation of the proposed project would not hinder or impair any local emergency response or evacuation plan and the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

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

Construction

All Build Alternatives

As identified by CAL FIRE and discussed above, the project area is in an urban area and is not within or adjacent to an FHSZ in an LRA or SRA, or a wildland-urban interface area. The City of San Rafael,

however, is susceptible to wildfire and does have some Moderate SRA zones in the undulating, more rural areas of the City, with the nearest zone approximately 1.5 miles north of the project area. In addition, according to the wildland-urban interface map, the project area is approximately 0.2 mile south of the wildland-urban interface (City of San Rafael 2007). All new construction is expected to follow fire management goals, rules, and regulations established by the City of San Rafael Municipal Code, *The City of San Rafael General Plan 2020*, SRFD, and SRPD. Due to level terrain, moderate Mediterranean climate in Marin County, and urban development surrounding the project area, construction workers in the project area would not be directly exposed to wildfire pollutant or heightened wildfire risk. Compliance with established procedures, rules, and regulations would further reduce potential impacts related to exposure of people to a significant risk of loss, injury, or death from wildfires to ***less-than-significant*** levels.

Operations

All Build Alternatives

The majority of the project area would be composed of impervious surface area like the existing transit center. The trees and minimal vegetation on site would be contained in planters or controlled areas and would be properly maintained. No hazardous materials such as fuel or other fire risk items would be stored on site. As a result, the risk of operation of the proposed project to expose people to a significant risk of loss, injury, or death from wildfires would be ***less than significant***.

Mitigation Measures

No mitigation is required.

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 on the Environment

Construction

All Build Alternatives

The proposed transit center facilities would require connection to existing utilities to operate the planned restrooms, kitchenette, and building spaces. Additional electrical requirements and infrastructure may be needed for onsite charging of future battery electric buses at the transit center bus bays. However, because the preferred technology for fleetwide rollout of zero-emission buses has not yet been determined, these utility needs would be incorporated into a project. Fleetwide rollout of zero-emission buses, along with related infrastructure to support the zero-emission fleet, is a separate planning initiative that is outside the scope of the proposed project. The District would implement the fleetwide rollout in a manner that is consistent with CEQA and any additional energy and utility needs for the fleetwide rollout would be addressed as part of that initiative. The proposed project would require the removal of existing storm drain infrastructure and the installation of new inlets, manholes, and bioretention facilities. Utilities, including traffic signal poles, streetlights, and fire hydrants, would need to be relocated and/or removed. All aforementioned utility changes would occur within the project area, and impacts associated with development are analyzed throughout this document. No offsite improvements would be required

that would exacerbate fire risks. Additionally, SRFD, as part of the City's process, will review all plans for adequate fire suppression, fire access, and emergency evacuation. Adherence to standard City policies would reduce potential impacts to a level of ***less than significant***.

Operations

All Build Alternatives

As described above, all new facilities and utility upgrades would occur within the project area and would not pose additional fire risks or impacts on the environment. Therefore, the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

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

Construction

All Build Alternatives

As stated above, the project area is within Downtown San Rafael, on flat terrain surrounded by urban uses and residential office uses. The proposed project would not exacerbate wildfire risks or hazards due to the location of the project area, and using already developed land on a flat site. In addition, the proposed project would require the removal of existing storm drain infrastructure and the installation of new inlets, manholes, and bioretention facilities. Although there would be utility improvements, the proposed project would use existing drainages in Downtown San Rafael and would not enact any drainage changes, as there are no natural drainage courses on site. Therefore, the proposed project would not result in significant new risks due to post-fire downstream flooding, landslides, slope instability, or drainage changes. Therefore, the impact would be ***less than significant***.

Operations

All Build Alternatives

The project area would be on flat terrain and the majority of the area would be composed of impervious surfaces. Therefore, the proposed project would not expose people or structures to significant risks related to slope, flooding, or landslides and the impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

Chapter 4
Cumulative Impacts

4.1 Cumulative Impacts

An environmental impact report (EIR) is required to examine cumulative impacts. California Code of Regulations Section 15130(a)(1) defines a cumulative impact as consisting "of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." The analysis of cumulative impacts need not provide the same level of detail as that for project-specific impacts, but it shall "reflect the severity of the impacts and their likelihood of occurrence" (per California Code of Regulations Section 15130(b)). The California Environmental Quality Act (CEQA) Guidelines Section 15065 states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects that are individually limited but cumulatively considerable. As defined in State CEQA Guidelines Section 15065(a)(3), *cumulatively considerable* means "that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." The cumulative impacts analysis in an EIR must analyze either a list of past, present, and probable future projects or a summary of projections contained in an adopted general plan or related planning document.

4.1.1 Approach and Methodology

State CEQA Guidelines Section 15130(b) states that the discussion of cumulative impacts should include:

- Either (1) a list of past, present, and probable future projects producing related or cumulative impacts or (2) a summary of projections contained in an adopted general plan or similar document, or in an adopted or certified environmental document, that described or evaluated conditions contributing to a cumulative impact
- A discussion of the geographic scope of the area affected by the cumulative impact
- A summary of expected environmental effects to be produced by these projects
- Reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects

As described in the Approach to Impact Analysis section in Chapter 3, the San Rafael Transit Center Replacement Project (proposed project) would have no impact on mineral resources or agricultural and forestry resources. Because the proposed project would have no impact, it cannot contribute to any potential cumulative impacts and these resource areas are not discussed further in the cumulative impact analysis.

4.1.2 Projections/Regional Growth Characteristics

The City of San Rafael (City) is in the process of updating *The City of San Rafael General Plan 2020* and drafting the *Downtown San Rafael Precise Plan* (Downtown Precise Plan), a new plan for the

Downtown San Rafael neighborhood. Growth forecasts for the Draft Downtown Precise Plan include the addition of 2,200 residential units, 698,000 square feet of non-residential use, and 2,000 jobs to the Downtown San Rafael Area. These projections are based on the addition of an assisted living facility, multiple residential and commercial developments, a hotel, and a public safety center.

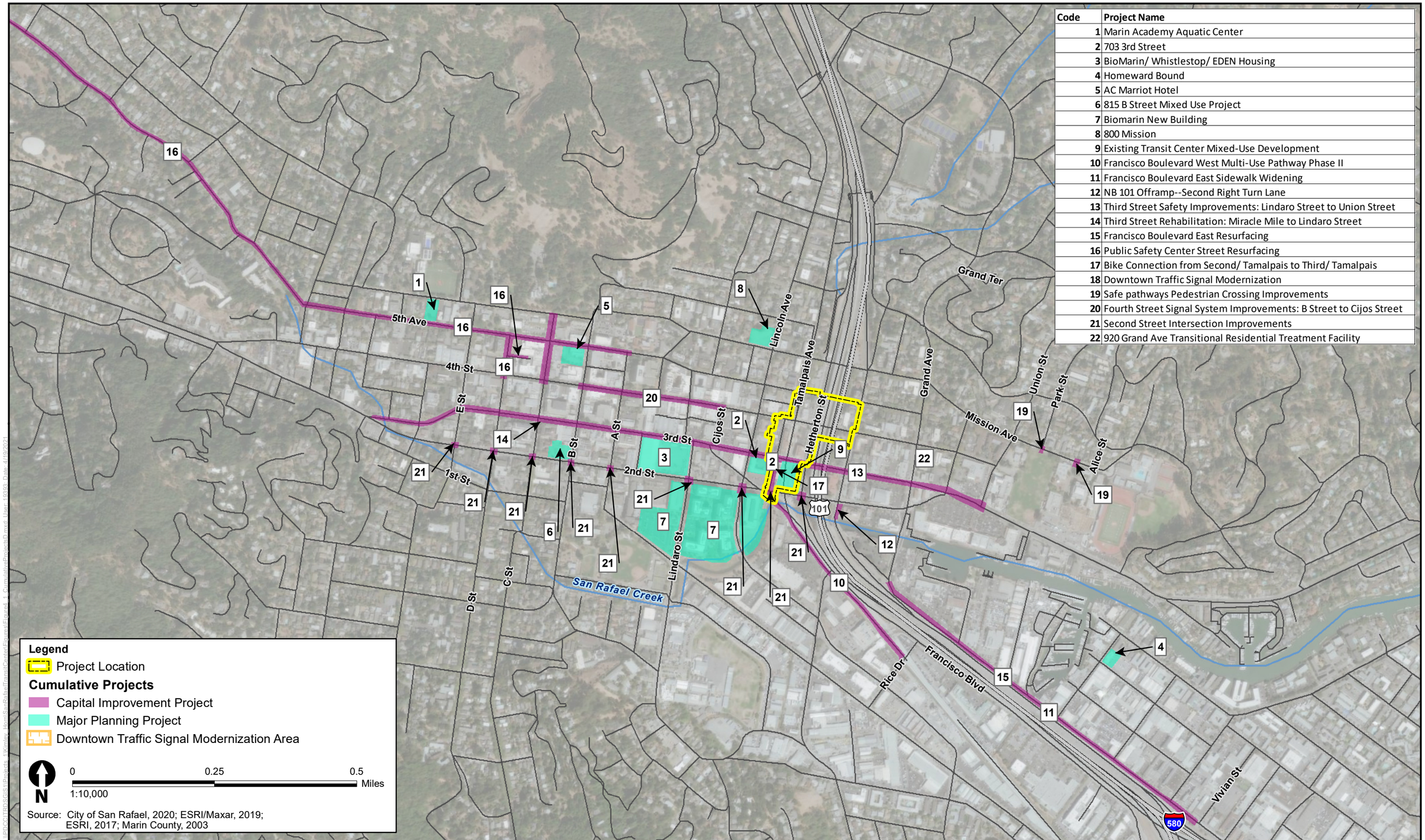
The Association of Bay Area Governments' (ABAG) projections of land use and population growth were used to estimate overall growth in the City and Marin County. By 2040, the City's population is projected to grow approximately 10.7 percent from its population in 2015, from 60,440 residents to 66,880 residents. Marin County's population is projected to grow approximately 7.8 percent from its population in 2015, from 262,305 residents to 282,670 residents (ABAG 2018).

4.1.3 Projects Considered

Reasonably foreseeable future projects are defined as the projects that have been adopted or have otherwise demonstrated likelihood to occur based on documentation from project sponsors.

The types of projects considered in this analysis include development projects within 1 mile of the project area, public projects from the City and Marin County's Capital Improvement Programs, and updates to regional plans and policies that include public transportation.

Table 4-1 presents the projects considered and includes their applicable jurisdictions, potential impact areas, estimated construction schedules, and distance from the proposed project. Cumulative projects are illustrated on Figure 4-1. Project information listed in Table 4-1 is based on information supplied by the City of San Rafael and Marin County, available environmental documents, and information posted on agency websites.



Code	Project Name
1	Marin Academy Aquatic Center
2	703 3rd Street
3	BioMarin/ Whistlestop/ EDEN Housing
4	Homeward Bound
5	AC Marriot Hotel
6	815 B Street Mixed Use Project
7	Biomarin New Building
8	800 Mission
9	Existing Transit Center Mixed-Use Development
10	Francisco Boulevard West Multi-Use Pathway Phase II
11	Francisco Boulevard East Sidewalk Widening
12	NB 101 Offramp--Second Right Turn Lane
13	Third Street Safety Improvements: Lindaro Street to Union Street
14	Third Street Rehabilitation: Miracle Mile to Lindaro Street
15	Francisco Boulevard East Resurfacing
16	Public Safety Center Street Resurfacing
17	Bike Connection from Second/ Tamalpais to Third/ Tamalpais
18	Downtown Traffic Signal Modernization
19	Safe pathways Pedestrian Crossing Improvements
20	Fourth Street Signal System Improvements: B Street to Cijos Street
21	Second Street Intersection Improvements
22	920 Grand Ave Transitional Residential Treatment Facility

Figure 4-1
San Rafael Transit Center - Cumulative Projects

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Table 4-1. Projects Considered in the Cumulative Impacts Analysis

Project #	Project Title	Estimated Construction Schedule	Approximate Distance from Project Area (feet)
1	Marin Academy Aquatic Center	Spring 2021 to spring 2022	3,500
2	703 3rd Street	TBD	Adjacent
3	BioMarin/Whistlestop/ EDEN Housing	2021 to 2028	1,000
4	Homeward Bound	2021 to 2022	3,000
5	AC Marriot Hotel	Fall 2019 to fall 2021	2,000
6	815 B Street Mixed Use Project	2019 to 2021	1,800
7	BioMarin New Building	TBD	750
8	800 Mission	TBD	700
9	Existing Transit Center Future Mixed-Use Development	TBD	Adjacent
10	Francisco Boulevard West Multi-Use Pathway Phase II	Early 2020 to early 2021	350
11	Francisco Boulevard East Sidewalk Widening	Summer 2020 to summer 2021	1,600
12	NB 101 Offramp: Second Right Turn Lane	Early 2021 to early 2022	700
13	Third Street Safety Improvements: Lindaro Street to Union Street	Summer 2021 to summer 2022	Adjacent
14	Third Street Rehabilitation: Miracle Mile to Lindaro Street	Summer 2021 to summer 2022	700
15	Francisco Boulevard East Resurfacing	2021 to 2022	1,600
16	Public Safety Center Street Resurfacing	2021 to 2022	2,000
17	Bike Connection from Second/Tamalpais to Third/Tamalpais	2020 to 2021	Adjacent
18	Downtown Traffic Signal Modernization	Summer 2020 to summer 2021	N/A
19	Safe pathways Pedestrian Crossing Improvements	Spring 2021 to summer 2021	2,000
20	Fourth Street Signal System Improvements: B Street to Cijos Street	2022 to 2023	1,600

Project #	Project Title	Estimated Construction Schedule	Approximate Distance from Project Area (feet)
21	Second Street Intersection Improvements	2022 to 2023	Adjacent
22	920 Grand Ave Transitional Residential Treatment Facility	2021 to 2023	1,100
23	General Plan 2040: General Plan Update and Downtown Precise Plan	Under review	N/A
24	Parks and Recreation Master Plan	TBD	N/A
25	Golden Gate Bridge, Highway and Transportation District Zero-Emission Bus Rollout Plan	Phased rollout through 2040	N/A

Sources: City of San Rafael 2020a, 2020b, 2020c; County of Marin 2020; District 2021
CIP = Capital Improvement Program; FY = Fiscal Year; NB = northbound

4.1.3.1 Planned Development Projects

Development projects planned within 1 mile of the project area are discussed in the following sections.

