CITY OF SANTA ROSA
ROSELAND AREA/SEBASTOPOL ROAD SPECIFIC PLAN AND ROSELAND AREA ANNEXATION
DRAFT ENVIRONMENTAL IMPACT REPORT

State Clearinghouse No. 2016012030

Prepared for:

CITY OF SANTA ROSA
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
100 SANTA ROSA AVENUE, ROOM 3
SANTA ROSA, CA 95404

Prepared by:

Michael Baker INTERNATIONAL

2729 PROSPECT PARK DRIVE, SUITE 220
RANCHO CORDOVA, CA 95670

MAY 2016

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EXECUTIVE SUMMARY

1.0 INTRODUCTION

2.0 PROJECT DESCRIPTION

3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

LIST OF FIGURES

AB	Assembly Bill
ABAG	Association of Bay Area Governments
AEP	Association of Environmental Professionals
AFY	acre-feet per year
amsl	above mean sea level
BAAQMD	Bay Area Air Quality Management District
BMP	best management practice
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
Cal Fire	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
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
CGS	California Geological Survey
CH_4	methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
CPUC	California Public Utilities Commissions
CRHR	California Register of Historic Resources
CUPA	Certified Unified Program Agency

CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DEIR	Draft Environmental Impact Report
DOC	California Department of Conservation
DOF	California Department of Finance
DOT	US Department of Transportation
DPM	diesel particulate matter
DRRP	Diesel Risk Reduction Plan
DSOD	California Division of Safety of Dams
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EFZ	Earthquake Fault Zone
EIR	environmental impact report
EOP	Emergency Operations Plan
EPA	US Environmental Protection Agency
ESA	Endangered Species Act (biological resources)
ESA	Environmental Site Assessment (hazards)
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
GHG	greenhouse gas
gpcd	gallons per capita per day
gpm	gallons per minute
GWP	global warming potential
HCD	California Department of Housing and Community Development
HCM	Highway Capacity Manual
HMTA	Hazardous Materials Transportation Act
HUD	US Department of Housing and Urban Development
HVAC	heating, ventilating, and air conditioning
in/sec	inches per second
ISO	Insurance Services Office
kV	kilovolt
LAFCO	Local Agency Formation Commission
LCFS	Low Carbon Fuel Standard
L_{dn}	day-night average sound level
LID	low impact development

LOS	level of service
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MM	mitigation measure
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MS4	municipal separate storm sewer
MTC	Bay Area Metropolitan Transportation Commission
Mw	moment magnitude
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCRA	North Coast Railroad Authority
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NIMS	National Incident Management System
NMFS	National Marine Fisheries Service
NOC	Notice of Completion
NOP	Notice of Preparation
NO_2	nitrogen dioxide
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
OPR	Governor's Office of Planning and Research
OSHA	Occupation Safety and Health Administration
O_3	ozone
PG&E	Pacific Gas and Electric Company
PHMSA	US Pipeline and Hazardous Materials Safety Administration
PM	particulate matter
$PM_{2.5}$	fine particulate matter
PM_{10}	coarse particulate matter
ppm	parts per million
ppv	peak-particle velocity
PRC	California Public Resources Code
RCRA	Resource Conservation and Recovery Act
REF	residential equivalency factor
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board

SB	Senate Bill
SCREEN3	air quality pollutant dispersion model
SCS	Sustainable Communities Strategy
SCTA	Sonoma County Transportation Authority
SCWA	Sonoma County Water Agency
SCWMA	Sonoma County Waste Management Agency
SEMS	Standard Emergency Management System
sf	square feet
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SMART	Sonoma-Marin Area Rail Transit
SO_2	sulfur dioxide
SPCSD	South Park County Sanitation District
SR	State Route
SRFD	Santa Rosa Fire Department
SRPD	Santa Rosa Police Department
SRRE	source reduction and recycling element
SSO	sanitary sewer overflow
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCM	traffic control measures
TIS	traffic impact study
TMDL	total maximum daily load
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code
µg/m³	micrograms per cubic meter
UGB	Urban Growth Boundary
US 101	US Highway 101
USACE	US Army Corps of Engineers
USC	United States Code
USDA	US Department of Agriculture
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UWMP	Urban Water Management Plan
VdB	vibration decibel
VHFHS	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WSA	water supply assessment
WTP	wastewater treatment plant

ES Executive Summary

ES.1 INTRODUCTION

This Draft Environmental Impact Report (Draft EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000, et seq.) and the State Guidelines for implementation of CEQA (CEQA Guidelines) (Title 14, Chapter 3 of the California Code of Regulations (CCR), Section 15000, et seq.). The Draft EIR will be used by the City of Santa Rosa (City) in its consideration of the environmental impacts associated with the implementation of the proposed Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation Projects (proposed project). The City is the lead agency and has primary responsibility for preparing the Draft EIR.

ES.2 PROJECT CHARACTERISTICS

A full description of the proposed project is provided in Section 2.0, Project Description, of the Draft EIR.

ROSELAND AREA/SEBASTOPOL ROAD SPECIFIC PLAN

The Roseland Specific Plan provides an overall vision for future development within the Plan Area. The Specific Plan provides a land use diagram, circulation plan, and infrastructure improvement plan as well as goals and policies to guide development and redevelopment. The proposed land use plan for the Plan Area is shown on **Figure 2.0-6**.

ANNEXATION AREAS

The proposed project includes annexation of five unincorporated County islands in southwest Santa Rosa. An unincorporated island is defined as an area of unincorporated land that is substantially surrounded by City land. Two of the five islands are located within the Plan Area and three located outside the Plan Area. These areas encompass 1,614 parcels and approximately 714 acres (see **Table 2.0-4** and **Figure 2.0-2**).

The proposed project consists of two components: the Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation, which is collectively referred to as the proposed project and the project area.

PROJECT OBJECTIVES

The principle objectives of the proposed project are identified as follows:

- Comply with Sonoma Local Agency Formation Commission (LAFCO) policy to create a more logical City boundary and provide more effective delivery of City services by annexing all existing unincorporated islands in southwest Santa Rosa.
- New residents will receive the same level of service as current residents.
- Existing service levels to current City residents will not be reduced in order to provide services to the Roseland Area.
- Make life and the physical environment better for plan area residents and employees.

- Establish a land use and policy framework to guide future development in the area toward transit supportive land uses.
- Balance the preservation of the existing uses and the development of new uses while maintaining the cultural diversity that makes this area special and unique in Santa Rosa.
- Improve connections, particularly for bicycling and walking, to the Southside Bus Transfer Center, to the downtown SMART station, and to Sebastopol Road, the main commercial area (within the plan area and beyond).
- Enhance livability by promoting community health and equity.
- Establish the Plan Area as a place where people want to live, work, shop, and visit.
- Promote economic vitality by maintaining and expanding small businesses and local services for residents.

ES.3 KNOWN AREAS OF CONTROVERSY AND ISSUES RAISED BY AGENCIES AND THE PUBLIC

Comments raised in response to the Notice of Preparation include concerns regarding increased traffic generated by the project, adequacy of water supplies, and the ability of schools to serve increased enrollment generated by the project.

ES.4 PROJECT ALTERNATIVES SUMMARY

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project and reduce the degree of environmental impact. Section 4.0, Alternatives, provides a qualitative analysis of two scenarios that include:

- ***Alternative 1 – No Project Alternative:*** CEQA Guidelines Section 15126.6(e) requires that a "no-project" alternative be evaluated in an EIR. Under this alternative, the project would not be approved and current land uses within the project area, as identified in the City of Santa Rosa General Plan 2035, would remain.
- ***Alternative 2 – Reduced Development Alternative:*** This alternative is intended to eliminate the impact on freeway operations on US 101 North between Todd Road and SR 12. The traffic study for the project determined that development in the project area would result in an increase in delays from existing conditions by approximately 3 percent; an increase of greater than 1 percent is considered significant. In order to reduce the impact to less than significant, this alternative assumes a reduction in development intensity in the project area to one-third of that proposed by the project.

The City of Santa Rosa is the lead agency for the proposed project. In accordance with Section 15082 of the CEQA Guidelines, the City prepared and distributed a Notice of Preparation (NOP) of an EIR for the project on January 15, 2016. This notice was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. The NOP and comments on the NOP are included in **Appendix A**.

ES.5 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 provides a summary of project impacts and mitigation measures identified in the Draft EIR.

TABLE ES-1
EXECUTIVE SUMMARY

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
3.1 Aesthetics				
Impact 3.1.1	The proposed project would result in development on previously undeveloped parcels in the project area that could block views of scenic vistas from surrounding properties.	LTS	None required	LTS
Impact 3.1.2	The proposed project would not substantially damage scenic resources within a state scenic highway.	NI	None required	NI
Impact 3.1.3	The proposed project could change the existing visual character of the project area by allowing new development on currently vacant and underutilized parcels.	LTS	None required	LTS
Impact 3.1.4	The proposed project would introduce new sources of light or glare.	LTS	None required	LTS
Impact 3.1.5	The proposed project, in combination with other planned and recently approved projects in the project area, would result in a less than cumulatively considerable impact on the visual character of the city.	LCC	None required	LCC

LTS – Less Than Significant *PS - Potentially Significant* *SU – Significant and Unavoidable* *NI – No Impact*
LCC – Less Than Cumulatively Considerable *PCC – Potentially Cumulatively Considerable* *CC – Cumulatively Considerable*

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
3.2 Agricultural Resources			
Impact 3.2.1 The Specific Plan area and the Annexation Areas do not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed project would not convert any important farmland.	NI	None required	NI
Impact 3.2.2 The proposed project would not contribute to cumulative impacts on agricultural resources.	LTS	None required	LTS
3.3 Air Quality			
Impact 3.3.1 Subsequent land use activities associated with implementation of the proposed project would not conflict with the Bay Area 2010 Clean Air Plan.	LTS	None required	LTS
Impact 3.3.2 Subsequent land use activities associated with implementation of the proposed project would not conflict with the Bay Area 2010 Clean Air Plan or result in vehicle miles traveled increases greater than the projected population increases over the project's planning period.	LTS	None required	LTS
Impact 3.3.3 The proposed project could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards.	PS	MM 3.3.3 Where projects in the project area are subject to subsequent CEQA review, the City of Santa Rosa must ensure that in addition to the BAAQMD basic construction mitigation measures from Table 8-1 of the BAAQMD CEQA	LTS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		Air Quality Guidelines (or subsequent updates), BAAQMD additional mitigation measures from Table 8-2 of the BAAQMD CEQA Air Quality Guidelines (or subsequent updates) are noted on the construction documents and implemented. These measures include the following: 1. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. 2. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. 3. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity. 4. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. 5. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		at any one time. 6. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. 7. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. 8. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent. 9. Minimizing the idling time of diesel powered construction equipment to two minutes. 10. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO_X reduction and 45 percent PM reduction compared to the most recent CARB fleet average. 11. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). 12. Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		emission reductions of NOx and PM. 13. Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy duty diesel engines. *Timing/Implementation:* *Implemented during construction activities for subsequent projects within the project area* *Enforcement/Monitoring:* *City of Santa Rosa Planning and Economic Development Department, Planning Division*	
Impact 3.3.4 The proposed project would not contribute to localized concentrations of mobile-source CO that would exceed applicable ambient air quality standards.	LTS	None required	LTS
Impact 3.3.5 The proposed project could result in increased exposure of existing or planned sensitive land uses to construction-source toxic air contaminant (TAC) emissions.	PS	MM 3.3.5 Projects within the project area that have a construction area greater than 5 acres and which are scheduled to last more than two years shall be required to prepare a site-specific construction pollutant mitigation plan in consultation with Bay Area Air Quality Management District (BAAQMD) staff prior to the issuance of grading permits. A project-specific construction-related dispersion model acceptable to the BAAQMD shall be used to identify potential toxic air contaminant impacts, including diesel particulate matter. If BAAQMD risk thresholds (i.e., probability of contracting cancer is greater than 10 in one million) would	LTS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		be exceeded, mitigation measures shall be identified in the construction pollutant mitigation plan to address potential impacts and shall be based on site-specific information, such as the distance to the nearest sensitive receptors, project site plan details, and construction schedule. The City shall ensure construction contracts include all identified measures. Construction pollutant mitigation plan measures shall include but not be limited to limiting the amount of acreage to be graded in a single day, requiring the use of advanced particulate filters on construction equipment, and requiring the use of alternative fuels, such as biodiesel, to power construction equipment. *Timing/Implementation:* *Modeling shall be completed prior to grading permit issuance, and measures implemented during construction activities for subsequent projects with a construction area greater than 5 acres and construction lasting more than two years* *Enforcement/Monitoring:* *City of Santa Rosa Planning and Economic Development Department, Planning Division*	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.3.6 The proposed project could result in the development of housing units (sensitive land uses) near stationary or mobile-source TACs.	PS	MM 3.3.6 The following measures shall be utilized in site planning and building designs to reduce TAC and PM2.5 exposure where new receptors are located within 1,000 feet of emissions sources: • Future development in the project area that includes sensitive receptors (such as residences, schools, hospitals, daycare centers, or retirement homes) located within 1,000 feet of US 101 and/or stationary sources shall require site-specific analysis to determine the level of health risk. This analysis shall be conducted following procedures outlined by the BAAQMD. If the site-specific analysis reveals significant exposures from all sources (i.e., health risk in terms of excess cancer risk greater than 100 in one million, acute or chronic hazards with a hazard Index greater than 10, or annual PM2.5 exposures greater than 0.8 µg/m3), measures shall be employed to reduce the risk to below the threshold (e.g., electrostatic filtering systems or equivalent systems and location of vents away from TAC sources). • Future nonresidential developments projected to generate more than 100 heavy-duty truck trips daily and/or include the need for a BAAQMD permit to operate a stationary source shall include measures to protect public health to ensure they do not cause a significant health risk in terms of excess cancer risk greater than 10 in one million, acute or chronic hazards with a Hazard Index greater than 1.0, or annual	LTS

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			PM2.5 exposures greater than 0.3 µg/m3. *Timing/Implementation:* *Prior to issuance of building permits* *Enforcement/Monitoring:* *City of Santa Rosa Planning and Economic Development Department, Planning Division*	
Impact 3.3.7	Future development within the project area would not result in exposure of sensitive receptors to substantial odorous emissions.	LTS	None required	LTS
Impact 3.3.8	The proposed project, in combination with cumulative development in the SFBAAB, could result in a significantly cumulative increase of criteria air pollutants for which the air basin is designated nonattainment.	CC	Implement mitigation measure MM 3.3.3	CC/SU
3.4 Biological Resources				
Impact 3.4.1	Implementation of the proposed project could result in adverse effects, either directly or indirectly, on species listed as endangered, threatened, rare, proposed, and candidate plant and wildlife species as well as plant species identified by the CNPS with a rating of List 1A or 1B.	PS	MM 3.4.1a Implement General Plan Mitigation Measure4.F-5: The City of Santa Rosa shall incorporate the avoidance and mitigation measures described in the Santa Rosa Plain Conservation Strategy and the USFWS Programmatic Biological Opinion, as conditions of approval for development in or near areas with suitable habitat for California tiger salamander, Burke's goldfields, Sonoma sunshine, Sebastopol meadowfoam, and manyflowered navarretia. However, in accordance with the USFWS Programmatic Biological Opinion, projects	LTS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		within the Southwest Santa Rosa Preserve System will be evaluated individually and mitigation may not necessarily adhere to the ratios described in the Conservation Strategy. MM 3.4.1b If there is the potential for destruction of a nest or substantial disturbance to nesting birds or bats due to construction activities, a plan to monitor nesting birds or bats during construction shall be prepared and submitted to the USFWS and CDFG for review and approval. The City shall comply with all USFWS or CDFG guidance for protection of nesting birds. If vegetation, buildings, or bridges that potentially provide nesting sites must be removed, a qualified wildlife biologist shall conduct pre-construction surveys. If an active bird nest is found, the bird shall be identified as to species and the approximate distance from the closest work site to the nest estimated. No additional measures need be implemented if active nests are more than the following distances from the nearest work site: (a) 300 feet for raptors; or (b) 75 feet for other non-special-status bird species. Disturbance of active nests shall be avoided to the extent possible until it is determined that nesting is complete and the young have fledged. Bats shall be absent or flushed from roost locations prior to demolition of buildings. If flushing of bats from buildings is necessary, it shall be done by a qualified biologist during the non-breeding season from October 1 to March 31. When flushing bats, structures shall be moved carefully	

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			to avoid harming individuals, and torpid bats given time to completely arouse and fly away. During the maternity season from April 1 to September 30, prior to building demolition or construction, a qualified biologist shall determine if a bat nursery is present at any sites identified as potentially housing bats. If an active nursery is present, disturbance of bats shall be avoided until the biologist determines that breeding is complete and young are reared. *Timing/Implementation:* *Prior to construction of any subsequent project that could result in disturbance to bird or bat nests* *Enforcement/Monitoring:* *City of Santa Rosa Planning and Economic Development Department, Planning Division*	
Impact 3.4.2	Implementation of the proposed project could result in direct and indirect loss of habitat and individuals of animal and plant species of concern and other non-listed special-status species.	PS	Implement Mitigation Measures MM 3.4.1a. and MM 3.4.1b	LTS
Impact 3.4.3	Implementation of the proposed project could result in disturbance and degradation of riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	LTS	None required	LTS

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Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.4.4	Implementation of the project would result in the loss or degradation of protected wetlands or vernal pools.	PS	MM 3.4.2a	Implement Mitigation Measure 3.4.1a	LTS
			MM 3.4.2b	A formal wetland delineation shall be conducted for areas that will be permanently or temporarily impacted by the project. If jurisdictional waters cannot be avoided, the City shall apply for a CWA Section 404 permit from the USACE and a Section 401 permit from the RWQCB. These permits shall be obtained prior to issuance of grading permits and implementation of the proposed project. The City shall ensure that the project will result in no net loss of waters of the U.S. by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined in the CWA Section 404/401 permits. Compensatory mitigation may consist of (a) obtaining credits from a mitigation bank; (b) making a payment to an in-lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities (these programs are generally administered by government agencies or nonprofit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants); and/or (c) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This last type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location,	