Marin Academy Aquatic Center

Marin Academy proposes to replace and relocate its existing aquatic center with a new 25-yard by 33-meter uncovered swimming pool; a two-story, 2,256-square-foot support building (restrooms, indoor and outdoor showers, changing and office areas, mechanical equipment, and chemical storage areas); concrete decking; site lighting and landscaping; perimeter metal fencing and courtyard walls; bleacher seating; public address system; and light-emitting-diode-illuminated scoreboard on two adjacent Downtown parcels with a combined lot area of 18,737 square feet. Construction is anticipated to begin in spring 2021 and to be completed in the spring of 2022.

703 3rd Street

This project proposes to redevelop and consolidate two contiguous Downtown parcels currently developed with existing one- and two-story commercial buildings and associated surface parking. The project proposes to construct a six-story, 73-foot-tall, mixed-use building with 120 rental units or apartments above a 969-square-foot commercial space and 121 garage parking spaces, including 112 mechanical parking lifts. The project was presented to and approved by the City Council on October 7, 2019. The project's construction schedule is not yet finalized.

BioMarin and Whistlestop/EDEN Housing Project

BioMarin, in conjunction with Whistlestop/EDEN Housing, submitted a planning application for a proposed development on 999 3rd Street in Downtown San Rafael. The project site, between 2nd and 3rd Streets (at the corner of Lindaro Street), is approximately 133,000 square feet in size. The Whistlestop/EDEN Housing would be developed on a 15,000-square-foot portion of the property at

the northwestern corner of the site (Brooks Street and 3rd Street). The Whistlestop/EDEN Housing component proposes a six-story, 70-foot-tall building with a senior center on the first two floors and 67 senior housing units on the upper four stories. BioMarin also proposes to construct two four-story, 72-foot-tall buildings for the purposes of laboratory, research and development, and general office space.

The San Rafael City Council approved the environmental document for this project on March 23, 2020. Whistlestop is anticipated to pursue the development of its portion of the project in 2021 or 2022, while BioMarin has 10 years through the adoption of a Development Agreement to pursue the construction of its portion of the project.

Homeward Bound Project

This project is a request by Homeward Bound for a General Plan Amendment, Zoning Amendment, and Use Permit for the following:

- General Plan Amendment to extend the high-density residential land use designation of the adjacent site such that it would include the entire 190 Mill Street property
- Zoning Map Amendment to extend the existing high-density residential zoning of the adjacent site such that it would include the entire 190 Mill Street property
- Use Permit to allow expansion of the existing emergency shelter

Separately, as a by-right project under Assembly Bill 2162, the project would include development of a 32-unit supportive housing project. This project was approved by the City Council on April 6, 2020, and construction is scheduled to commence in 2021 and be completed in 2022.

AC Marriott Hotel

The AC Marriot Hotel project is at 1201 5th Avenue and was approved on April 23, 2019. The City authorized the demolition of an existing 10,600-square-foot office building, associated tree removal, and construction of a 54-foot-tall, 140-room hotel building and associated parking and landscape improvements. The project also includes a rooftop lounge area. The City's most recent construction timeline estimated that construction would begin in August 2020 and conclude in the fall of 2021.

815 B Street Mixed Use Project

The project proposes to construct a four-story, mixed-use building with 41 residential units or apartments above 1,939 square feet of commercial retail space on four adjacent Downtown lots (at the northwest corner of B Street and 2nd Street) with a combined area of approximately 23,800 square feet. The project also proposes 48 garage parking spaces behind the commercial retail space. Vehicular and pedestrian access to the project is proposed along B Street and a secondary means of access for residents would be along 2nd Street. The project proposes to demolish all three existing structures on site, including a single-story, 4,500-square-foot commercial building at the corner of B Street and 2nd Street and two two-story, Victorian-era residences along 2nd Street, one of which is a local cultural resource. This project is currently under construction.

BioMarin New Building

BioMarin is proposing to develop a new office building on Parcel 1 of the San Rafael Corporate Center campus at 755 Lindaro Street. BioMarin acquired ownership of the campus in 2014 and is the

sole owner and the largest tenant of the campus, where it maintains its corporate headquarters. This proposed new structure would be a four-story, 72,396-square-foot office building on parcel 1 and include a Phase II expansion to the six-story parking structure at 788 Lincoln Avenue with approximately 312 additional stalls on six levels, including 41 stalls on grade. With the additional parking garage expansion, there would be a total of 978 parking spaces in the six-level parking structure.

The proposed building and parking structure and associated site developments will be designed to be compatible with the architectural character of the current campus and in compliance with the established design, planning, and development goals of the City of San Rafael. The project will meet California Green Building Standards Code mandatory measures plus Tier 1 voluntary measures in accordance with San Rafael standards for sustainability and efficiency, and will be designed to minimize impacts on the site and surrounding areas. The project's construction schedule is not yet finalized.

800 Mission Avenue Project

This project includes the construction of a four-story assisted living facility with 77 assisted living bedrooms or suites and 88 beds over 40 garage parking spaces. The project proposes one floor of memory care services. On July 10, 2018, the Planning Commission with the recommendation of the Design Review Board approved the project with conditions. Construction is anticipated to be completed in 2024.

Existing Transit Center Future Mixed-Use Development

The Golden Gate Bridge, Highway and Transportation District (District) would relocate the existing transit center and dispose of the property where existing facilities are located between 2nd Street, 3rd Street, Tamalpais Avenue, and Hetherton Street. The Draft *San Rafael General Plan 2040*, which is expected to be adopted in 2021, designates the site as "Downtown Mixed Use" (City of San Rafael 2020d) in anticipation of the transit center relocation. Any future use or development of the site would conform with City procedures for entitlements, zoning, and land use. For purposes of this EIR, it is assumed that the existing site would likely be sold and developed as some form of a mixed-use project, subject to more detailed design and approvals and subsequent CEQA review.

4.1.3.2 Public Projects

This section discusses publicly funded projects from the City's Capital Improvement Program (Fiscal Years 2020–2021 to 2022–2023) (City of San Rafael 2020a) and Marin County's Capital Improvement Program (Fiscal Years 2020–2021 to 2024–2025) (County of Marin 2020) within 1 mile of the project area.

Francisco Boulevard West Multi-Use Pathway Project, Phase II

In 2019, the City partnered with Sonoma-Marin Area Rail Transit (SMART) to complete construction of a multi-use pathway along Francisco Boulevard West between Andersen Drive and Rice Drive parallel to the railroad tracks as part of Phase I of this project. Phase II will install a bicycle pathway on Francisco Boulevard West between 2nd Street and Rice Drive by converting the roadway to a one-way southbound street, allowing the City to repurpose the other travel lane on the roadway into a bicycle pathway. This project completes the regional bicycle facility from Larkspur to Downtown San Rafael. The project is slated to receive funding for construction in Fiscal Year 2020–2021.

Francisco Boulevard East Sidewalk Widening

The existing sidewalk along Francisco Boulevard East is utilized daily by pedestrians and bicyclists that must navigate the congestion of fire hydrants and power poles. This project will install an 8-foot-wide sidewalk/bicycle pathway on Francisco Boulevard East between Vivian Street and Grand Avenue. This project was partially funded prior to the adoption of the current City Capital Improvement Program in June 2020 and is slated to receive additional construction funding in Fiscal Year 2020–2021.

NB 101 Offramp—Second Right Turn Lane

This project includes the installation of a second right-turn lane from the northbound Central San Rafael off-ramp onto 2nd Street. Construction for this improvement will be funded by the California Department of Transportation in conjunction with a bridge replacement project scheduled to start in early 2021.

Third Street Safety Improvements: Lindaro Street to Union Street

Funded in part by a California Department of Transportation Highway Safety Improvement Program grant, this project will install new wheelchair ramps, modify traffic signals, install a new communications network, and rehabilitate the asphalt pavement. Planning and design of this project was funded prior to the adoption of the current City Capital Improvement Program and construction funding is anticipated in Fiscal Year 2021–2022.

Third Street Rehabilitation: Miracle Mile to Lindaro Street

The City received major allocation from the Transportation Authority of Marin through the Measure A program to rehabilitate 3rd Street. In 2019, the City completed a Feasibility Study for the 3rd Street corridor. Since then, the corridor has been subdivided into two City projects, with this project covering Miracle Mile to Lindaro Street. The Third Street Safety Improvements project will make roadway improvements from Lindaro Street to Union Street. The intent of the improvements is to provide congestion relief and safety improvements along 3rd Street. Planning and design of this project was funded prior to the adoption of the current City Capital Improvement Program and construction funding is anticipated in Fiscal Year 2021–2022.

Francisco Boulevard East Resurfacing

This project includes removal of the existing asphalt and resurfacing Francisco Boulevard East from Vivian Way to Grand Avenue. Adjustment of utility covers and installation of new striping is included in the scope of work. Construction funding is anticipated in Fiscal Year 2020–2021.

Public Safety Center Street Resurfacing

With the new Public Safety Center nearing completion and portions of the roadways surrounding the Public Safety Center to be converted to two-way traffic, this project will resurface with either asphalt or slurry seal the following: C Street (Mission Avenue to 4th Street), D Street (5th Avenue to 4th Street), 5th Avenue (A Street to Ray Court), and Via Sessi. The project scope will also include installation of a retaining wall at the end of Via Sessi and installation of a concrete bulb-out on the southwest corner of D Street at 5th Avenue. Construction funding is anticipated in Fiscal Year 2020–2021.

Bike Connection from Second/Tamalpais to Third/Tamalpais

Beginning in summer 2020, the City will install a bicycle cycle-track on Francisco Boulevard West between Rice Drive and 2nd Street. This project will consider improvements on Tamalpais Avenue between 2nd and 3rd Streets to receive cyclists exiting the cycle-track on the south side of 2nd Street.

Downtown Traffic Signal Modernization

The traffic signals in the Downtown San Rafael area play a critical role in keeping traffic moving. The Innovative Developments to Enhance Arterials grant-funded project will improve traffic signal equipment throughout the Downtown area at many busy intersections. This project received funding prior to the adoption of the current City Capital Improvement Program.

Safe Pathways Pedestrian Crossing Improvements

Pedestrian crosswalk improvements near schools are important safety projects for the City. This project will create painted bulb-outs and install rectangular, rapid-flashing beacons at four crosswalks at Mission Avenue/Park Street, Mission Avenue/Alice Street, 5th Avenue/River Oaks Road, and Knight Drive/Ashwood Court. Construction funding is anticipated in Fiscal Year 2020–2021.

Fourth Street Signal System Improvements: B Street to Cijos Street

4th Street is the heart of the Downtown Business District conveying pedestrians, bicyclists, and motorists through San Rafael. The existing traffic signal system needs to be updated to meet current design standards and ensure reliability of the system for all types of users. Construction funding is anticipated in Fiscal Year 2022–2023.

Second Street Intersection Improvements

2nd Street is a major thoroughfare through Downtown San Rafael. This project will rehabilitate critical intersections and includes pavement resurfacing, wheelchair ramps, and traffic signal upgrades with new communication equipment. Planning and design funding is scheduled for Fiscal Year 2020–2021 and construction funding is anticipated in Fiscal Year 2022–2023.

920 Grand Ave Transitional Residential Treatment Facility

As reported in Fiscal Year 2018–2019, cost estimates to convert the facility into a Transitional Residential Treatment facility ranged from $4–$5 million. Since that time, the Department of Health and Human Services has identified funds to cover most of the balance of the costs of the project through the current fiscal year budget savings. In the April 2019 budget hearings, the Marin County Board of Supervisors authorized the project to proceed as originally envisioned for a Transitional Residential Treatment facility. Staff will work to develop a project plan and schedule starting in Fiscal Year 2019–2020. This project was listed as a priority in the Marin County Fiscal Year 2020–2021 to Fiscal Year 2024–2025 Capital Improvement Plan (County of Marin 2020).

4.1.3.3 Updates to Plans and Policies

This section discusses updates to plans and policies that have jurisdiction over the project area.

San Rafael General Plan 2040 and Downtown Precise Plan Update

This includes the changes in land use proposed by the *San Rafael General Plan 2040*, as well as capital projects and new or modified policies relating to topics such as transportation, housing, resource management, and safety. It also includes the Downtown Precise Plan, now underway. The Downtown Precise Plan implements the community's vision to create opportunities for reinvestment and future development in the Downtown area that is feasible, predictable, and consistent with the community's priorities and aspirations. Growth forecasts for this plan include the addition of 2,200 residential units, 698,000 square feet of non-residential use, and 2,000 jobs. These projections are based on the addition of an assisted living facility, multiple residential and commercial developments, a hotel, and a public safety center. The City is presently working on the *San Rafael General Plan 2040* and released a draft for public review in October 2020. The *San Rafael General Plan 2040* is expected to be approved and implemented in 2021 or 2022.