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project proponent/permit applicant retains responsibility for the implementation and success of the mitigation project. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project. *Timing/Implementation:* *Prior to any vegetation removal or ground disturbing activities* *Enforcement/Monitoring:* *City of Santa Rosa Planning and Economic Development Department, Planning Division*	
Impact 3.4.5	Implementation of the project could interfere with movement of native resident or migratory fish or wildlife species or establish migratory corridor.	LTS	None required	LTS
Impact 3.4.6	Implementation of the project will not result in a conflict with a local policy or ordinance protecting biological resources.	NI	None required	NI
Impact 3.4.7	Development in the project area would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved Conservation Plan.	NI	None required	NI

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.4.8	Development in the project area, when considered together with other past, existing, planned future projects, would result in a significant cumulative impact to biological resources in the region.	LCC	None required	LCC
3.5 Cultural Resources				
Impact 3.5.1	Redevelopment within the project area could affect historic properties through modification of historic character and though construction activities.	LTS	None required.	LTS
Impact 3.5.2	If future projects constructed in the project area involve ground disturbance, implementation of the proposed project could result in the disturbance of known and undiscovered archaeological resources or cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074.	PS	MM 3.5.2a Phase 1 Archaeological Resource Study. When specific projects are proposed within the project area that involve ground-disturbing activity, a site-specific Phase I archaeological resource study shall be performed by a qualified archaeologist or equivalent cultural resources professional that will include an updated records search, pedestrian survey of the project area, development of a historic context, sensitivity assessment for buried prehistoric deposits, and preparation of a technical report that meets federal and state requirements. If significant or unique resources are identified and cannot be avoided, treatment plans will be developed in consultation with the City and appropriate Native American representatives to mitigate potential impacts to less than significant based on the provisions of Public Resources Code Section 21083.2.	LTS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		MM 3.5.2b Should any archaeological artifacts be discovered during construction of any project allowed under the Specific Plan, all construction activities shall be halted immediately within 50 feet of the discovery, the City shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Standards and Guidelines for Professional Qualifications in archaeology and/or history shall be retained to determine the significance of the discovery. The professional archaeologist shall prepare a plan to identify, record, report, evaluate, and recover the resources as necessary, which shall be implemented by the developer. Construction within the area of the discovery shall not recommence until impacts on the archaeological resource are mitigated as described in Mitigation Measure MM 3.5.2a. Additionally, Public Resources Code Section 5097.993 stipulates that a project sponsor must inform project personnel that collection of any Native American artifacts is prohibited by law.	
Impact 3.5.3 If future projects constructed under the Specific Plan involve ground disturbance, implementation of the proposed project could result in the disturbance of human remains.	PS	MM 3.5.3a Implement Mitigation Measure MM 3.5.2a (Phase 1 Archaeological Resource Study). MM 3.5.3b Should human remains be discovered during construction of any project allowed under the Specific Plan, all construction activities shall be halted immediately within 50 feet of the discovery, the City shall be notified, and the Sonoma County Coroner shall be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of	LTS

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.	
Impact 3.5.4	Implementation of the proposed project, along with any foreseeable development in the project vicinity, could contribute to cumulative impacts to cultural resources.	LCC	None required	LCC
3.6 Geology and Soils				
Impact 3.6.1	Subsequent projects developed as a result of implementation of the proposed project could be at risk from seismic hazards.	LTS	None required	LTS
Impact 3.6.2	Construction of subsequent projects developed as a result of implementation of the proposed project could result in temporary erosion impacts.	LTS	None required	LTS
Impact 3.6.3	Subsequent projects developed as a result of implementation of the proposed project could be constructed on soils that are expansive or have other physical characteristics that could result in unstable conditions.	LTS	None required	LTS

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.6.4	Subsequent projects developed as a result of implementation of the proposed project, in addition to other proposed and approved projects in the vicinity, would not cumulatively create any new or exacerbate any identified geological or soils impacts.	LCC	None required	LCC
3.7 Greenhouse Gas Emissions				
Impact 3.7.1	The project would not conflict with an applicable plan adopted for the purpose of reducing GHG emissions.	LCC	None required	LCC
3.8 Hazards and Hazardous Materials				
Impact 3.8.1	Implementation of the proposed project would result in the use, storage, and transport of hazardous materials. Accidental release of these materials could constitute a hazard to the public or the environment.	LTS	None required	LTS
Impact 3.8.2	New development in the project area would lead to an associated increase in use of hazardous materials. The proposed project therefore has potential to result in an increased risk of accidental release of hazardous materials.	LTS	None required	LTS

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Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.8.3	Several schools are located within and in the vicinity of the project area. Hazardous materials or substances may be handled in the vicinity of these schools.	LTS	None required		LTS
Impact 3.8.4	Review of environmental hazards databases conducted in association with the proposed project identified hazardous materials sites in the project area.	PS	MM 3.8.4	Phase I Environmental Site Assessment. Developers shall be required to complete a Phase I environmental site assessment for each property to be developed or redeveloped. If a Recognized Environmental Condition (REC) is identified in a Phase I environmental site assessment, a Phase II environmental site assessment shall be prepared to determine whether conditions are present that require remediation or other controls to minimize the potential for hazardous materials contamination to adversely affect public health and the environment. If remediation is required, developers shall complete site remediation in accordance with OSHA standards and Santa Rosa Fire Department, Sonoma County Environmental Health Department, and State Water Resources Control Board guidelines. The Department of Toxic Substances Control (DTSC) may become involved wherever toxic levels of contaminants are found that pose an immediate hazard. Remediation shall reduce human exposure risk and environmental hazards, both during and after construction. The remediation plan shall be prepared in accordance with the environmental consultant's recommendations and established procedures for safe remediation. Specific mitigation measures designed to protect	LTS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		human health and the environment will be provided in the plan. Requirements shall include but not be limited to the following: • Documentation of the extent of previous environmental investigation and remediation at the site, including closure reports for underground storage tanks (USTs) and contaminant concentrations. • A site-specific health and safety plan to be prepared by all contractors at the project site, where applicable. This includes a plan for all demolition, grading, and excavation on the site, as well as for future subsurface maintenance work. The plan shall include appropriate training, any required personal protective equipment, and monitoring of contaminants to determine exposure. The Health and Safety Plan shall be reviewed and approved by a certified industrial hygienist. • Description of protocols for the investigation and evaluation of previously unidentified hazardous materials that could be encountered during project development, including engineering controls that may be required to reduce exposure to construction workers and future users of the site. • Requirements for site-specific construction techniques that would minimize exposure to any subsurface contamination, where applicable, which shall include treatment	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		and disposal measures for any contaminated groundwater removed from excavations, trenches, and dewatering systems in accordance with local and Regional Water Quality Control Board guidelines. • Sampling and testing plan for excavated soils to determine suitability for reuse or acceptability for disposal at a state-licensed landfill facility. • Restrictions limiting future excavation or development of the subsurface by residents and visitors to the proposed development, and prohibition of groundwater development should it be determined from test results that contamination is present. The restrictions would be developed based on site-specific conditions and would reflect the requirements of the RWQCB and/or DTSC, depending on which agency is responsible for oversight of the particular site. Restrictions, which are sometimes also referred to as land use covenants, shall be recorded with the parcel(s), shall run with the land. The developer or land owner successor(s)-in-interest shall be responsible for ensuring development complies with the restrictions. Compliance with the restrictions must be demonstrated to the satisfaction of the City before a grading permit is issued. • Completion of an approved remediation plan should land use restrictions be insufficient to allow development to	

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		proceed safely. Remediation measures may include excavation and replacement of contaminated soil with clean fill, pumping and treatment of groundwater, thermal treatment, etc. MM 3.8.4b In the event previously unknown contaminated soil, groundwater, or subsurface features are encountered or have the potential be present during ground-disturbing activities at any site, work shall cease immediately, and the developer's contractor shall notify the City of Santa Rosa Fire Department for further instruction. The City shall ensure any grading or improvement plan or building permit includes a statement specifying that if hazardous materials contamination is discovered or suspected during construction activities, all work shall stop immediately until the City of Santa Rosa Fire Department has determined an appropriate course of action. Such actions may include, but would not be limited to, site investigation, human health and environmental risk assessment, implementation of a health and safety plan, and remediation and/or site management controls. The City of Santa Rosa Fire Department shall be responsible for notifying the appropriate regulatory agencies and providing evidence to the City Planning and Economic Development Department that potential risks have been mitigated to the extent required by regulatory agencies. Work shall not recommence on an impacted site until the applicable regulatory agency has	

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			determined further work would not pose an unacceptable human health or environmental risk. Deed restrictions may be required as provided under mitigation measure MM 3.8.4a. *Timing/Implementation:* *As a condition of subsequent project approval, and implemented during construction activities* *Enforcement/Monitoring:* *City of Santa Rosa Fire Department; City of Santa Rosa Planning and Economic Development Department*	
Impact 3.8.5	The proposed project could have an impact on area roadways used to respond to hazardous materials incidents and/or for emergency evacuations.	LTS	None required	LTS
Impact 3.8.6	Implementation of the proposed project, in combination with other existing and reasonably foreseeable future projects, may result in cumulative hazards and hazardous materials impacts.	LCC	None required	LCC
3.9 Hydrology and Water Quality				
Impact 3.9.1	Construction and operation of subsequent projects in the project area could generate stormwater runoff containing pollutants from construction sites and new impervious surfaces, which could affect water quality.	LTS	None required	LTS

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.9.2	Future development in the project area would not significantly deplete groundwater supplies or alter the area available for recharge of the groundwater aquifer.	LTS	None required	LTS
Impact 3.9.3	Future development in the project area could increase impervious surfaces and, as a result, alter drainage patterns and increase drainage rates over existing conditions.	LTS	None required	LTS
Impact 3.9.4	Future development in the project area may result in increased runoff and flows to the municipal storm drain system.	LTS	None required	LTS
Impact 3.9.5	Future development in the project area may occur in areas subject to flooding hazards.	LTS	None required	LTS
Impact 3.9.6	The proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the Laguna de Santa Rosa watershed, would alter drainage conditions, rates, volumes, and water quality, which could result in potential flooding and stormwater quality impacts in the overall watershed.	LCC	None required	LCC

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
3.10 Land Use and Planning			
Impact 3.10.1 The proposed project would not divide an established community.	LTS	None required	LTS
Impact 3.10.2 The proposed project would not conflict with applicable land use plans.	LTS	None required	LTS
Impact 3.10.3 Implementation of the proposed project would not significantly contribute to adverse cumulative impacts related to land use including conflicts with applicable land use plans.	LCC	None required	LCC
3.11 Noise			
Impact 3.11.1 The proposed project would not expose residents to traffic noise or stationary sources of noise in excess of established standards.	LTS	None required	LTS
Impact 3.11.2 Project operation would generate increased local traffic volumes that could cause a substantial permanent increase in ambient noise levels in the project vicinity.	LTS	None required	LTS
Impact 3.11.3 Planned development under the proposed project would be required to comply with City noise standards set forth in the City Code.	LTS	None required	LTS

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Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.11.4	Construction activities could cause a substantial temporary increase in ambient noise levels at nearby noise-sensitive land uses, which may result in increased levels of annoyance, activity interference, and sleep disruption.	LTS	None required	LTS
Impact 3.11.5	The proposed project, when considered in combination with other past, existing, planned future projects, would result in increased noise levels.	LTS	None required	LTS
3.12 Population and Housing				
Impact 3.12.1	The proposed project would result in population growth in the project area that is consistent with growth projections for the city.	LTS	None required	LTS
Impact 3.12.2	The proposed project could involve redevelopment activities on currently occupied residential parcels, but there would be no net displacement of people or housing overall.	LTS	None required	LTS
Impact 3.12.3	The proposed project, along with other approved, proposed, and reasonably foreseeable development, could induce population and housing growth in the City's Urban Growth Boundary.	LCC	None required	LCC

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.12.4 The proposed project, along with other approved, proposed, and reasonably foreseeable development, would not result in cumulative loss of housing or displacement of people.	LCC	None required	LCC
3.13 Public Services			
Impact 3.13.1.1 Development resulting from implementation of the proposed project could increase demand for fire protection, fire prevention, emergency medical, and law enforcement services resulting in the need for new facilities, the construction of which could result in physical environmental effects.	LTS	None required	LTS
Impact 3.13.1.2 The proposed project, in combination with other reasonably foreseeable development, would increase the City's population and could contribute to the need for expanded fire protection, fire prevention, and emergency medical services that could cause significant physical impacts to the environment.	LTS	None required	LTS
Impact 3.13.2.1 The proposed project would result in the development of new residential and non-residential uses in the project area which would increase enrollment at local schools.	LTS	None required	LTS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.13.2.2 The proposed project, in combination with other reasonably foreseeable development in the city, would generate new student enrollments at local area schools.	LTS	None required	LTS
Impact 3.13.3.1 Implementation of the proposed project would increase demand for parks and recreational facilities.	LTS	None required	LTS
Impact 3.13.3.2 Implementation of the proposed project, in combination with other reasonably foreseeable development in the city, would increase demand for parks and recreational facilities.	LTS	None required	LTS
3.14 Traffic and Transportation			
Impact 3.14.1 Project traffic would not degrade corridor operations to unacceptable levels of service under Existing plus Project conditions.	LTS	None required	LTS
Impact 3.14.2 Project traffic would have the potential to degrade mainline freeway operations to unacceptable levels of service under Existing plus Project conditions.	PS	None available	SU
Impact 3.14.3 Project traffic would have the potential to degrade freeway ramp operations to an unacceptable level of service at the southbound US 101 freeway off-ramp at Hearn Avenue under Existing plus Project conditions.	PS	None available	SU

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Impact		Level of Significance Without Mitigation	Mitigation Measure		Resulting Level of Significance
Impact 3.14.4	The proposed project includes various roadway improvements that would be designed and constructed according to City-approved design standards to ensure safety.	LTS	None required		LTS
Impact 3.14.5	Implementation of the proposed project would not interfere with emergency access within the project area.	LTS	None required		LTS
Impact 3.14.6	Implementation of the proposed project would not conflict with any alternative transportation policies or plans.	LTS	None required		LTS
Impact 3.14.7	Implementation of the proposed project would result in improvements to pedestrian and bicycle circulation in the project area that would enhance connectivity and safety.	LTS	None required		LTS
Impact 3.14.8	Implementation of the proposed project would have a beneficial impact on bus transit by concentrating uses in a transit-oriented development pattern and by increasing connectivity to transit facilities.	LTS	None required		LTS
Impact 3.14.9	Construction activities associated with project implementation may temporarily affect vehicular, pedestrian, bicycle, and transit circulation.	PS	MM 3.14.9	Prior to construction activities, applicants seeking to construct projects in the project area shall submit a construction traffic control plan to the City of Santa Rosa for review and approval. The plan shall identify the timing and routing of all major construction-related traffic to avoid	LTS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
		potential congestion and delays on the local street network. Any temporary road or sidewalk closures shall be identified along with detour plans for rerouting pedestrian and bicycle traffic for rerouting pedestrian and bicycle traffic. The plan shall also identify locations where transit service would be temporarily rerouted or transit stops moved, and these changes must be approved by the Santa Rosa CityBus and Sonoma County Transit before the plan is finalized. If necessary, movement of major construction equipment and materials shall be limited to off-peak hours to avoid conflicts with local traffic circulation. *Timing/Implementation:* *Prior to construction activities* *Enforcement/Monitoring:* *City of Santa Rosa Transportation and Public Works Department and Planning and Economic Development Department*	
Impact 3.14.10 Project traffic, when considered together with other past, present, and future development, would have the potential to degrade corridor operations to unacceptable levels of service (Future plus Project or cumulative condition).	LCC	None required	LCC
Impact 3.14.11 Project traffic, when considered together with other past, present, and future development, would have the potential to degrade	PCC	None available	CC/SU

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
mainline freeway operations to unacceptable levels of service (Future plus Project or "cumulative" conditions).			
Impact 3.14.12 Project traffic, when considered together with other past, present, and future development, would have the potential to degrade freeway ramp operations to an unacceptable level of service at the westbound SR 12 freeway off-ramp at Dutton Avenue (Future plus Project or cumulative conditions).	PCC	MM 3.14.12 The City shall widen the Dutton Avenue westbound off-ramp to extend the right turn pocket to a minimum length of 550 feet to alleviate the adverse queuing onto the mainline freeway. The City shall monitor queuing conditions on the ramp through field observations and review of development traffic impact studies and add the widening project to the Capital Improvement Program once it is determined that queues are likely to exceed storage within a five-year time frame. The City shall collaborate with Caltrans in obtaining approvals to complete the widening project. *Timing/Implementation:* *Prior to adverse queuing onto the mainline freeway* *Enforcement/Monitoring:* *City of Santa Rosa Transportation and Public Works Department*	LCC
3.15 Public Utilities			
Impact 3.15.1.1 The proposed project would exceed the City's projected water demand compared to that identified in the 2010 Urban Water Management Plan.	LTS	None required	LTS