Parks and Recreation Master Plan

In consultation with the Parks and Recreation Commission, the City will review the conditions of all parks and playground structures to understand deficiencies and where future improvements should be focused to meet current codes and Americans with Disabilities Act regulations. This assessment will become part of a Parks and Recreation Master Plan. This plan is set to receive planning/design funding in Fiscal Year 2020–2021.

Golden Gate Bridge, Highway and Transportation District Zero-Emission Bus Rollout Plan

The District adopted its Zero-Emission Bus Rollout Plan in May 2021. Implementation of this plan is expected to occur gradually, with 100 percent of the fleet required to consist of zero-emission buses by 2040. The plan outlines the schedule for replacing the District's existing fleet with zero-emission buses, the anticipated sources of funding for the rollout, and the plan for training District staff on protocols associated with the zero-emission fleet rollout.

4.1.4 Cumulative Impacts Analysis

The following discussion presents the cumulative impacts of the proposed project, organized by resource area. There is the potential for cumulative construction impacts where cumulative projects and the proposed project overlap in location or are adjacent (affecting the same resource/receptor but potentially at different times), or if they overlap in time (affecting the same resource/receptor at the same time).

4.1.4.1 Aesthetics

Cumulative impacts are those resulting from past, present, and reasonably foreseeable future actions, combined with the potential visual impacts of the proposed project. The combined visual effect of the proposed project and other development projects planned, recently in construction, or currently in construction would contribute to change in the visual character of the project area. Implementation of *The City of San Rafael General Plan 2020*, *San Rafael General Plan 2040*, and Downtown Vision will contribute to growth and redevelopment within and surrounding the project area, resulting in a cumulative visual impact. Once implemented, these plans will improve existing transportation corridors with repaving street surfaces and redeveloping parcels within and near the

Downtown area. The proposed project will contribute to redevelopment in the area in addition to the approved Marin Academy Aquatic Center, 703 3rd Street, BioMarin/Whistlestop/EDEN Housing, AC Marriot Hotel, 815 B Street Mixed Use Project, BioMarin New Building, and 800 Mission Avenue Project, and future development of the existing transit center site, which would contribute to cumulative impacts.

The proposed project is driven by implementation of *The City of San Rafael General Plan 2020* and the *San Rafael Downtown Community Plan* to improve local access, create a transportation center in the Downtown area, create public plazas, and add connectivity for future land uses in the vicinity. All alternatives would contribute to the same cumulative visual impacts. Temporary construction activities associated with the proposed project would not result in a cumulatively considerable contribution to visual impacts because of their relatively short-term duration. The planned redevelopment in the Downtown area would alter the existing visual character of the area in the long term and would be visible from the project area by changing existing land uses. The proposed project would contribute to the addition of transportation infrastructure, landscaping, and plaza-like spaces. Roadway users, residents, businesses, and recreationists will see undeveloped areas within the landscape gradually transition and infill to mixed-use, commercial, and residential development, including the associated utility infrastructure needed to support it. Redevelopment and roadway improvements will also increase ambient atmospheric lighting and glare in the area by developing unlit areas with lit buildings, redeveloping areas with a higher number of light sources (e.g., replacing a one-story building with a multiple-story building), and adding reflective surfaces to areas that are currently undeveloped or not as densely developed. The proposed project would contribute incrementally to these cumulative impacts related to planned and proposed redevelopment in the area, but it would not substantially alter the existing visual landscape or degrade the visual quality of the project area, and is likely to result in beneficial cumulative impacts by creating public spaces that are landscaped and attractive streetscapes. In addition, it would comply with local regulations and policies that facilitate the redevelopment of these areas. However, the contribution would be cumulatively considerable due to the potential to affect historic buildings and increase nuisance light and glare. Implementation of Mitigation Measure MM-CULT-CNST-1 (Prepare and Implement Relocation Plans) would relocate historic structures affected by the 4th Street Gateway Alternative and the Under the Freeway Alternative, ensuring that the visual integrity of these structures are retained within the City, and Mitigation Measure MM-AES-OP-3 (Apply Minimum Lighting Standards) would ensure lighting impacts are minimized, reducing the proposed project's contribution to cumulative effects on visual resources to a ***less-than-cumulatively considerable level with mitigation***.

4.1.4.2 Air Quality

The cumulative geographic context for air quality is the San Francisco Bay Area Air Basin (SFBAAB). The cumulative geographic context for health risks is the immediate vicinity of the project area (i.e., within 1,000 feet). The cumulative geographic context for odors is the City.

Conflict With or Obstruct Implementation of the Applicable Air Quality Plan

As discussed in Section 3.2, the proposed project would support the goals of the Bay Area Air Quality Management District's (BAAQMD's) 2017 Clean Air Plan, would include all applicable control measures, and would not conflict with 2017 Clean Air Plan implementation. The purpose of the 2017 Clean Air Plan is to improve regional air quality in the air basin; therefore, the analysis and less-than-significant finding are inherently cumulative. Consequently, this impact would not be

cumulatively considerable. For these reasons, the proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact related to air quality plan consistency. The cumulative impact would be ***less than significant***.

Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region Is a Nonattainment Area for an Applicable Federal or State Ambient Air Quality Standard

As discussed in Section 3.2, BAAQMD has identified project-level thresholds to evaluate criteria pollutant impacts (Table 3.2-6 in Section 3.2). In developing these thresholds, BAAQMD considers levels at which project emissions are cumulatively considerable. As noted in BAAQMD's *California Environmental Quality Act Air Quality Guidelines*:

> In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

Consequently, exceedances of project-level thresholds would be cumulatively considerable, and the cumulative impact would be significant. As discussed in Section 3.2, the proposed project would not contribute a significant level of air pollution such that regional air quality within the SFBAAB would be degraded. Accordingly, the proposed project's contribution to a cumulative criteria pollutant emissions impact would be ***less than significant***.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

As discussed in Section 3.2, health risk impacts associated with construction and operation of the proposed project were evaluated in a Health Risk Assessment. According to BAAQMD's *California Environmental Quality Act Air Quality Guidelines*, combined risk and concentration levels should be determined from all nearby diesel particulate matter (DPM) and inhalable fine particle ($PM_{2.5}$) sources within 1,000 feet of a project site, respectively, and these combined risk and concentration levels should be compared to BAAQMD's cumulative thresholds.

The proposed project would generate DPM and $PM_{2.5}$ during construction activities and from relocating diesel-powered buses. There are existing nearby DPM and $PM_{2.5}$ sources within 1,000 feet of the project area, which, along with the proposed project, could contribute to a cumulative health risk for existing sensitive receptors adjacent to and within the project area (see Figure 3.2-1 in Section 3.2). This is a potentially **significant** cumulative impact. BAAQMD data files and distance multipliers provided by BAAQMD were used to estimate the background impacts and concentrations for existing stationary, roadway, and rail sources. The combined risks from mitigated construction and operation of the proposed project and ambient sources are summarized in the tables below.

As shown in Tables 4-2 through 4-5, cancer risk and chronic non-cancer chronic risk would be below BAAQMD thresholds; however, the cumulative annual $PM_{2.5}$ concentrations would exceed the BAAQMD threshold for all alternatives. It should be noted that the annual $PM_{2.5}$ concentrations from background sources exceed the cumulative threshold without any project-related emissions.

Table 4-2. Maximum Mitigated Cumulative Health Risks for the Move Whistlestop Alternative

	Maximum Affected Residential Receptor		
Source[a]	Cancer Risk (per million)	Non-Cancer Hazard Index[c]	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[d]
Contribution from Existing Sources for Cancer Risk Scenario 1			
Stationary[a]	4.29	0.02	-
Roadway[b]	62.54	-	0.58
Rail[b]	1.31	-	0.004
Existing Total	68.14	0.02	0.59
Contribution from Proposed Project for Cancer Risk Scenario 1			
Project Construction (1.5-year exposure duration)	0.36	0.0005	0.05
Project Operations (28.75-year exposure duration)	2.55	-	-
Existing + Construction + Operations	71.05	-	-
Existing + Construction	-	0.02	0.64
BAAQMD Cumulative Thresholds	100	10.0	0.8
Exceeds Thresholds?	**No**	**No**	**No**
Contribution from Existing Sources for Cancer Risk Scenario 2			
Stationary[b]	4.29	0.02	-
Roadway	44.10	-	0.95
Rail	1.11	-	0.001
Existing Total	49.50	0.02	0.95
Contribution from Proposed Project for Cancer Risk Scenario 2			
Project Operations (30-year exposure duration)	3.66	0.001	0.13
Existing + Operations	53.16	0.02	1.08
BAAQMD Cumulative Thresholds	100	10.0	0.8
Exceeds Thresholds?	**No**	**No**	**Yes**

See Appendix B for detailed modeling files.
[a] For existing stationary sources, the values represent the highest possible risk values of any maximally affected receptor among any build alternative.
[b] The maximum affected receptor for Scenario 1 and Scenario 2 are at different locations; therefore, the existing roadway and rail source values are different and are associated with the maximally affected receptor for each scenario.
[c] No data were available for chronic values for roadway and rails sources.
[d] All stationary sources were gasoline-dispensing facilities and do generate $PM_{2.5}$ emissions.

Table 4-3. Maximum Mitigated Cumulative Health Risks for the Adapt Whistlestop Alternative

	Maximum Affected Residential Receptor		
Source[a]	Cancer Risk (per million)	Non-Cancer Hazard Index[c]	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[d]
Contribution from Existing Sources for Cancer Risk Scenario 1			
Stationary[a]	4.29	0.02	-
Roadway[b]	62.54	-	0.58
Rail[b]	1.31	-	0.004
Existing Total	68.14	0.02	0.59

Source[a]	Maximum Affected Residential Receptor		
	Cancer Risk (per million)	Non-Cancer Hazard Index[c]	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[d]
Contribution from Proposed Project for Cancer Risk Scenario 1			
Project Construction (1.5-year exposure duration)	0.37	0.004	0.05
Project Operations (28.75-year exposure duration)	2.55	-	-
Existing + Construction + Operations	71.06	-	-
Existing + Construction	-	0.02	0.64
BAAQMD Cumulative Thresholds	100	10.0	0.8
Exceeds Thresholds?	**No**	**No**	**No**
Contribution from Existing Sources for Cancer Risk Scenario 2			
Stationary[b]	4.29	0.02	-
Roadway	44.10	-	0.95
Rail	1.11	-	0.001
Existing Total	49.50	0.02	0.95
Contribution from Proposed Project for Cancer Risk Scenario 2			
Project Operations (30-year exposure duration)	3.66	0.001	0.13
Existing + Operations	53.16	0.02	1.08
BAAQMD Cumulative Thresholds	100	10.0	0.8
Exceeds Thresholds?	**No**	**No**	**Yes**

See Appendix B for detailed modeling files.
[a] For existing stationary sources, the values represent the highest possible risk values of any maximally affected receptor among any build alternative.
[b] The maximum affected receptor for Scenario 1 and Scenario 2 are at different locations; therefore, the existing roadway and rail source values are different and are associated with the maximally affected receptor for each scenario.
[c] No data were available for chronic values for roadway and rails sources.
[d] All stationary sources were gasoline-dispensing facilities and do generate $PM_{2.5}$ emissions.

Table 4-4. Maximum Mitigated Cumulative Health Risks for the 4th Street Gateway Alternative

Source[a]	Maximum Affected Residential Receptor		
	Cancer Risk (per million)	Non-Cancer Hazard Index[c]	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[d]
Contribution from Existing Sources for Cancer Risk Scenario 1			
Stationary[a]	4.29	0.02	-
Roadway[b]	34.06	-	0.57
Rail[b]	2.88	-	0.004
Existing Total	41.24	0.02	0.57
Contribution from Proposed Project for Cancer Risk Scenario 1			
Project Construction (1.5-year exposure duration)	1.26	0.001	0.15
Project Operations (28.75-year exposure duration)	3.31	-	-
Existing + Construction + Operations	45.81	-	-
Existing + Construction	-	0.02	0.72
BAAQMD Cumulative Thresholds	100	10	0.8

Source[a]	Maximum Affected Residential Receptor		
	Cancer Risk (per million)	Non-Cancer Hazard Index[c]	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[d]
Exceeds Thresholds?	**No**	**No**	**No**
Contribution from Existing Sources for Cancer Risk Scenario 2			
Stationary[b]	4.29	0.02	-
Roadway	34.06	-	0.96
Rail	2.88	-	0.001
Existing Total	41.24	0.02	0.96
Contribution from Proposed Project for Cancer Risk Scenario 2			
Project Operations (30-year exposure duration)	4.65	0.001	0.12
Existing + Operations	45.89	0.02	1.08
BAAQMD Cumulative Thresholds	100	10.0	0.8
Exceeds Thresholds?	**No**	**No**	**Yes**

See Appendix B for detailed modeling files.
[a] For existing stationary sources, the values represent the highest possible risk values of any maximally affected receptor among any build alternative.
[b] The maximum affected receptor for Scenario 1 and Scenario 2 are at different locations; therefore, the existing roadway and rail source values are different and are associated with the maximally affected receptor for each scenario.
[c] No data were available for chronic values for roadway and rails sources.
[d] All stationary sources were gasoline-dispensing facilities and do generate $PM_{2.5}$ emissions.