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.15.1.2 Implementation of the proposed project would not require any new or expanded water treatment facilities.	NI	None required	NI
Impact 3.15.1.3 The proposed project, in combination with other reasonably foreseeable development in the Sonoma County Water Agency service area, would result in less than cumulatively considerable water supply impacts.	LCC	None required	LCC
Impact 3.15.2.1 Wastewater flows generated as a result of the proposed project would not exceed existing capacity at the Laguna Wastewater Treatment Plant or in existing conveyance facilities.	LTS	None required	LTS
Impact 3.15.2.2 Existing, planned, and reasonably foreseeable development in the cumulative setting, when considered together with the proposed project, would result in a cumulative increase in demand for wastewater conveyance and treatment services requiring system improvements.	LCC	None required	LCC
Impact 3.15.3.1 Implementation of the proposed project would require the extension of existing stormwater drainage facilities to serve new development.	LTS	None required	LTS
Impact 3.15.3.2 Cumulative growth in the city would increase the volume of stormwater entering the City's drainage system.	LCC	None required	LCC

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Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3.15.4.1 Future development resulting from implementation of the proposed project would increase demand for solid waste collection, recycling, and disposal services.	LTS	None required	LTS
Impact 3.15.4.2 Implementation of the proposed project would not be expected to result in conflicts with any federal, state, or local solid waste regulations.	LTS	None required	LTS
Impact 3.15.4.3 The proposed project, when considered in combination with other existing and planned development in the SCWMA service area, would increase cumulative demand for solid waste disposal services.	LCC	None required	LCC

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1.0 INTRODUCTION

This section summarizes the purpose of the Environmental Impact Report (EIR) for the Roseland Area/Sebastopol Road Specific Plan and Annexation Projects (proposed project); describes the environmental procedures that are to be followed according to state law; discusses the intended uses of the EIR; discusses the project's relationship to the City of Santa Rosa General Plan; describes the EIR scope and organization, contact person, and impact terminology; and summarizes comments received on the Notice of Preparation.

1.1 BACKGROUND AND PURPOSE OF THE EIR

This Draft EIR has been prepared in conformance with the provisions of the California Environmental Quality Act (CEQA) to evaluate the environmental effects of the proposed Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation Projects (proposed project; project) in Santa Rosa.

The City of Santa Rosa (City), acting as the lead agency, has prepared this Draft EIR to provide the public and responsible and trustee agencies with information about the proposed project's potential environmental effects. As described in CEQA Guidelines Section 15121(a), an EIR is a public informational document that assesses potential environmental effects of a proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. Public agencies are charged with the duty to consider and minimize environmental impacts of proposed development where feasible, and are obligated to balance a variety of public objectives, including economic, environmental, and social factors.

CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term *project* refers to the whole of an action that has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). The City has determined that adoption and implementation of the Roseland Area/Sebastopol Road Specific Plan and Annexation Projects is a "project" within the definition of CEQA.

1.2 TYPE OF DOCUMENT

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a program EIR pursuant to CEQA Guidelines Section 15168. The analysis associated with a program EIR focuses primarily on the changes in the environment that would occur as a result of project implementation and examines all phases of the project.

Ultimately, the EIR will be used by the City as a tool in evaluating the proposed project's environmental impacts and can be further used to modify, approve, or deny approval of the proposed project based on the analysis in the EIR.

1.3 INTENDED USES OF THE EIR

This Draft EIR is intended to evaluate the project's environmental impacts to the greatest extent possible. This Draft EIR, in accordance with CEQA Guidelines Section 15126, should be used as the primary environmental document to evaluate all planning and permitting actions associated with the project. These actions include, but are not limited to, the following:

- General Plan Amendment
- Zoning Code Amendment

- Bicycle and Pedestrian Master Plan Amendment
- Annexation

The analysis included in this EIR may also be relied upon in conjunction with the City's consideration of future development proposals, as summarized below.

As provided under CEQA Guidelines Section 15183(a) and (c), future projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified does not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects that are peculiar to the project or its site. Upon adoption of the General Plan and zoning amendments, the City may rely upon this EIR to streamline the environmental review of future projects, provided they are consistent with the approved specific plan and zoning.

In addition, the City may also rely upon this EIR for certain projects (depending on the type of project and location) as provided by CEQA (Public Resources Code [PRC] Section 21155.4) pertaining to projects within a transit priority area, provided that the criteria set forth in Sections 21155.4(a)(1)-(3) are met.

Under Senate Bill 375, streamlined CEQA review and analysis may also apply to future residential or mixed-use residential projects that are consistent with an adopted Sustainable Communities Strategy (SCS) pursuant to PRC Section 21159.28 (as included in Plan Bay Area 2013, approved in July 2013 by the Association of Bay Area Governments Executive Board and by the Metropolitan Transportation Commission). This consistency determination must be made the by the CEQA lead agency (in this case, the City of Santa Rosa). Environmental documents prepared for projects that are consistent with the MTP/SCS EIR are not required to reference, describe, or discuss the following in their GHG impact analysis: 1) growth-inducing impacts; 2) a reduced-density alternative to address impacts on transportation or climate change of increased car and truck VMT induced by the project; and 3) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network.

1.4 RELATIONSHIP TO THE CITY OF SANTA ROSA GENERAL PLAN AND EIR

The City Council adopted the Santa Rosa General Plan 2035 on November 3, 2009. The General Plan is the City's overall guide for the use of Santa Rosa's resources, expresses the development goals of the community, addresses issues related to the physical development and growth of Santa Rosa, and is the foundation upon which all land use decisions are made. According to the General Plan Land Use Diagram, the project area is designated for Low-, Medium- and Medium-High Residential, Mobile Home Park, Retail and Business Service, Office, Business Park, Light Industry, General Industry, Public/Institutional, Parks/Recreation, and Open Space uses.

Both the Roseland area and the Sebastopol Road transportation corridor are designated as Priority Development Areas in the General Plan. This designation is available to jurisdictions that are planning increased residential development around existing or planned transit (i.e., the Southside Bus Transfer Center) and enhances the City's eligibility for funding to implement land use plans in these areas (e.g., the proposed Specific Plan). General Plan Goal LUL-X calls for the City to develop the Sebastopol Road area from Stony Point Road to Dutton Avenue with a mix of neighborhood uses, focusing on commercial activity and neighborhood services for the Roseland area.

The City certified the General Plan EIR (State Clearinghouse No. 2008092114) on November 3, 2009. The EIR evaluated the potential environmental effects of buildout of the city in accordance with the General Plan. The proposed Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation Projects are within the planning area evaluated in the General Plan EIR. This Draft EIR uses technical information and analyses from the General Plan EIR that is relevant to the consideration of environmental effects of the proposed project, as provided by CEQA Guidelines Section 15150 [Incorporation by Reference]).

1.5 ORGANIZATION AND SCOPE

CEQA Guidelines Sections 15122 through 15132 identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The environmental issues addressed in the Draft EIR were established through review of environmental documentation developed for the site, environmental documentation for nearby projects, and public agency responses to the Notice of Preparation (NOP). Based on these comments, agency consultation, and review of the project application, the City determined the scope for this EIR.

This Draft EIR is organized in the following manner:

SECTION ES – EXECUTIVE SUMMARY

This section summarizes the characteristics of the proposed project and provides a concise summary matrix of the project's environmental impacts and associated mitigation measures.

SECTION 1.0 – INTRODUCTION

Section 1.0 provides an introduction and overview describing the intended use of the EIR.

SECTION 2.0 – PROJECT DESCRIPTION

This section provides a detailed description of the proposed project, including intended objectives, background information, and physical and technical characteristics.

SECTION 3.0 – ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Section 3.0 presents information pertaining to baseline conditions, development assumptions used in the analysis, and the approach to the cumulative impacts analysis. Sections 3.1 through 3.15 provide an integrated presentation of the setting, environmental impacts, and mitigation measures for each of the environmental issue areas addressed. Potential effects of implementing the proposed project are identified, including cumulative effects, along with mitigation measures recommended to lessen or reduce identified impacts. In cases where no mitigation is available or feasible, this fact is noted. This EIR provides an analysis of environmental effects specifically associated with the proposed project, as well as an evaluation of project impacts in light of the environmental analysis provided in the General Plan EIR. Consistent with CEQA Guidelines Section 15183, this EIR addresses environmental effects that are peculiar to the proposed project and utilizes mitigation measures that are based on adopted City development policies and standards to mitigate anticipated impacts.

SECTION 4.0 – ALTERNATIVES

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. The alternatives analysis provides a comparative analysis between the project and the selected alternatives.

SECTION 5.0 – OTHER CEQA ANALYSIS

This section identifies significant unavoidable impacts, growth-inducing effects, and significant irreversible changes that would occur as a result of implementation of the proposed project.

SECTION 6.0 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the report by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as all technical material prepared to support the analysis.

1.6 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR will involve the following procedural steps:

NOTICE OF PREPARATION

In accordance with Section 15082 of the CEQA Guidelines, the City prepared a Notice of Preparation (NOP) of an EIR for the project on January 15, 2016. The City of Santa Rosa was identified as the lead agency for the proposed project. The NOP was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on what should be addressed in the scope of the EIR. A scoping meeting was held on February 1, 2016, to solicit input from interested agencies and the public. Concerns raised in response to the NOP and at the scoping meeting were considered during preparation of the Draft EIR. The 30-day comment period for the NOP closed on February 16, 2016. The NOP and responses are presented in **Appendix 1.0**, which includes a summary of the comments and indicates where issues raised in the comments are addressed in the Draft EIR.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. Upon completion of the Draft EIR, the City will file the Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code Section 21161).

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the City will provide public notice of the availability of the Draft EIR for public review and will invite comment from the general public, agencies, organizations, and other interested parties. The review period is 45 days. Public comment on the Draft EIR will be accepted in written form via common carrier or via electronic mail. All comments or questions regarding the Draft EIR should be addressed to:

City of Santa Rosa
Planning and Economic Development Department
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404
Attn: Jessica Jones, Senior Planner
Phone: (707) 543-3410
Fax: (707) 543-3269
E-mail: jjones@srcity.org

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the City may certify the Final EIR at a public hearing. The rule of adequacy generally holds that the EIR can be certified if it shows a good faith effort at full disclosure of environmental information and provides sufficient analysis to allow decisions to be made regarding the project in contemplation of its environmental consequences.

Upon review and consideration of the Final EIR, the City may take action to approve, revise, or reject the project. A decision to approve the project would be accompanied by written findings in accordance with CEQA Guidelines Section 15091 and, if applicable, Section 15093. A Mitigation Monitoring and Reporting Program (MMRP), as described below, would also be adopted for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. This MMRP will be designed to ensure that these measures are carried out during project implementation.

MITIGATION MONITORING

CEQA Section 21081.6(a) requires lead agencies to adopt an MMRP to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific "reporting or monitoring" program required by CEQA is not required to be included in the EIR; however, it will be presented to the Planning Commission and City Council for consideration and adoption in connection with the proposed project. Throughout the EIR, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a Mitigation Monitoring and Reporting Program. Any mitigation measures adopted by the City will be included in the MMRP to verify compliance.

1.7 TRUSTEE AND KNOWN RESPONSIBLE AGENCIES

For the purposes of CEQA, a trustee agency has jurisdiction by law over natural resources that are held in trust for the people of California (CEQA Guidelines Section 15386). For example, the California Department of Fish and Wildlife is a trustee agency with regard to the state's fish and wildlife and designated rare or endangered native plants. The CDFW is the only trustee agency for the proposed project. The term *responsible agency* includes all public agencies other than the lead agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). The following agencies are identified as potential responsible agencies:

- Sonoma County Local Agency Formation Commission (LAFCO)
- Bay Area Air Quality Management District (BAAQMD)
- Regional Water Quality Control Board (RWQCB)
- State Water Resources Control Board (SWRCB)
- US Army Corps of Engineers (USACE)
- Sonoma County Department of Health Services
- US Fish and Wildlife Service (USFWS)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife (CDFW)

1.8 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received comment letters on the NOP for the proposed project. A copy of each letter is provided in **Appendix 1.0**. A summary of the letters is included in **Table 1.0-1**. The environmental issues raised in the comment letters are addressed in the applicable technical sections of this Draft EIR (Sections 3.1 through 3.15).

TABLE 1.0-1
SUMMARY OF COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

Date	Signatory	Agency or Organization	Comments
12/30/2015	Katy Sanchez, Associate Government Program Analyst	Native American Heritage Commission (NAHC)	• A sacred lands file record search failed to indicate the presence of Native American cultural resources in the immediate project area. • Other sources of cultural resources should be contacted for information regarding known and recorded sites, including those on the Native American Tribal Consultation List provided.
1/8/2016	Brenda L. Tomaras	Tomaras & Ogas, LLP, on behalf of the Lytton Rancheria	• The Lytton Rancheria acknowledges receipt of the request for consultation on the project per Assembly Bill (AB) 52. • Requests that cultural resources be evaluated in the EIR. • Requests that once a cultural survey report has been prepared, a copy be sent to Lytton Rancheria for review.
1/19/2016	Rick Coates, Executive Director	EcoRing	• Questions where traffic and public transit are addressed in the NOP. • Recommends that the EIR evaluate a project alternative in which an electric streetcar serves the Roseland area along Sebastopol Road.
1/25/2016	Reg Elgin	Dry Creek Rancheria	• The Dry Creek Rancheria is not aware of any historic properties in the project area. • Requests that he be contacted if any new information or historic remains are found.
2/9/2016	Joshua Standing Horse, Associate Governmental Program Analyst	Native American Heritage Commission (NAHC)	• Provides a summary of the various requirements for cultural resources assessment and tribal consultation under CEQA, AB 52, and Senate Bill (SB) 18 as well as the NAHC's recommendations for cultural resources assessments.
2/14/2016	Annette Ball		• The EIR should consider project traffic volumes in relation to the proposed rezoning of property near the Hearn Avenue/Dutton Avenue intersection to business uses in addition to existing traffic congestion. • Questions the availability of adequate water supplies to support the proposed higher-density zoning along Hearn Avenue from Burbank Avenue to Stony Point Road. • Expresses the opinion that increased traffic along Hearn Avenue would exacerbate existing traffic congestion and increase air pollution and noise.
2/16/2016	Victoria Drive Residents	Victoria Drive Residents	• Question availability of adequate water supplies to serve the proposed development given the current drought and water shortage measures in place. • Question how Hearn Avenue could accommodate increases in traffic resulting from the project given the existing congestion and two-lane roadway.

Date	Signatory	Agency or Organization	Comments
			• Request that any planned bicycle or pedestrian paths connect only to the SMART train path and not terminate onto Victoria Drive, as Victoria Drive does not have bicycle lanes or sidewalks and could not safely accommodate increased bicycle or pedestrian traffic. • Ask which schools would serve new residents and whether those schools could accommodate the increased enrollments.

2.0 PROJECT DESCRIPTION

This section describes the proposed Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation Projects (project; proposed project), depicts the location of the project area both regionally and locally, and describes the existing conditions of the Specific Plan area and Annexation areas (collectively, project area), as well as the project objectives and a general description of the project's technical and environmental characteristics. A detailed list of the approvals required to implement the project is also provided. As the City of Santa Rosa would make a number of decisions on this project, all decisions subject to the California Environmental Quality Act (CEQA) are listed and the implementation process is described in the order that it would occur. This includes actions the City would take now and actions that may be taken in the future.

For a description of the background, purpose, intended use, and type of EIR, please refer to Section 1.0, Introduction. This Project Description has been prepared in compliance with CEQA Guidelines Section 15124.

2.1 PROJECT LOCATION

The project site includes the Roseland Area/Sebastopol Road Specific Plan area (plan area). The specific plan area encompasses approximately 1,860 acres (1,220 acres of incorporated city land and 640 acres of unincorporated county land) located in southwestern Santa Rosa. The plan area is generally bounded by State Route (SR) 12 to the north, Bellevue Avenue to the south, US Highway 101 (US 101) to the east, and Stony Point Road to the west (see **Figure 2.0-1**).

The project site also includes three Annexation areas located in southwestern Santa Rosa but outside of the plan area (see **Figure 2.0-2**). The West Third Street Annexation Area is located immediately north of the Specific Plan area, encompasses approximately 22.7 acres, and is generally bounded by Santa Rosa Creek to the north, Dutton Avenue and Iowa Street to the west, Pierson Street to the east, and West Third Street and SR 12 to the south. The Brittain Lane Annexation area is located west of the plan area, encompasses approximately 17 acres, and is generally bounded by SR 12 to the north, Brittain Lane to the west, Lombardi Court to the east, and Sebastopol Road to the south. The West Hearn Avenue Annexation area is located west of the plan area, encompasses approximately 33.8 acres, and generally consists of those parcels located immediately north, south, and west of West Hearn Avenue. These areas are in addition to the 640 acres of unincorporated land in the Specific Plan area that is proposed for annexation.

2.2 PROJECT BACKGROUND

The Santa Rosa City Council and Sonoma County Board of Supervisors identified the Roseland area annexation as a priority in 2013 because of the need to unify the areas in southwest Santa Rosa, which are completely surrounded by the city. As part of Santa Rosa, these areas of the community would be provided services by one jurisdiction, rather than multiple jurisdictions.

In 2014, the City of Santa Rosa was awarded a grant from the Sonoma County Transportation Authority (SCTA) for development of a specific plan for the southwestern portion of the city, which is commonly known as Roseland, and the area to its south. The Specific Plan area includes the Roseland Priority Development Area (PDA) and part of the Sebastopol Road PDA. PDAs are locally identified areas that can accommodate residential growth near transit and jobs. The planning process for the proposed project commenced in December 2014.

SANTA ROSA GENERAL PLAN BUILDOUT ASSUMPTIONS

The Santa Rosa City Council adopted the Santa Rosa General Plan 2035 and certified the associated EIR (State Clearinghouse Number 2008092114) on November 3, 2009. The General Plan addresses issues related to the physical development and growth of Santa Rosa. The General Plan EIR evaluated the potential environmental effects of buildout of the city in accordance with the General Plan.