Table 4-5. Maximum Mitigated Cumulative Health Risks for the Under the Freeway Alternative

Source[a]	Maximum Affected Residential Receptor		
	Cancer Risk (per million)	Non-Cancer Hazard Index[c]	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[d]
Contribution from Existing Sources for Cancer Risk Scenario 1			
Stationary[a]	4.29	0.02	-
Roadway[b]	44.54	-	0.97
Rail[b]	1.12	-	0.00
Existing Total	49.96	0.02	0.97
Contribution from Proposed Project for Cancer Risk Scenario 1			
Project Construction (1.5-year exposure duration)	2.18	0.002	0.27
Project Operations (28.75-year exposure duration)	3.84	-	-
Existing + Construction + Operations	55.98	-	-
Existing + Construction	-	0.02	1.24
BAAQMD Cumulative Thresholds	100	10	0.8
Exceeds Thresholds?	**No**	**No**	**Yes**
Contribution from Existing Sources for Cancer Risk Scenario 2			
Stationary[b]	4.29	0.02	-
Roadway	34.06	-	0.96
Rail	2.88	-	0.001
Existing Total	41.24	0.02	0.96

Source[a]	Maximum Affected Residential Receptor		
	Cancer Risk (per million)	Non-Cancer Hazard Index[c]	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[d]
Contribution from Proposed Project for Cancer Risk Scenario 2			
Project Operations (30-year exposure duration)	5.40	0.001	0.12
Existing + Operations	55.35	0.02	1.08
BAAQMD Cumulative Thresholds	100	10.0	0.8
Exceeds Thresholds?	**No**	**No**	**Yes**

See Appendix B for detailed modeling files.
[a] For existing stationary sources, the values represent the highest possible risk values of any maximally affected receptor among any build alternative.
[b] The maximum affected receptor for Scenario 1 and Scenario 2 are at different locations; therefore, the existing roadway and rail source values are different and are associated with the maximally affected receptor for each scenario.
[c] No data were available for chronic values for roadway and rails sources.
[d] All stationary sources were gasoline-dispensing facilities and do generate $PM_{2.5}$ emissions.

As shown in the tables above, each build alternative would be below the cancer risk and non-cancer chronic thresholds; however, each build alternative would exceed the BAAQMD cumulative threshold for annual $PM_{2.5}$ concentrations. However, it should be noted that the annual $PM_{2.5}$ concentrations for the existing background sources exceed BAAQMD's cumulative thresholds without the proposed project's contributions. Furthermore, the BAAQMD *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2017) state that if a project would exceed the project-level thresholds of significance, then the proposed project would result in a significant impact and would have a cumulatively considerable contribution. As discussed in Section 3.2, the proposed project's contributions of $PM_{2.5}$ concentrations would be below the project-level thresholds for all project build alternatives. Accordingly, the contribution of the proposed project's emissions would not be cumulatively considerable. This impact would therefore be ***less than significant***.

Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People

Each build alternative would result in less-than-significant odor impacts. Construction activities would generate odors from diesel exhaust, asphalt paving, and the use of architectural coatings and solvents, but activities would be temporary and would not result in nuisance odors that would violate BAAQMD's Regulation 7. In addition, future project activities are not associated with the operation of odor-generating facilities. For these reasons, the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative odor impact. The cumulative impact would be ***less than significant***.

4.1.4.3 Biological Resources

Given the proposed project's location in an urban area, the cumulative impacts analysis was limited to the immediate vicinity of the proposed build alternatives and Irwin Creek, immediately downstream of the project area. As discussed in Section 3.3, Biological Resources, the dominant land use in the project area is commercial development. Twenty-four projects have been proposed or are approved for construction in the immediate vicinity of the project area (Table 4-1). Past, current, and future projects that result in the loss of biological resources contribute to cumulative biological impacts. Construction of the proposed project would add to those cumulative impacts.

All build alternatives have the potential to affect special-status or non-special-status roosting bats, nesting migratory birds, protected wetlands, and native wildlife nursery sites. Impacts that result in the mortality of bats or migratory birds would contribute to the cumulative loss of populations of these animals. The cumulative loss of roosting and nesting habitat (which are also considered native wildlife nursery sites) would contribute to a general decline of these habitats in the project vicinity, resulting in the loss or displacement of wildlife that would have to compete for suitable habitats with existing adjacent populations. With Mitigation Measures MM-BIO-CNST-1: Conduct Environmental Awareness Training for Construction Employees, MM-BIO-CNST-2: Conduct Preconstruction Surveys for Bats and Implement Protective Measures, and MM-BIO-CNST-6: Conduct a Preconstruction Survey for Nesting Birds and Implement Protective Buffers Around Active Nests to avoid or minimize potential effects on roosting bats and migratory birds, the loss of structures that provide suitable bat roosting habitat and the loss of vegetation that provides suitable nesting habitat, when combined with other impacts on habitat and special-status species from other past, present, and future projects, would not be considerable.

The Under the Freeway Alternative would result in permanent and temporary losses of wetland (Irwin Creek), which would contribute to the cumulative loss of wetlands in the project vicinity. Water quality impacts, such as increased turbidity and chemical runoff, could result from construction under all alternatives and could extend downstream of the immediate project area; however, implementation of water quality protection measures and construction site best management practices would avoid these impacts. Mitigation Measures MM-BIO-CNST-1, MM-BIO-CNST-3: Install Orange Construction Fencing Between the Construction Area and Adjacent Sensitive Biological Resources, MM-BIO-CNST-4: Conduct Periodic Biological Monitoring, and MM-BIO-CNST-5: Compensate for Temporary and Permanent Loss of Perennial Stream would minimize and mitigate potential effects on wetlands from the Under the Freeway Alternative and the contribution to cumulative impacts on wetlands would not be considerable.

4.1.4.4 Cultural Resources

The project is proposed in San Rafael's Downtown commercial district, an area where several past, present, and reasonably foreseeable projects have already occurred or would occur in the future. The cumulative projects generally constitute new development and transportation facility improvements. Some cumulative projects are within or adjacent to the boundaries of the project area, while others are dispersed throughout Downtown San Rafael, some more than 0.25 mile to the west of the project area.

Regarding built-environment historical resources, none of the cumulative projects would involve direct, physical changes to the properties within the project area. It is anticipated that the cumulative projects could result in changes to the settings of those built-environment historical resources, as well as resources near the project area from which the proposed project would be visible. However, these changes in setting would be minor in nature and would be consistent with the degree of urban development that has already occurred in the resources' setting across the 20th and early 21st centuries. The significance of any of the historical resources in the project area is not premised on it possessing an intact and cohesive visual or functional relationship with nearby properties. Likewise, and reciprocally, the significance of nearby offsite historical resources does not appear to be premised on the resource having an intact and cohesive visual or functional relationship with the project area. Such changes would not combine to result in a significant cumulative impact on built-environment historical resources. The impact would be ***less than significant***. No mitigation is required.

The cumulative context for archaeological resources and human remains includes urban development projects and transportation and streetscape improvements occurring in or within 1,000 feet of the project area, which together could lead to ground-disturbing activities that could result in impacts on archaeological resources and human remains. The past, present, and reasonably foreseeable future projects within and surrounding the project area include projects that will require ground disturbance during project construction and therefore have the potential to affect archaeological resources and human remains. Taken together, the proposed project and the identified cumulative projects have the potential to result in an overall cumulative impact on archaeological resources and/or human remains.

The project area is considered sensitive for archaeological resources. Additionally, numerous archaeological sites including human burials have been recorded within 0.25 mile of the project area. Implementation of Mitigation Measures MM-CULT-CNST-4 through MM-CULT-CNST-7 recommend archaeological testing and monitoring, cultural resource training, and compliance with laws regarding human remains. These measures would reduce cumulative impacts of the proposed project on archaeological resources and human remains to less-than-significant levels.

With implementation of mitigation measures, the contribution from the proposed project to impacts on archaeological resources and human remains would be reduced to less-than-considerable levels. The impact would be ***less than significant after mitigation***; therefore, the proposed project's contribution to the cumulative impact would be less than cumulatively considerable.

4.1.4.5 Energy

The cumulative geographic context for energy is the service area of Marin Clean Energy (MCE) and Pacific Gas and Electric Company (PG&E) (i.e., electric and natural gas service area), which comprises several counties in the north and east Bay Area, and the larger Northern California area, respectively.

Continued growth throughout MCE's and PG&E's service areas could contribute to ongoing increases in demand for electricity and natural gas. These anticipated increases would be countered, in part, as state and local requirements related to renewable energy become more stringent and energy efficiency increases. The extent to which cumulative development through 2025, the proposed project's buildout year, could result in the wasteful, inefficient, or unnecessary consumption of energy resources would depend on the specific characteristics of new development, which are not known at this time. As discussed previously, Senate Bill 100 obligates utilities to supply 100 percent carbon-free electricity by 2045; PG&E reached California's 2020 renewable energy goal 3 years ahead of schedule and is currently projected to meet the new SB 100 goal that calls for 60 percent renewable energy by 2030, also ahead of schedule. Similarly, MCE has outpaced the state in both its renewable and greenhouse gas (GHG)-free portfolio content. In addition, the Pavley standards are expected to increase average fuel economy to roughly 54.5 miles per gallon by 2025, thereby lowering the demand or fossil fuels. In May 2021, the District adopted its Zero-Emission Bus Rollout Plan, which outlines the schedule for replacing the District's existing fleet with zero-emission buses by 2040, the anticipated sources of funding, and the plan for training District staff on protocols associated with the zero-emission fleet rollout. In summary, it is anticipated that future energy users will become more efficient and less wasteful over time.

Similar to the proposed project, the cumulative projects would most likely include features that would reduce energy consumption and increase renewable energy generation. For these reasons, the proposed project in combination with past, present, and reasonably foreseeable future projects

would not result in a significant cumulative impact related to the wasteful, inefficient, or unnecessary consumption of energy resources. The cumulative impact would be ***less than significant***. No mitigation is required.

4.1.4.6 Geology and Soils

Geology, Soils, and Seismicity

The proposed project, combined with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact on geology and soils. In general, a project's potential impacts related to geology and soils are individual and localized, depending on the project site and underlying soils. Each project requires different levels of excavation, cut-and-fill work, and grading, which would affect local geologic conditions in different ways; therefore, the geographic context for geology and soils is site-specific. As each project would be required to complete a site-specific detailed geotechnical investigation as required by the California Building Code, the *Marin Countywide Plan*, the San Rafael Municipal Code, and *The City of San Rafael General Plan 2020*, each project would be provided with site-specific design recommendations, which would reduce each project's impacts to a less-than-significant level. Similar seismic safety standards would also apply to the reasonably foreseeable future projects. For these reasons, the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative geology and soils impact. The cumulative impact would be ***less than significant***. No mitigation is required.

Paleontological Resources

Because the geologic units present in the project area, Holocene alluvium, Holocene intertidal deposits, and the Franciscan Formation, have very low likelihood to contain significant paleontological resources, it is unlikely that there would be a cumulative impact on paleontological resources. As such, the proposed project, combined with past, present, and reasonably foreseeable future projects shown in Table 4-1 and on Figure 4-1, is unlikely to result in a cumulatively considerable contribution to a cumulative impact on paleontological resources. Impacts would be ***less than significant***.

4.1.4.7 Greenhouse Gas Emissions

GHG emissions and climate change are exclusively cumulative impacts; there are no non-cumulative GHG emissions impacts from a climate change perspective. Climate change is the result of cumulative global emissions. No single project, when considered in isolation, can cause climate change because a single project's emissions are not enough to change the radiative balance of the atmosphere. Because climate change is the result of GHG emissions and GHGs are emitted by innumerable sources worldwide, global climate change will have a significant cumulative impact on the natural environment as well as human development and activity. As such, GHGs and climate change are cumulatively considerable, even though the contribution may be individually limited. California Air Resources Board and BAAQMD methodology and thresholds are thus cumulative in nature. The proposed project would be consistent with statewide targets and with adopted plans and policies for reducing GHGs; therefore, impacts from the proposed project would be ***less than significant***.

4.1.4.8 Hazards and Hazardous Materials

The cumulative geographic context for hazards and hazardous materials is the project area and nearby properties in the immediate vicinity. Similar to the proposed project, reasonably foreseeable projects could result in construction impacts related to the routine transport, disposal, or handling of hazardous materials; intermittent use and transport of hazardous materials commonly used for construction; and transport of affected soil to and from sites. However, hazardous waste generated during construction of any project would be collected, properly characterized for disposal, and transported in compliance with regulations such as those described under Section 3.8.1.1, Regulatory Setting. Additionally, implementation of Mitigation Measure MM-HYD-CNST-1, Prepare and Implement Stormwater Pollution Prevention Plan, would contain BMPs to minimize potential impacts related to hazardous materials during construction. Hazardous materials are strictly regulated by local, state, and federal laws. Specifically, these laws are designed to ensure that hazardous materials do not result in a gradual increase of toxins to the environment. For each of the reasonably foreseeable projects under consideration, various project-specific measures (such as those identified for the proposed project) would be implemented as a condition of development approval to mitigate risks associated with exposure to hazardous materials. For these reasons, the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative hazards or hazardous materials impact. The cumulative impact of the proposed project on hazards and hazardous materials would be ***less than significant***.

4.1.4.9 Hydrology and Water Quality

Future development within the San Rafael Creek Watershed would increase stormwater runoff and erosion runoff, which would increase the amount and rate of surface water runoff throughout the watershed. Cumulative impacts on water quality could occur due to erosion and sedimentation and/or from the release of nonpoint-source pollutants associated with cumulative development in Marin County and the City of San Rafael.