Both the Roseland area and the Sebastopol Road transportation corridor are designated as Priority Development Areas. This designation is available to jurisdictions that are planning increased residential development around existing or planned transit (i.e., the Southside Bus Transfer Center) and enhances the City's eligibility for funding to implement land use plans in these areas (e.g., the proposed Specific Plan). Furthermore, General Plan Policy LUL-X calls for the City to develop the Sebastopol Road area from Stony Point Road to Dutton Avenue with a mix of neighborhood uses, focusing on commercial activity and neighborhood services for the Roseland area. In accordance with the City's vision for these areas, the General Plan planned for future development and redevelopment in the project area as shown in **Figure 2.0-3**. Existing City zoning for the project area is shown in **Figure 2.0-4**. **Figure 2.0-5** and **Figure 2.0-6** show Sonoma County General Plan designations and zoning, respectively. The City's General Plan serves as the overall guiding policy document for Santa Rosa. The entire project area, including unincorporated areas, was included in the General Plan planning area, and buildout of the project area in accordance with General Plan 2035 was evaluated in the associated EIR. The proposed project would be generally consistent with the General Plan 2035 with a few exceptions, which are shown on the proposed land plan (see **Figure 2.0-7**) as "areas of change."

2.3 PROJECT OBJECTIVES

State CEQA Guidelines Section 15124 requires that a project description be accompanied by a statement of objectives sought by the proposed project. The guidelines go on to state that the "objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project."

The City has established the following objectives for the proposed project for purposes of CEQA:

- Comply with Sonoma Local Agency Formation Commission (LAFCO) policy to create a more logical City boundary and provide more effective delivery of City services by annexing all existing unincorporated islands in southwest Santa Rosa.
- New residents will receive the same level of service as current residents.
- Existing service levels to current City residents will not be reduced in order to provide services to the Roseland Area.
- Make life and the physical environment better for plan area residents and employees.
- Establish a land use and policy framework to guide future development in the area toward transit-supportive land uses.
- Balance the preservation of the existing uses and the development of new uses while maintaining the cultural diversity that makes this area special and unique in Santa Rosa.

- Improve connections, particularly for bicycling and walking, to the Southside Bus Transfer Center, to the downtown SMART station, and to Sebastopol Road, the main commercial area (within the plan area and beyond).

- Enhance livability by promoting community health and equity.

- Establish the plan area as a place where people want to live, work, shop, and visit.

- Promote economic vitality by maintaining and expanding small businesses and local services for residents.

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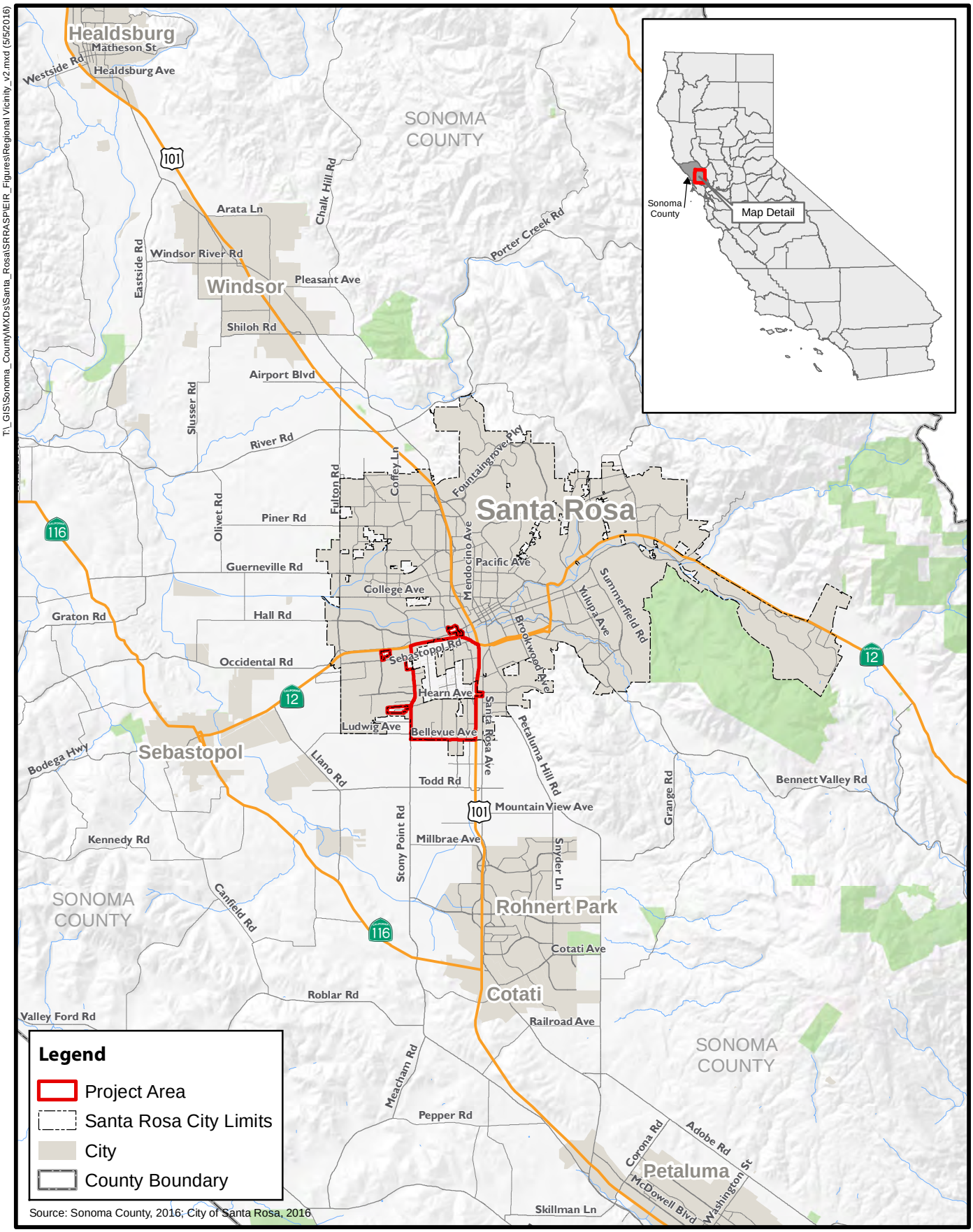