When the effects of the proposed project on water quality are considered in combination with the overall proposed project and potential effects of other cumulative projects, there would be the potential for cumulative impacts on surface and groundwater quality. The geographic area is fully developed. Buildout of cumulative projects would involve redevelopment of existing developed sites that contain substantial impervious surfaces. The incremental water quality impact contribution from implementation of the proposed project would be minor. The combined effects on water quality from the proposed project and other projects could result in a cumulatively significant impact. However, all future development projects would be required to comply with laws and regulations pertaining to water resources, including development of stormwater pollution prevention plans, water quality management plans, and source control/treatment control best management practices to prevent water quality degradation and reduce potential impacts to the maximum extent feasible.

Potential sources of flooding near the project area include San Rafael Creek and San Rafael Bay, runoff generated on site, and offsite runoff that passes through the project area. It is also anticipated that flooding and storm surge will likely become more intense in the coming years as a result of climate change. The system of onsite controls, as planned as required by existing regulations, serves to regulate flows off site, minimizing the proposed project's contribution to the volume and rate of downstream flow. The proposed project has been designed to be protected from flooding up to and

including the 100-year flood event. Notwithstanding, cumulative development within the project area could increase the volume and rate of stormwater runoff. Such increases could cause localized flooding if the storm drainage capacity is exceeded or conveys excess flows to areas where flood storage may not be available. Generally, cumulative projects would occur in developed areas with existing impervious surfaces and would not be expected to substantially increase the amount of new impervious surfaces. All new development would be required to address stormwater management in a manner that ensures that flooding as a result of storm surges would not increase and flood flows would not be redirected to other areas not currently prone to flooding. All cumulative projects would be required to include stormwater management features, such as Low-Impact Development measures into project designs, to reduce flows to pre-project conditions.

Developments are required by the state and City to maximize hydrologic and water quality mitigation efforts and are reviewed by other jurisdictions for hydrologic impacts. Additionally, implementation of Mitigation Measure MM-HYD-CNST-1 would contain BMPs to minimize the proposed project's potential construction impacts related to water quality. With implementation of BMPs and compliance with applicable regulations pertaining to hydrology and water quality, the proposed project would not have cumulatively considerable impacts related to flooding, stormwater drainage, or water resources within the City. Impacts would be ***less than significant***.

4.1.4.10 Land Use and Planning

The proposed project would not conflict with any applicable land use regulations, land use policies, or land use planning documents. Although the proposed project involves improvements to roadway intersections and bicycle and pedestrian facilities, these improvements would occur in the existing right-of-way and parcels within Downtown San Rafael and would not include construction of any new roadways or other substantial infrastructure improvements that would restrict access or otherwise divide an established community. Therefore, the proposed project would not contribute toward any cumulative impacts in these regards. For these reasons, the proposed project would not contribute to a cumulative impact or result in land use conflicts. The proposed project would not affect land use policies; therefore, taken with past, present, and reasonably foreseeable projects, impacts are considered not cumulatively considerable and ***less than significant***, and no mitigation is required.

4.1.4.11 Noise and Vibration

The geographic scope of analysis for cumulative noise and vibration construction impacts, as well as stationary noise sources, encompasses reasonably foreseeable projects within approximately 1,000 feet of the project area. Beyond 1,000 feet, the contributions of noise from other projects would be greatly attenuated through both distance and intervening structures, and their contribution would be expected to be minimal.

Construction

Move Whistlestop and Adapt Whistlestop Alternatives

The nearest major planning projects in the project area are 703 3rd Street and the BioMarin/ Whistlestop/EDEN Housing project. Other projects in the vicinity of the project area include bicycle connection between 2nd Street and 3rd Street, Third Street Rehabilitation: Miracle Mile to Lindaro Street, and 2nd Street intersection improvements. Construction of these projects could overlap with

construction of the chosen build alternative. As described Section 3.11, for the Move Whistlestop and Adapt Whistlestop Alternatives, City daytime noise limits are likely to be exceeded at the nearest receptors during construction. These build alternatives would be near the major planning projects identified above, which may produce noise levels during construction that would be cumulatively higher if done during project construction. For the Move Whistlestop and Adapt Whistlestop Alternatives, this would contribute to a **significant** cumulative impact.

Therefore, construction of the Move Whistlestop and Adapt Whistlestop Alternatives would potentially contribute to a significant cumulative impact. Mitigation Measure MM-NOI-CNST-1 would reduce this impact to ***a less-than-significant level with mitigation***.

4th Street Gateway and Under the Freeway Alternatives

For the 4th Street Gateway or Under the Freeway Alternatives, heavy equipment would not exceed City construction noise limits during daytime hours. Nighttime work may be required during construction but only for utility work. As such, it is unlikely that the proposed project in combination with other planned projects would contribute to a significant cumulative impact for these two build alternatives, resulting in a less-than-significant impact.

Therefore, cumulative impacts for the 4th Street Gateway and Under the Freeway Alternatives would be ***less than significant***. No mitigation is required.

Vibration

All Build Alternatives

Groundborne vibration from non-impact equipment is only perceptible within a localized area around the source of the vibration, generally at a distance of less than 50 feet. Vibration effects from the proposed project are not likely to combine with other planned projects in the area. As such, vibration from the proposed project is not expected to result in a cumulative impact. Impacts would be ***less than significant***.

Vehicle Traffic

All Build Alternatives

The cumulative impacts analysis for operational noise focuses on changes in traffic patterns. Noise level estimates were based on average traffic volumes for p.m. peak-hour turning movement volumes for adjacent local roadways. A logarithmic comparison of traffic volumes among all four build alternatives was used to develop noise level increase values for roadway segments adjacent to Hetherton Street. The traffic noise analysis indicates that the redistribution of traffic under all build alternatives would not result in a noticeable increase in noise levels. The increase would be less than 1 decibel on nearly all segments, except for Hetherton Street between 2nd Street and 3rd Street, where there are no sensitive uses. For these reasons, vehicle traffic in combination with other projects is not expected to produce noise levels that would be cumulatively significant. Impacts would be ***less than significant***.

Bus Operations

All Build Alternatives

The existing transit center's bus operations would be transferred to the new transit facility, and the proposed transit center is expected to generate a similar level of noise from buses and transportation operations. The proposed project is in an urban setting with a high level of existing ambient noise, and the increase in ambient noise introduced by the transit center is not expected to be noticeable. For these reasons, operation of the proposed project in combination with other projects is not expected to produce noise levels that would be cumulatively significant. Impacts would be ***less than significant***.

4.1.4.12 Population and Housing

Direct Population Growth

The proposed project under all four alternatives does not propose any new housing units and would not directly induce population growth. Because the proposed project would not involve the construction of residential housing units and would not directly introduce any new residents, the proposed project falls within ABAG projections for the City and Marin County. Therefore, the proposed project would not result in a cumulatively considerable impact. The cumulative impact would be ***less than significant***. No mitigation is required.

Indirect Population Growth

Indirect population growth is not anticipated because construction work would be temporary, construction workers would be drawn from the construction employment labor force already residing in San Rafael and the surrounding communities, and the proposed project would be considered infill development and would not require the construction of any new roads. For these reasons, the proposed project under all four build alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant indirect population growth as a result of expansion of infrastructure. The cumulative impact would be ***less than significant***. No mitigation is required.

4.1.4.13 Public Services and Recreation

The cumulative geographic context for public services and recreation (i.e., police and fire protection services, public school facilities, recreational facilities, or other public service facilities) is the City of San Rafael. A project that would result in unanticipated population growth (e.g., population growth beyond existing projections) may generate a corresponding increase in demand for public services, such as police and fire protection services, public school facilities, recreational facilities, or other public service facilities, that would exceed the existing capacities of these public services. The proposed project would not directly induce population growth in the City because the existing workforce capacity in the City and Marin County would be sufficient to serve the new transit center and no new residents would be added. Therefore, the proposed project would not result in a significant contribution to a cumulative increase in demand for public services and recreational facilities. The proposed project would not be anticipated to contribute to the accelerated deterioration of existing public service and recreational facilities and would not require new or physically modified facilities to be built. This impact would be ***less than significant***.

4.1.4.14 Transportation

The cumulative geographic context for transportation is the project area and the study area reviewed in the Transportation Summary Report. The nearest major planning projects in this geographic area are the 703 3rd Street Project and the BioMarin/Whistlestop/EDEN Housing Project. Capital improvement projects in the vicinity of the project area include a bicycle connection between 2nd Avenue and 3rd Avenue, Third Street Rehabilitation: Miracle Mile to Lindaro Street, and 2nd Street intersection improvements. As described in Section 3.14, all of the build alternatives would have the potential to interfere with traffic hazards, circulation, and emergency response during the construction period; however, these impacts would be temporary, intermittent, and less than significant. As such, coordination with regional transit agencies identified in the Construction Traffic Control Plan would make it unlikely that the proposed project, in combination with other planned projects in the area, would considerably contribute to a significant cumulative impact, resulting in a ***less-than-significant*** impact.

4.1.4.15 Tribal Cultural Resources

The project is proposed in San Rafael's Downtown commercial district, an area where several past, present, and reasonably foreseeable projects have already occurred or would occur in the future. The cumulative projects generally constitute new development and transportation facility improvements. Some cumulative projects are within or adjacent to the boundaries of the project area, while others are dispersed throughout Downtown San Rafael, some more than 0.25 mile to the west of the project area.

The cumulative context for tribal cultural resources includes urban development projects and transportation and streetscape improvements occurring in or within 1,000 feet of the project area, which together could lead to ground-disturbing activities that could result in impacts on tribal cultural resources. The past, present, and reasonably foreseeable future projects within and surrounding the project area include 11 projects that will require ground disturbance during project construction and therefore have the potential to affect tribal cultural resources. Taken together, the proposed project and the identified cumulative projects have the potential to result in an overall cumulative impact on tribal cultural resources.

The project area is considered sensitive for tribal cultural resources. Additionally, numerous archaeological sites, including human burials, have been recorded within 0.25 mile of the project area. Implementation of Mitigation Measures MM-CULT-CNST-4 through MM-CULT-CNST-7 would reduce cumulative impacts of the proposed project on tribal cultural resources to ***less-than-significant levels with mitigation***.

4.1.4.16 Utilities and Service Systems

The cumulative geographic contexts for utilities and service systems are the service territories of the utility providers. Over time, growth throughout the City will result in increased demand for water, wastewater treatment, solid waste disposal, natural gas, electricity, and telecommunications. Construction and the operation of proposed cumulative projects including the future mixed-use development at the exiting transit center site have the potential to induce growth and increase need for utilities. However, as part of the local entitlement process, projects are required to demonstrate ability to provide and obtain adequate utilities for their projects. Although the proposed project would aid the circulation of transit Downtown for commuters, the proposed project would not directly induce growth within the City. The proposed project would replace the existing transit

center nearby to improve transit connectivity and would maintain the same number of employees and bus service. Therefore, the majority of increased usage of utilities would occur during construction and would be temporary. The increased usage of utilities compared to the existing transit center, if any, would be minimal. Therefore, implementation of the proposed project would not result in a cumulatively considerable contribution to impacts on water supply and wastewater, stormwater, or solid waste generation. Impacts would be ***less than significant***.

4.1.4.17 Wildfire

Table 4-1 lists the related projects that were considered in the cumulative impact analyses. As the proposed project would be replacing the existing transit center and would not increase development in the City, the incremental effects of the proposed project related to wildfire would be minimal. The proposed project would be required to comply with applicable requirements set forth by the Marin County Operational Area Emergency Response Plan, San Rafael Fire Department, San Rafael Police Department, and adherence to county and City regulations and hazard plans. In addition, no off-site improvements would be required that would exacerbate fire risks. Therefore, the proposed project would not result in incremental effects related to wildfire that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable probable future projects. The proposed project would not result in cumulatively considerable impacts related to or from wildfires. Impacts would be ***less than significant***.

Chapter 5
Alternatives to the Project

5.1 Introduction

This chapter presents the alternatives analysis for the San Rafael Transit Center Replacement Project (proposed project), as required by the California Environmental Quality Act (CEQA). It includes a discussion of the CEQA requirements for an alternatives analysis and background information on how the alternatives considered in detailed analysis were identified.

The concept development process included the identification of sites capable of meeting the program and the transfer needs of patrons; the development of design concepts to site the required transit facilities; an assessment of bus routing and circulation that allows for bus access and exit; the delineation of space for bicycle and pedestrian circulation internally and externally; and the identification of opportunities for supportive uses, urban design, and placemaking components. Concepts were then evaluated for their ability to meet the project objectives and based on feedback received from public outreach to the local communities.

This chapter compares the impacts of the Move Whistlestop Alternative, the preferred alternative, to the impacts of the other three build alternatives analyzed in detail in Chapter 3, Environmental Analysis, and the No-Project Alternative. In this chapter, the alternatives are evaluated for their comparative ability to minimize adverse environmental effects. The chapter evaluates the alternatives' impacts compared to existing environmental conditions and compared to the impacts of the preferred alternative. Finally, it describes other alternative concepts that were considered but eliminated from detailed consideration in this Draft Environmental Impact Report (EIR) and the reasons for their elimination.

5.2 CEQA Requirements for Alternatives Analysis

The State CEQA Guidelines require the analysis of a reasonable range of alternatives to a proposed project or to the location of a project that would feasibly attain most of the basic objectives of the project and avoid or substantially lessen the significant effects of the project (State CEQA Guidelines Section 15126.6(a)). The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those potentially feasible alternatives necessary to foster informed public participation and an informed and reasoned choice by the decision-making body (State CEQA Guidelines Section 15126.6(f)). CEQA generally defines "feasible" to mean the ability to be accomplished in a successful manner within a reasonable timeframe, taking into account economic, environmental, social, technological, and legal factors. The following factors may also be taken into consideration when assessing the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (State CEQA Guidelines Section 15126.6(f)(1)). An EIR need not consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote and speculative. Furthermore, an EIR need not consider every conceivable alternative but must consider a reasonable range of alternatives that will foster informed decision-making and public participation.

CEQA also requires the evaluation of a no-project alternative (State CEQA Guidelines Section 15126.6(e)). The analysis of a no-project alternative is based on the assumption that the proposed project would not be approved. In certain instances, the no-project alternative means "no build," wherein the existing environmental setting is maintained. However, where failure to proceed with the project would not result in the preservation of existing environmental conditions, the no-project alternative should identify the practical result of the project's non-approval rather than create and analyze a set of artificial assumptions to preserve the existing physical environment.

An environmentally superior alternative must also be identified among the alternatives considered. The environmentally superior alternative is generally defined as the alternative that would result in the least adverse environmental impact on the project site and affected environment. If a no-project alternative is found to be the environmentally superior alternative, the EIR must identify an environmentally superior alternative among the other alternatives (State CEQA Guidelines Section 15126.6(e)(2)).

State CEQA Guidelines Section 15126.6(c) also requires an EIR to identify and briefly discuss any alternatives that were considered by the lead agency but rejected as infeasible during the scoping process. In identifying alternatives, primary consideration was given to alternatives that would reduce significant impacts while still meeting most of the basic project objectives. Those alternatives that would have impacts identical to or more severe than those of the proposed project or would not meet most of the basic project objectives were rejected from further consideration.

5.3 Alternatives Selection

The goal of developing a set of possible alternatives is to identify other means for attaining the project objectives while substantially lessening or avoiding one or more of the significant environmental impacts potentially caused by the proposed project. The proposed project's objectives and significant impacts were considered in developing a reasonable range of alternatives for analysis, so that the alternatives analyzed meet most of the objectives and avoid or minimize at least one of the proposed project's significant impacts.

5.3.1 Project Objectives

The Golden Gate Bridge, Highway and Transportation District (District), in coordination with the City of San Rafael (City), Marin County Transit District (Marin Transit), Transportation Authority of Marin (TAM), and Sonoma-Marin Area Rail Transit (SMART), plans to replace the transit center in Downtown San Rafael. The proposed project is needed primarily to replace the existing transit center following the loss of some of the transit center facilities that resulted from the implementation of the SMART Phase 2 line to Larkspur. Specifically, the project objectives are to:

- Provide improved transit connectivity and ease of use in and around Downtown San Rafael.
- Enhance local and regional transit use by bringing together multiple modes of the transportation network—including the SMART-bus connection—into a hub that affords transit users the safest, most efficient means of using bus and rail services.
- Efficiently accommodate transit users and services, optimize operating costs, and improve transit desirability.

- Design a functional, attractive, cost-effective facility that can meet long-term projected service levels and be implemented in an expeditious manner, so as to minimize the period of use of the interim facility.
- Provide a transit facility that is readily accessible to individuals with disabilities, transit users, and transit-dependent populations, including those with low incomes.
- Provide a secure, safe, and inviting space for transit patrons.
- Create a more accessible transit facility for all users by reducing vehicular, rail, bicycle, and pedestrian conflicts and improving safety.
- Provide convenient, pedestrian connections to surrounding land uses.

5.3.2 Summary of Significant Impacts of the Move Whistlestop Alternative (Preferred Alternative)

The EIR did not identify any significant and unavoidable impacts of the Move Whistlestop Alternative. The EIR identified significant impacts that would be reduced to less-than-significant levels with mitigation in the resource areas of air quality, biological resources, cultural resources, energy, greenhouse gases, hazards and hazardous materials, noise, and tribal cultural resources.

5.4 Alternatives Analysis

The following section describes the alternatives that were selected and evaluated in equal detail to the preferred alternative. The No-Project Alternative is required under State CEQA Guidelines Section 15126.6(e). The selected alternatives, which were developed by the project proponent with input from the local communities, were identified based on their ability to meet the needs of transit users and achieve the project objectives. The alternatives evaluated in equal detail to the preferred alternative are the following:

- No-Project Alternative
- Adapt Whistlestop Alternative
- 4th Street Gateway Alternative
- Under the Freeway Alternative

The impacts of the Move Whistlestop Alternative, Adapt Whistlestop Alternative, 4th Street Gateway Alternative, and Under the Freeway Alternative are analyzed in Chapter 3, Environmental Analysis. Table 5-1 provides a comparison between the impacts of the preferred alternative, the Move Whistlestop Alternative, to the impacts of the build alternatives analyzed in equal detail and the No-Project Alternative.

5.4.1 No-Project Alternative

5.4.1.1 Description

The No-Project Alternative is based on what would reasonably be expected to occur if the proposed project is not implemented. Under the No-Project Alternative, the District would not relocate the

transit center; it would remain at its current location in Downtown San Rafael between 2nd Street, 3rd Street, West Tamalpais Avenue, and Hetherton Street and continue to operate as it does currently.

The southward extension of SMART to Larkspur in late 2019 required the construction of two sets of tracks through the middle of the existing transit center site south of 3rd Street. The SMART tracks bisect the existing transit center, which required reconfiguration of platforms. These changes have led to reduced bus operations, site functionality, and capacity including eliminating existing bus and taxi staging platforms as well as some bicycle facilities; inhibiting some bus turning movements; increasing bus congestion within the transit center; increasing queuing on surrounding surface streets during train crossing events; and channelizing pedestrian circulation within the transit center area. Pedestrian access and transfer activity among the remaining platforms at the transit center has also been disrupted. The existing transit center is deficient in bus operations, connectivity between modes, and pedestrian safety. The 17 existing bus bays are fully utilized at peak times and provides limited opportunity for growth in transit service. Additionally, there is limited adjacent space available for provision of paratransit, pick-up/drop-off, maintenance vehicle, and shuttle curb space.

The No-Project Alternative would include the existing transit center, which has been compromised by the implementation of the SMART Phase 2 line. This facility would not meet the project objective to provide improved transit connectivity and ease of use in and around Downtown San Rafael. Connectivity and ease of use would not be improved. The No-Project Alternative would not improve local and regional transit use by enhancing the integration of multiple modes of the transportation network, including the SMART-bus connection. The existing transit center would remain separated from the SMART station by heavily traveled 3rd Street and would require users to navigate between stations. Other improvements to the safety, accessibility, and functionality of transit would not be achieved if the No-Project Alternative were implemented.

Additionally, the No-Project Alternative would not meet the transportation goals established in the *San Rafael Transit Center Relocation Study* (City of San Rafael et al. 2017), the *San Rafael Downtown Station Area Plan* (City of San Rafael 2012), the long-range *Strategic Vision Plan* (TAM 2017), or *Plan Bay Area 2040* (MTC and ABAG 2017). The No-Project Alternative would also not meet the goals proposed in the Draft *San Rafael General Plan 2040* (City of San Rafael 2020a) and Draft *Downtown San Rafael Precise Plan* (City of San Rafael 2020b).

5.4.1.2 Impacts

Aesthetics

Under the No-Project Alternative, there would be no change to the current views, visual character, daytime glare, and nighttime lighting. With respect to aesthetics, impacts under this alternative would be less than those of the Move Whistlestop Alternative.

Air Quality

No construction would occur with the No-Project Alternative. As a result, none of the short-term construction-related emissions resulting from the Move Whistlestop Alternative would occur. Mitigation measures are identified in this EIR that would reduce potential air quality impacts during project construction to a less-than-significant level. The No-Project Alternative would not require mitigation to offset this impact. Therefore, impacts on air quality under this alternative would be

less than those of the Move Whistlestop Alternative. The No-Project Alternative would not provide the decreased congestion associated with the Move Whistlestop Alternative. Therefore, operational impacts on air quality under this alternative would be less beneficial than those of the Move Whistlestop Alternative.

Biological Resources

The No-Project Alternative would avoid impacts related to tree removal and potential disturbance to nesting birds and, therefore, impacts on biological resources under this alternative would be less than those of the Move Whistlestop Alternative.

Cultural Resources

Potential disruption to unknown historic, archaeological, and paleontological resources would not occur with this alternative because there would be no ground disturbance. Therefore, the impacts on cultural resources under this alternative would be less than those of the Move Whistlestop Alternative.

Energy

The No-Project Alternative would not have temporary impacts on energy use from construction. The existing transit center is less energy efficient than the new facility that would be constructed under the Move Whistlestop Alternative. Therefore, construction of the No-Project Alternative would have less of an impact than the Move Whistlestop Alternative. Operation of the No-Project Alternative would not have the beneficial impacts of the Move Whistlestop Alternative.

Geology and Soils

No construction would occur under the No-Project Alternative. Therefore, none of the geologic/soils impacts associated with construction and operation would occur. Mitigation measures are identified in this EIR that would reduce potential geology and soils impacts to a less-than-significant level. The No-Project Alternative would have no need for such mitigation. Therefore, the impacts on geology and soils would be less than those of the Move Whistlestop Alternative.

Greenhouse Gas Emissions

No new construction would occur with the No-Project Alternative. As a result, none of the short-term construction-related emissions resulting from the anticipated development would occur under this alternative. Therefore, impacts related to greenhouse gas emissions under this alternative would be less than those of the Move Whistlestop Alternative.

Hazards and Hazardous Materials

Under the No-Project Alternative, as there would be no construction, there would be no risk of exposure to potentially hazardous materials due to construction materials and ground disturbance. Operational risks related to hazards and hazardous materials under the No-Project Alternative would be similar to those of the Move Whistlestop Alternative. Therefore, impacts related to hazards and hazardous materials under this alternative would be less than those of the Move Whistlestop Alternative during construction and similar to those of the Move Whistlestop Alternative during operation.

Hydrology and Water Quality

Under the No-Project Alternative, the existing drainage patterns in the project area would be maintained. The No-Project Alternative would not result in temporary impacts on water quality related to construction. Therefore, impacts on hydrology and water quality under this alternative would be less than those of the Move Whistlestop Alternative.

Land Use and Planning

The No-Project Alternative would result in a continuation of the existing uses in the project area. This alternative would also be consistent with *The City of San Rafael General Plan 2020* and City zoning regulations. However, the No-Project Alternative would not be compatible with the vision for a replaced transit center contained in the *San Rafael Downtown Station Area Plan* (City of San Rafael 2012), TAM's *Strategic Vision Plan* (2017), or *Plan Bay Area 2040* (MTC and ABAG 2017). The No-Project Alternative would not be compatible with the Draft *San Rafael General Plan 2040* (City of San Rafael 2020a) and Draft *Downtown San Rafael Precise Plan* (City of San Rafael 2020b). This would be a significant and unavoidable impact.

Noise and Vibration

With the No-Project Alternative, there would be no short-term construction noise impacts. Therefore, impacts related to noise and vibration under this alternative would be less than those of the Move Whistlestop Alternative. The No-Project Alternative would not provide the decreased congestion associated with the Move Whistlestop Alternative. Therefore, operational impacts on noise under the No-Project Alternative would be less beneficial than those of the Move Whistlestop Alternative.

Population and Housing

The No-Project Alternative would result in the continuation of existing uses in the project area. There would be no effect on population growth or demand for housing. Therefore, the impacts on population and housing under this alternative would be equal to those of the Move Whistlestop Alternative.

Public Services and Recreation

Under the No-Project Alternative, there would be no temporary impacts on public service providers related to compromised access for emergency vehicles during construction. Therefore, impacts on public services and recreation under this alternative would be less than those of the Move Whistlestop Alternative.

Transportation

Under the No-Project Alternative, the temporary impacts on traffic and transportation related to construction of the Move Whistlestop Alternative would not occur. Therefore, construction impacts on traffic and transportation under this alternative would be less than those of the Move Whistlestop Alternative. During operation, the No-Project Alternative would not provide the decreased congestion associated with the Move Whistlestop Alternative. It would also not have the beneficial impact of integration between transit modes. The No-Project Alternative would not provide additional bicycle or pedestrian connectivity in the project area and existing safety concerns

for transit users transferring between transit modes would remain. The No-Project Alternative would not have the beneficial operational impacts on traffic and transportation that would occur under the Move Whistlestop Alternative. Additionally, the No-Project Alternative would not be compatible with the vision for a replaced transit center contained in the *San Rafael Downtown Station Area Plan* (City of San Rafael 2012), TAM's *Strategic Vision Plan* (2017), *Plan Bay Area 2040* (MTC and ABAG 2017), or the Draft *San Rafael General Plan 2040,* including Program M-4.7A: Transit Center Relocation. This impact would be significant and unavoidable under the No-Project Alternative.

Tribal Cultural Resources

Under the No-Project Alternative, there would be no potential impacts from disturbance to identified resources of tribal cultural significance or unanticipated discovery of tribal cultural resources. Therefore, the impact of this alternative on tribal cultural resources would be less than those of the Move Whistlestop Alternative.

Utilities and Service Systems

The No-Project Alternative would result in the continuation of existing uses in the project area and would not require modification to any of the existing utilities and service systems at the existing transit center. Therefore, impacts on utilities and service systems under this alternative would be less than those of the Move Whistlestop Alternative.

Wildfire

Given the location of the No-Project Alternative in relation to the location of the Move Whistlestop Alternative, the existing transit facility would have a comparable level of wildfire risk to that of the Move Whistlestop Alternative. Therefore, impacts from this alternative related to wildfires would be comparable to those of the Move Whistlestop Alternative.

5.4.2 Build Alternatives

The Adapt Whistlestop, 4th Street Gateway, and Under the Freeway Alternatives would vary in site area and location; specific features and facilities would vary. These alternatives share the following components:

- 17 straight-curb bus bays to accommodate transit, airport coach service, and Greyhound services at the transit center
- Provision of paratransit, pick-up/drop-off, maintenance vehicle, and shuttle curb space
- Provision of bicycle parking, including racks and lockers
- Minimum 9-foot-wide platforms adjacent to bus bays
- Platforms providing passenger amenities including weather protection (such as shelters or canopies) and seating
- Other features including public art, security, and wayfinding signage
- Provision of a roughly 3,000-square-foot building including customer service, public restrooms, driver relief facilities, small retail, maintenance, and security

- Existing transit center facility to be vacated; no plans for use of the site once vacated

Due to these shared features, the Adapt Whistlestop, 4th Street Gateway, and Under the Freeway Alternatives all generally meet the project objectives. Any variation in these alternatives' ability to meet the project objectives is discussed in the below descriptions.

5.4.2.1 Adapt Whistlestop Alternative

The site is generally between West Tamalpais Avenue to the west and Hetherton Street to the east, 4th Street to the north, and 3rd Street to the south. This alternative would include the construction of a bike path and pedestrian improvements on the west side of West Tamalpais Avenue from 2nd Street to 4th Street. See Figure 2-5 for the site plan. This alternative is on the same block as the existing SMART station. This alternative includes nine parcels currently occupied by the Whistlestop building, a café, a restaurant, parking spaces, the SMART tracks, and the Citibank building with its affiliated parking lot, also referred to as the "Citibank parcel." Surrounding the project site are retail, commercial, and office uses to the north, US-101 to the east, the existing San Rafael Transit Center to the south, and restaurants, residential, and retail facilities to the west.

The Adapt Whistlestop Alternative would feature five platforms, A through E, and one District building. There would be 17 straight-curb bus bays to accommodate transit, airport coach service, and Greyhound services at the transit center.

The Whistlestop building (minus the Jackson Café) would be renovated or remodeled to serve as District customer service and operations building space. Some of the space within the building could be allocated for non-District uses. Tamalpais Avenue between 3rd and 4th Streets would be limited to buses only. Bus bays on the Citibank parcel would be accessed via driveways along 3rd and 4th Streets. The area on the southeast corner of the intersection of Tamalpais Avenue and 4th Street would be provided for bicycle parking. The existing SMART pick-up/drop-off area on East Tamalpais Avenue would be removed and replaced with passenger pick-up/drop-off for six vehicles on West Tamalpais Avenue between 4th Street and 5th Avenue. Fifty feet of shuttle parking would be provided on West Tamalpais Avenue between 3rd Street and 4th Street. Maintenance vehicle parking for six District vehicles would be provided on West and East Tamalpais Avenues between 4th Street and 5th Avenue. A new driveway would be installed on 4th Street between West Tamalpais Avenue and Lincoln Avenue to replace the removed driveway on West Tamalpais Avenue to the condo complex at Lincoln Avenue and 4th Street. Space would be provided for public plazas, customer service, bicycle parking, and/or transit-supportive land uses. Construction of the bicycle path on Tamalpais Avenue from 2nd Street to 4th Street would reflect implementation of one of the City's planned bicycle infrastructure improvements. This bike path would connect to the Mahon Creek Path. This alternative would generally meet the project objectives.

See Chapter 2, Project Description, for more detail on this alternative and Chapter 3, Environmental Analysis, for the analysis of impacts from the Adapt Whistlestop Alternative.

5.4.2.2 4th Street Gateway Alternative

This alternative site is bounded by 5th Avenue, 3rd Street, Hetherton Street, and the SMART tracks, as well as curb space along West Tamalpais Avenue; see Figure 2-6 in Chapter 2, Project Description, for the site plan. North of 4th Street, the existing project site is currently occupied by offices and retail (salons and a bagel shop) and associated parking spaces. Citibank and its affiliated parking lot currently occupy the existing portion of the site south of 4th Street. To the west of the Citibank

parcel are the SMART tracks, which align the western portion of the southern section of the project site. Adjacent to the tracks are the Whistlestop building and Jackson Café. Surrounding the project site are retail and office uses to the north, US-101 to the east, the existing San Rafael Transit Center to the south, and restaurants and retail facilities to the west.

The 4th Street Gateway Alternative would feature six platforms, A through F, and two District buildings. There would be three on-street bays located curbside on the west side of Hetherton Street between 4th Street and 5th Avenue. In order to accommodate these curbside bays, southbound right turns from Hetherton Street to 4th Street would be precluded. On the east side of both sites, space would be provided for public plazas, customer service, bicycle parking, and/or transit-supportive land uses.

Under this alternative, the District building would be one story and an estimated 3,000 square feet. It would include a driver break room with restrooms, District offices and customer support area with restrooms and a kitchen, and a public lobby with a service counter and restrooms.

This alternative would generally meet the project objectives; however, it would result in increased intersection delays, longer corridor travel times, and gridlock conditions and would not include the construction of the City's proposed bicycle facilities that would be constructed under the preferred alternative, meaning that it conflicts with the project objective to create a more accessible transit facility for all users by reducing vehicular, rail, bicycle, and pedestrian conflicts. This alternative would also require the acquisition of additional parcels, which would increase project costs and result in this alternative less fully meeting the project objective to design a cost-effective facility.

See Chapter 2, Project Description, for more detail on this alternative and Chapter 3, Environmental Analysis, for the analysis of impacts from the 4th Street Gateway Alternative.

5.4.2.3 Under the Freeway Alternative

This alternative site is generally located beneath US-101 and bounded by 5th Avenue, south of 4th Street, Irwin Street, and Hetherton Street; see Figure 2-7 for the site plan. Underneath US-101 there are four park-and-ride lots, maintained and operated by the California Department of Transportation (Caltrans), in the vicinity of the existing transit center. Irwin Creek, underneath US-101, flows parallel to US-101. North of 4th Street the existing project site is currently occupied by offices and parking, and south of 4th Street the site is currently occupied by retail and offices. Surrounding the project site are residential offices to the north; residences to the east; retail and offices to the south; and retail uses, restaurants, and residential offices to the west.

The Under the Freeway Alternative would feature six platforms, A through F. The affiliated bus bays would be accessed via driveways on 4th Street, Irwin Street, and Hetherton Street. Internal circulation would be provided to allow buses accessing bays from either side of the site to egress on either side as well, which is critical given the diverse bus routing accessing the site. Space would be provided for public plazas, customer service, and/or transit-supportive land uses. This would require three bridges/viaducts over Irwin Creek to connect Hetherton Street to the bus bays.

Under this alternative, the District building would be one story and an estimated 3,000 square feet. It would include a driver break room with restrooms, District offices and customer support area with restrooms and a kitchen, and a public lobby with a service counter and restrooms.

This alternative would generally meet the project objectives; however, its location under the freeway would affect site visibility and partially conflict with the objective to provide a secure, safe,

and inviting space for transit patrons. Additionally, this alternative would not include the construction of the City's proposed bicycle facilities that would be constructed under the preferred alternative, meaning that it less fully meets the project objective to create a more accessible transit facility for all users by reducing vehicular, rail, bicycle, and pedestrian conflicts. Additionally, this alternative would result in bus services being located farther from the SMART platform than under the preferred alternative. Therefore, this alternative less fully meets the objective of bringing together multiple modes of the transportation network—including the SMART-bus connection—into a hub that affords transit users the safest, most efficient means of using bus and rail services. This alternative would also require the acquisition of additional parcels, which would increase project costs and result in this alternative less fully meeting the project objective to design a cost-effective facility.

See Chapter 2, Project Description, for more detail on this alternative and Chapter 3, Environmental Analysis, for the analysis of impacts from the Under the Freeway Alternative.

Table 5-1. Comparison of Other Build Alternatives to the Preferred Alternative

Resource	Move Whistlestop Alternative (Preferred Alternative) Level of Impact	No-Project Alternative		Adapt Whistlestop Alternative		4th Street Gateway Alternative		Under the Freeway Alternative	
		Level of Impact	Comparison to Preferred Alternative	Level of Impact	Comparison to Preferred Alternative	Level of Impact	Comparison to Preferred Alternative	Level of Impact	Comparison to Preferred Alternative
Aesthetics	LTS	NI	<	LTS	=	LTS w/MM	>	LTS w/MM	>
Air Quality	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Biological Resources	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	>
Cultural Resources	LTS w/MM	NI	<	LTS w/MM	=	SU	>	SU	>
Energy	LTS w/MM	NI	<[a]	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Geology and Soils	LTS	NI	<	LTS	=	LTS	=	LTS	=
Greenhouse Gas Emissions	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Hazards and Hazardous Materials	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Hydrology and Water Quality	LTS	NI	<	LTS	=	LTS	=	LTS	>
Land Use and Planning	LTS	SU	<[a]	LTS	=	LTS	=	LTS	=
Noise and Vibration	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	>	LTS w/MM	>
Population and Housing	LTS	NI	<	LTS	=	LTS	=	LTS	=
Public Services and Recreation	LTS	NI	<	LTS	=	LTS	=	LTS	=
Transportation	LTS	SU	>[a]	LTS	=	SU	>	SU	>
Tribal Cultural Resources	LTS w/MM	NI	<	LTS w/MM	=	LTS w/MM	=	LTS w/MM	=
Utilities and Service Systems	LTS	NI	<	LTS	=	LTS	=	LTS	=
Wildfire	LTS	NI	<	LTS	=	LTS	=	LTS	=

NI: No Impact
LTS: Less than Significant
LTS w/MM: Less than Significant with Mitigation
SU: Significant and Unavoidable

<: Impacts would be less than the impacts of the Move Whistlestop Alternative.
>: Impacts would be greater than the impacts of the Move Whistlestop Alternative.
=: Impacts would be equivalent to the impacts of the Move Whistlestop Alternative.

[a] Under the No-Project Alternative, the beneficial transportation impacts of the Move Whistlestop Alternative would not occur.

5.4.3 Environmentally Superior Alternative

The State CEQA Guidelines require that an environmentally superior alternative be identified. The environmentally superior alternative is the alternative that would avoid or substantially lessen, to the greatest extent feasible, the environmental impacts associated with the project while feasibly obtaining most of the major project objectives. If the alternative with the least environmental impact is determined to be the no-project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

The identification of the environmentally superior alternative results from a comparison of the impacts associated with each alternative to the preferred alternative, as shown in Table 5-1. Table 5-1 shows that the No-Project Alternative would avoid the construction-related impacts associated with the build alternatives. However, the No-Project Alternative would result in significant and unavoidable land use and transportation impacts related to continued operations at the existing transit center. In addition, the No-Project Alternative fails to meet most of the basic project objectives.

Comparing the build alternatives to the preferred alternative, the 4th Street Gateway Alternative and the Under the Freeway Alternative would have worsened impacts than the preferred alternative (Table 5-1), including significant and unavoidable impacts on cultural resources under the 4th Street Gateway Alternative and the Under the Freeway Alternative and significant and unavoidable impacts on transportation under the 4th Street Gateway Alternative. In contrast, there would be no significant and unavoidable impacts associated with the preferred alternative, the Move Whistlestop Alternative.

Therefore, of the build alternatives considered in equal detail to the preferred alternative, the Adapt Whistlestop Alternative would have the least environmental impacts and would meet the project objectives. The environmental impacts of the Adapt Whistlestop Alternative would be similar to the impacts identified for the preferred alternative, the Move Whistlestop Alternative. For these reasons, the Adapt Whistlestop Alternative is considered the Environmentally Superior Alternative.

5.4.4 Alternatives Considered but Eliminated from Further Analysis

The following alternatives were identified based on a review of previous documents prepared for the proposed project, including the *Environmental Scoping Report for the San Rafael Transit Center Replacement Project* (ICF 2019; see Appendix A) and the *San Rafael Transit Center Relocation Study* (City of San Rafael et al. 2017).

5.4.4.1 Two-Story Concept

This concept for the transit center would utilize the parcel across 3rd Street from the existing transit center and across the street from the SMART station as the ground level of a two-story transit center. In scoping, it was determined that the amount of ramping needed to deck over the ground-floor portion of the transit center would not fit within the identified parcel, and, therefore, work would need to extend over 3rd Street into the site of the existing transit center. The upper level would need to extend farther into the existing transit center site to accommodate the appropriate

number of bus bays, which would interrupt operation of the existing transit center while the new facility is being constructed.

This concept would include six bays on the ground level of the facility and 12 bays on the upper level of the facility. Pick-up and drop-off facilities would be provided on the ground level at the site of the existing transit center. Stairs and elevators would provide vertical circulation to access the upper level. The ramp leading to the upper level would be accessed via a driveway on Hetherton Street. The ramp down would egress onto Hetherton Street at the 3rd Street and Hetherton Street intersection. The signal at the 3rd Street and Hetherton Street intersection would need to be modified to accommodate an exclusive bus movement phase. Additional facilities, such as customer service, restrooms, retail, etc., could be provided on the upper level of the new transit center.

The primary advantages of this concept are that it concentrates transit activity at one location, enabling transfers between buses and SMART to all occur on one block. The main drawbacks are the challenges that come with a two-level structure: concerns around cost, safety, aesthetics, and constructability.

This alternative would meet the project objectives of providing improved transit connectivity and ease of use in and around Downtown San Rafael, enhancing local and regional transit use by bringing together multiple modes of transportation, and providing a secure, safe, and inviting space for transit patrons. This alternative would meet these objectives by constructing a single facility that would house expanded bus capacity as compared to the existing facility and provide a convenient connection to the SMART platform.

However, this alternative would not meet the project objective of a cost-effective facility, as construction of a two-story facility would result in additional expenses due to the more complex design. These costs would have implications on the operational economic success of the transit center, as it would take a longer amount of time to recoup the investment required for a two-story facility. This alternative could also raise accessibility concerns. Additionally, operations of this alternative would compromise efficiency due to the need for vertical circulation movement to access the second story, resulting in increased potential for operational impacts from the ramps becoming blocked or otherwise inaccessible. For these reasons, this alternative is eliminated from further analysis in this EIR.

5.4.4.2 Relocation to Between 4th Street and Mission Avenue

This alternative would include the relocation of the existing transit center to the space bordered by Mission Avenue, Hetherton Street, 4th Street, and the SMART. This concept would require the closure of 5th Avenue between Tamalpais Avenue and Hetherton Street to vehicle traffic. The alternative would also require dedication of East Tamalpais Avenue between 3rd Street and 5th Avenue. Under this alternative, 5th Avenue would be closed to vehicle traffic between Tamalpais Avenue and Hetherton Street to allow room for the new bus bays, requiring vehicle traffic to shift to other routes. A total of 20 bus bays would be provided, including two curbside bus bays on the east side of Tamalpais Avenue south of Mission Avenue and four curbside bus bays on the west side of Hetherton Street north of 5th Avenue. This alternative would include two driveways for buses to enter and exit the facility.

Transit users moving from some of the facility's bus bays would be required to cross 4th Street using a mid-block crosswalk to access the SMART platform. Additionally, there would be a limited number of bus routes that could be located on Tamalpais Avenue, across the SMART tracks from the

rest of the transit center. Transit users transferring from these bus routes to the main facility would be required to cross the SMART tracks to access the main transit center. The Puerto Suello bicycle path could be relocated to run adjacent to the SMART tracks, which would reduce conflicts across the path, eliminating its current crossing of 5th Avenue. This would also allow for bicycle parking adjacent to the bicycle path. Bicycles on the path would be able to cross 4th Avenue at the queue cutter signal or at Tamalpais Avenue to access the planned Tamalpais Avenue bicycle route.

This alternative meets the project objectives of providing improved transit connectivity, ease of use in and around Downtown San Rafael, and convenient, pedestrian connections to surrounding land uses. The transit center would be proximally located to the 4th Street corridor, which is home to San Rafael's central Downtown district. This alternative would enhance local and regional transit use by bringing together multiple modes of the transportation network—including the SMART-bus connection—into a hub that affords transit users the safest, most efficient means of using bus and rail services. As discussed, this alternative would also create a more accessible transit facility for all users by reducing the vehicular, rail, bicycle, and pedestrian conflicts associated with having a busy street intersect the transit center.

This alternative would not achieve the project objective of implementing a cost-effective facility, as the land acquisition required for this alternative would result in additional project cost and would displace numerous residences and businesses, resulting in additional impacts on population and housing. Additionally, the closure of 5th Avenue to vehicle traffic between Tamalpais Avenue and Hetherton Street was deemed infeasible by the City, due to the resulting traffic impacts. For the reasons discussed above, this alternative is eliminated from further analysis in this EIR.

5.4.4.3 Relocation to South of Francisco Boulevard West

This alternative would include the relocation of the existing transit center to a site between Lincoln Avenue, 2nd Street, Francisco Boulevard West, and Irwin Street. This concept would relocate the transit center's bus services, shifting them to the south of the existing transit center. The alternative would require acquisition of parcels along Francisco Boulevard West and would require conversion of a portion of the parking lot of the Sprouts and Staples shopping center. Transit users transferring between the facility's bus bays and the SMART station would be required to travel south across 3rd Street, 2nd Street, and Francisco Boulevard West.

This alternative would not meet the project objectives of providing improved transit connectivity, ease of use in and around Downtown San Rafael, and convenient, pedestrian connections to surrounding land uses. The transit center would be farther than the existing facility from the 4th Street corridor, which is home to San Rafael's central Downtown district. This alternative is also separated from the SMART station, making transfers between bus lines and SMART less convenient.

This alternative would not achieve the project objective of implementing a cost-effective facility, as this alternative would result in out-of-direction travel for nearly all bus routes, adding substantial delay for buses and congestion to nearby roadways. It would be outside of Downtown San Rafael, which is the origin and destination for many users of the transit center, making it inconvenient for many users. For the reasons discussed, this alternative is eliminated from further analysis in the EIR.

5.4.4.4 Across the Freeway

This concept is bounded by 5th Avenue to the north, Irwin and Hetherton Streets to the east, 3rd Street to the south, and Tamalpais Avenue to the west. This alternative could include a three-bay

transit island on Hetherton Street between 3rd and 4th Streets, and or could shift Hetherton Street to the west to allow for on-street bays on the east side of Hetherton Street between 3rd and 4th Streets. This concept incorporates the area underneath US-101, which would eliminate some existing Caltrans park-and-ride lot parking stalls and require covering Irwin Creek (a tributary of San Rafael Creek), across a portion of the block.

This alternative would not meet the project objective of improved transit connectivity and ease of use, the objective of bringing together multiple modes of the transportation network—including the SMART-bus connection, or the objective of reducing vehicular, rail, bicycle, and pedestrian conflicts and improving safety. Multiple bus platforms would be located under the freeway and would require transit users to cross Hetherton Street in order to reach the SMART station. Shifting Hetherton Street to the west would increase project costs and result in additional impacts on transportation. This alternative would also have additional impacts on biological resources due to covering Irwin Creek. For the reasons discussed, this alternative is eliminated from further analysis in the EIR.

5.4.4.5 North of 4th Street and Under the Freeway

This concept would occupy the entire block bounded by 5th Avenue to the north, Irwin Street to the east, 4th Street to the South, and Hetherton Street to the west. It is generally located beneath US-101, would eliminate some existing parking stalls in the Caltrans park-and-ride lot, and require covering Irwin Creek (a tributary of San Rafael Creek) across the full length of the block. While this concept could accommodate 17 bus bays within this block, site circulation would be limited, affecting bus operations, and it would require customer service, restrooms, and pick-up/drop-off functions to be located off site.

This alternative would not meet the project objective of improved transit connectivity and ease of use, the objective of bringing together multiple modes of the transportation network—including the SMART-bus connection, or the objective of reducing vehicular, rail, bicycle, and pedestrian conflicts and improving safety. The separation between this alternative and the SMART Station would require users to cross 4th Street and Hetherton Street to reach the SMART Station and pick-up/drop-off areas. Additionally, this alternative would not meet the project objectives of a secure, safe, and inviting space for transit patrons and improving transit desirability due to the lack of customer service space and restroom facilities. This alternative would not achieve the objective of efficiently accommodating transit services because it would limit site circulation for buses. This alternative would also have additional impacts on biological resources due to covering Irwin Creek. For the reasons discussed, this alternative is eliminated from further analysis in the EIR.

5.4.4.6 Existing Transit Center Plus Citibank Site

This alternative would use the eastern portion of the existing transit center and the Citibank site at the corner of Hetherton Street and 3rd Street. In this configuration, driveways would be located on 2nd, 3rd, and 4th Streets. A total of 17 bus bays would be provided. This alternative would provide two locations (one on each side of 3rd Street) for customer service or security space, with a total of 1,873 square feet of space provided. Four curbside bus bays would be located on Hetherton Street between 2nd Street and 3rd Street to accommodate routes coming to and from US-101. This alternative could include an overhead pedestrian crossing across 3rd Street to provide a grade-separated pedestrian connection between the two portions of the transit center, or the alternative could be implemented without the overhead pedestrian crossing and pedestrian activity shifted to the signalized crossing of 3rd Street at Hetherton Street.

This alternative would result in pedestrian safety and congestion concerns due to its location relative to existing congestion points, particularly related to driveways on congested roadways and the pedestrian crossing at 3rd Street. Therefore, this alternative would not meet the project objective of reducing vehicular, rail, bicycle, and pedestrian conflicts and improving safety. It would also fail to meet the project objective of efficiently accommodating transit users and services. For the reasons discussed, this alternative is eliminated from further analysis in the EIR.

Chapter 6
Other CEQA-Required Analysis

6.1 Growth-Inducing Impacts

The California Environmental Quality Act (CEQA) requires a consideration of a project's capacity to induce growth. Growth inducement would occur if the amount of population or employment growth projected to occur as a result of the San Rafael Transit Center Replacement Project (proposed project) would exceed planned levels. Increased development and growth in an area are dependent on a variety of factors, including employment and other opportunities, availability of developable land, and availability of infrastructure, water, and power resources. The proposed project does not include the development of housing or businesses, and therefore would not directly induce population. The proposed project would provide transit, bicycle, and pedestrian improvements consistent with multiple City of San Rafael (City) planning documents including *The City of San Rafael General Plan 2020, San Rafael Climate Change Action Plan*, and *San Rafael Downtown Station Area Plan*. Approximately eight individuals are currently employed at the existing transit center. With implementation of the proposed project, the same eight employees would work at the proposed transit center. This would result in no net increase in the number of employees, and therefore there would be no increase in the number of jobs available in the City as a result of the proposed project. The proposed project is in an area that is already heavily developed with a mix of uses, including commercial or residential uses. The proposed project would not require the construction of any new roads. Overall, the proposed project would not induce growth in the region surrounding the project area.

6.2 Significant and Unavoidable Environmental Consequences

Section 21067 of CEQA and Sections 15126(b) and 15126.2(b) of the State CEQA Guidelines require that an environmental impact report describe any significant impacts, including those that can be mitigated but not reduced to a less-than-significant level. Furthermore, where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should also be described.

6.2.1 Move Whistlestop Alternative (Preferred Project)

There would be no significant and unavoidable impacts under the Move Whistlestop Alternative.

6.2.2 No-Project Alternative

Impacts related to the following topics would remain significant and unavoidable with the implementation of mitigation under the No-Project Alternative.

- **Land Use and Planning**: 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
- **Transportation and Traffic:** Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities

6.2.3 Adapt Whistlestop Alternative

There would be no significant and unavoidable impacts under the Adapt Whistlestop Alternative.

6.2.4 4th Street Gateway Alternative

Impacts related to the following topics would remain significant and unavoidable with the implementation of mitigation under the 4th Street Gateway Alternative.

- **Cultural Resources**: Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5
- **Transportation and Traffic**: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities

6.2.5 Under the Freeway Alternative

Impacts related to the following topics would remain significant and unavoidable with the implementation of mitigation under the Under the Freeway Alternative.

- **Cultural Resources**: Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5

6.3 Significant Irreversible Environmental Changes

CEQA requires evaluation of irretrievable resources to ensure that their use is justified. State CEQA Guidelines Section 15126.2(d) describes potential significant irreversible changes, including "use of nonrenewable resources during the initial and continued phases of a project."

The Move Whistlestop Alternative would not commit future generations to specific uses that are incompatible with existing and reasonably foreseeable conditions. The proposed project would provide the same modes of transit services as the No-Project Alternative.

Under the No-Project Alternative, transit services would continue as provided by the existing transit center. The consumption of nonrenewable resources that can be attributed to the transit center's operation would continue. Implementation of each of the four build alternatives would increase transit capacity and improve transit connectivity and ease of use. Each of the build alternatives would also bring together multiple modes of the transportation network and enable easier, safer transfers between modes than under the No-Project Alternative, lowering dependency on passenger vehicles and reducing associated fossil fuel use.

Construction of all four build alternatives would entail the one-time, irreversible, and irretrievable commitment of nonrenewable resources, such as labor required for planning, design, construction,

and operations; energy (fossil fuels used for construction equipment and transportation of workers and materials); and construction materials (such as lumber, sand, gravel, metals, and water). Although these expenditures would be irrecoverable, there is adequate supply of these resources to complete the proposed project without causing a significant environmental impact on the continued availability or supply of these resources. Chapter 3, Environmental Analysis, includes measures that would be implemented for the duration of construction to avoid unnecessary, inefficient, or wasteful use of energy resources.

Overall, the build alternatives would not result in significant irreversible environmental changes as compared to the No-Project Alternative. The transit center would provide improved but comparable transit services to the existing facility. Construction and operation of the proposed project would entail the irreversible and irretrievable commitment of energy and human resources, including labor required for planning, design, construction, and operations. Although irrecoverable, there is adequate supply of these resources, and their use in this proposed project would not affect their continued availability and supply for future projects.

Chapter 7
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The California Environmental Quality Act lead agency for this Environmental Impact Report (EIR) is the Golden Gate Bridge, Highway and Transportation District and the responsible agency is the City of San Rafael.

This EIR was prepared for the Golden Gate Bridge, Highway and Transportation District by ICF in partnership with Kimley-Horn, with specific technical analyses provided by Kimley-Horn. This chapter lists the primary individuals who prepared the EIR.

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Chapter 8
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8.1 Chapter 1: Introduction

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8.6 Chapter 6: Other CEQA-Required Analysis

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