FIGURE 2.0-1
Regional Vicinity

Michael Baker INTERNATIONAL

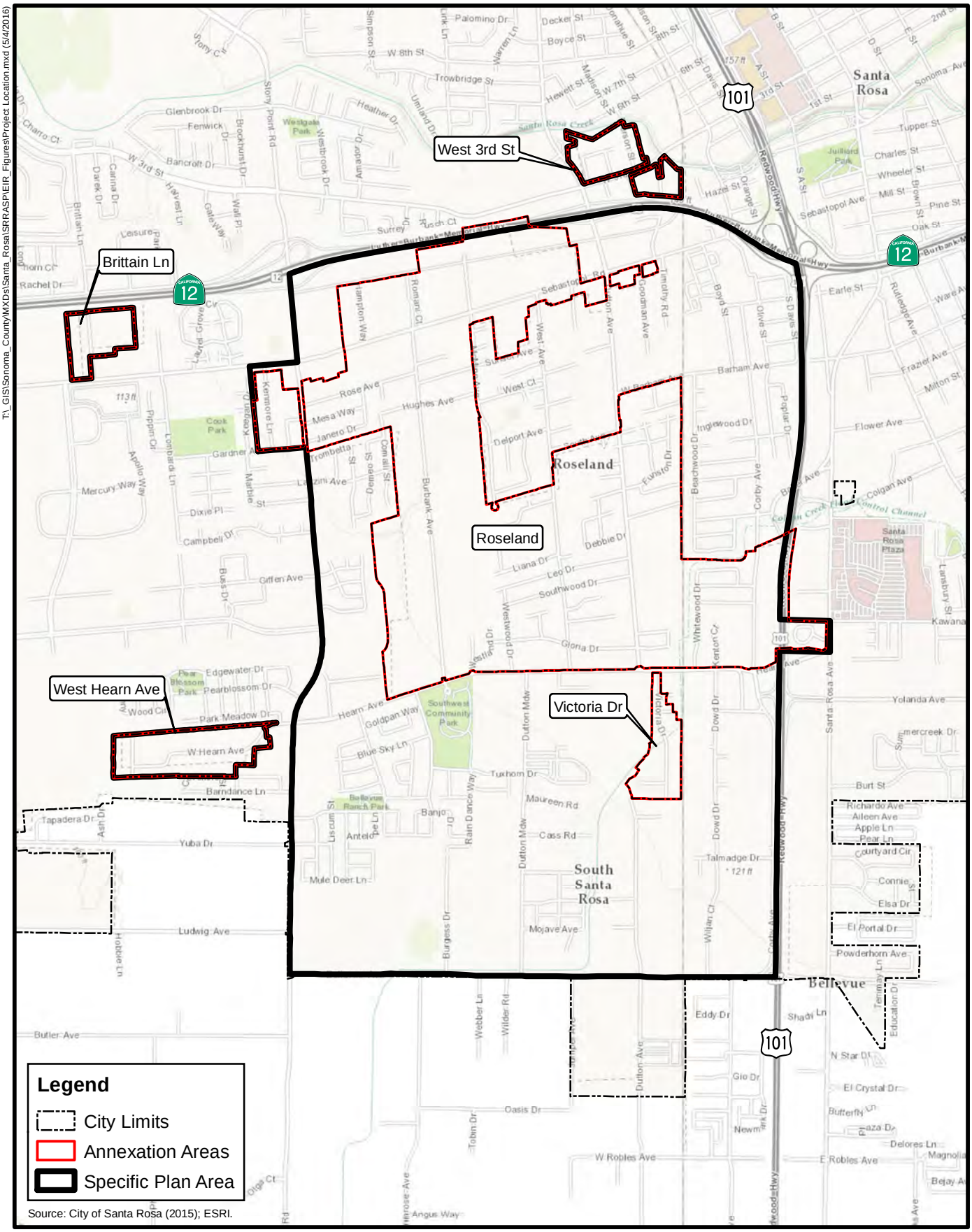


FIGURE 2.0-2
Project Location

Michael Baker INTERNATIONAL

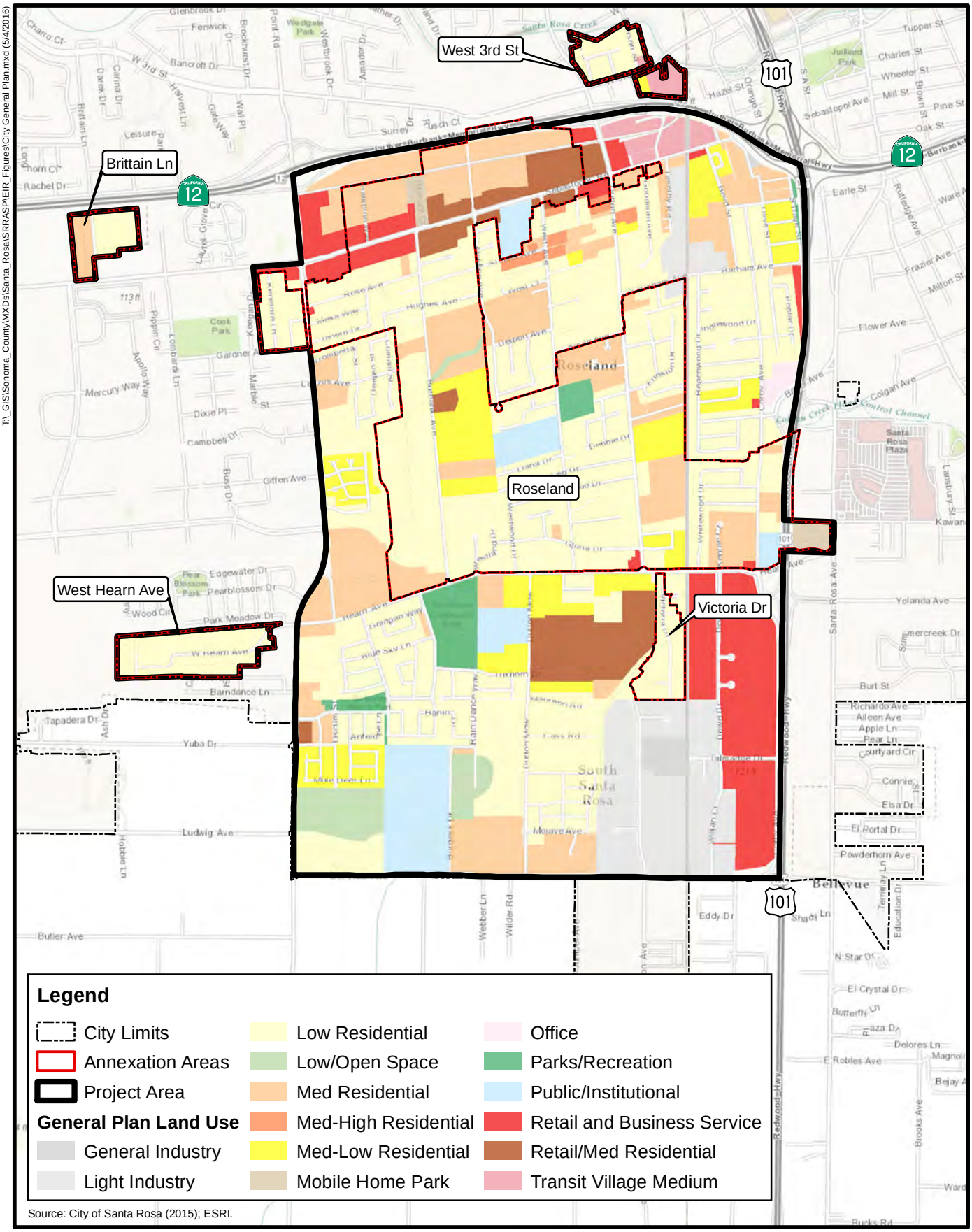


FIGURE 2.0-3
City of Santa Rosa Existing General Plan

Michael Baker INTERNATIONAL

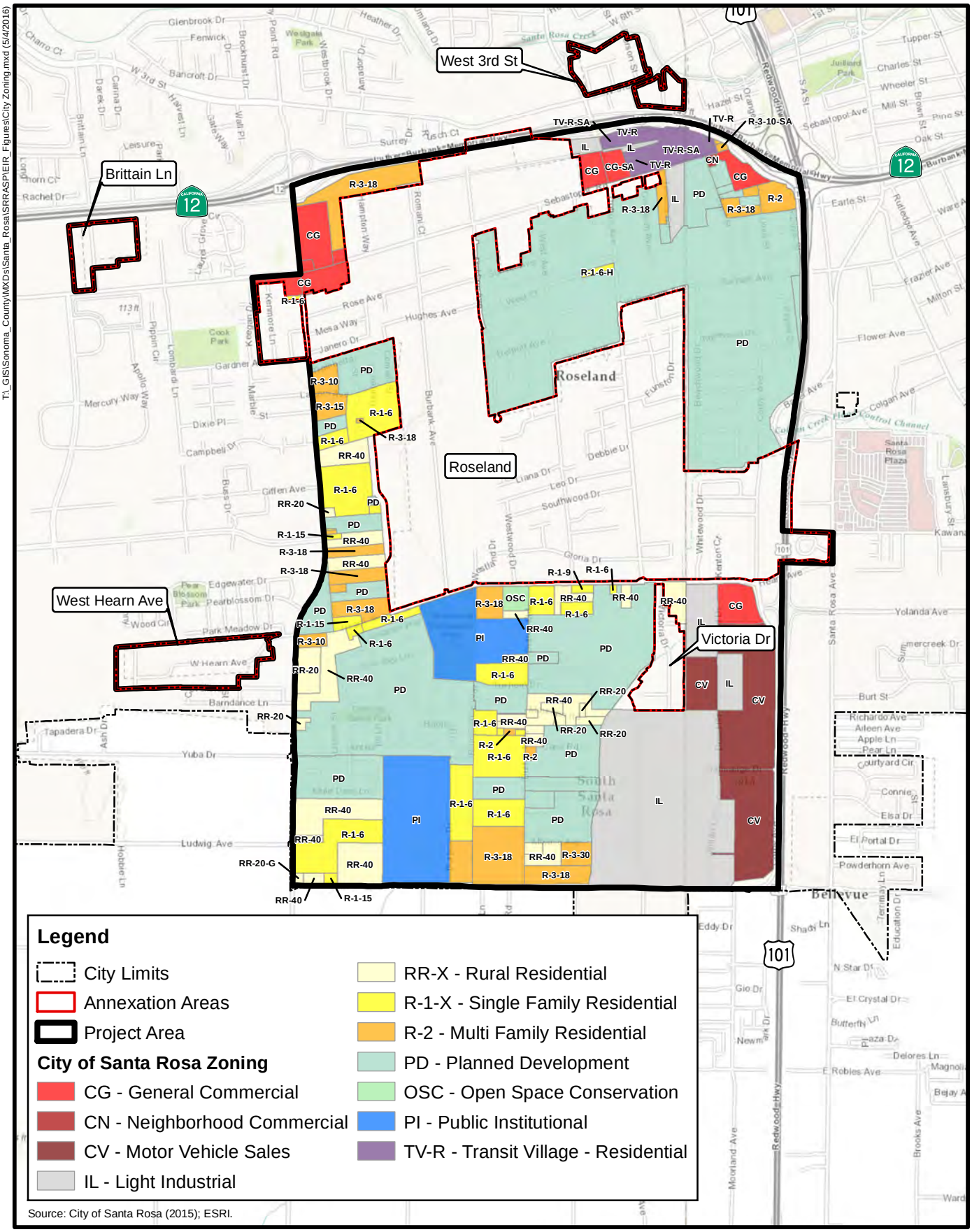


FIGURE 2.0-4
City of Santa Rosa Existing Zoning

Michael Baker INTERNATIONAL

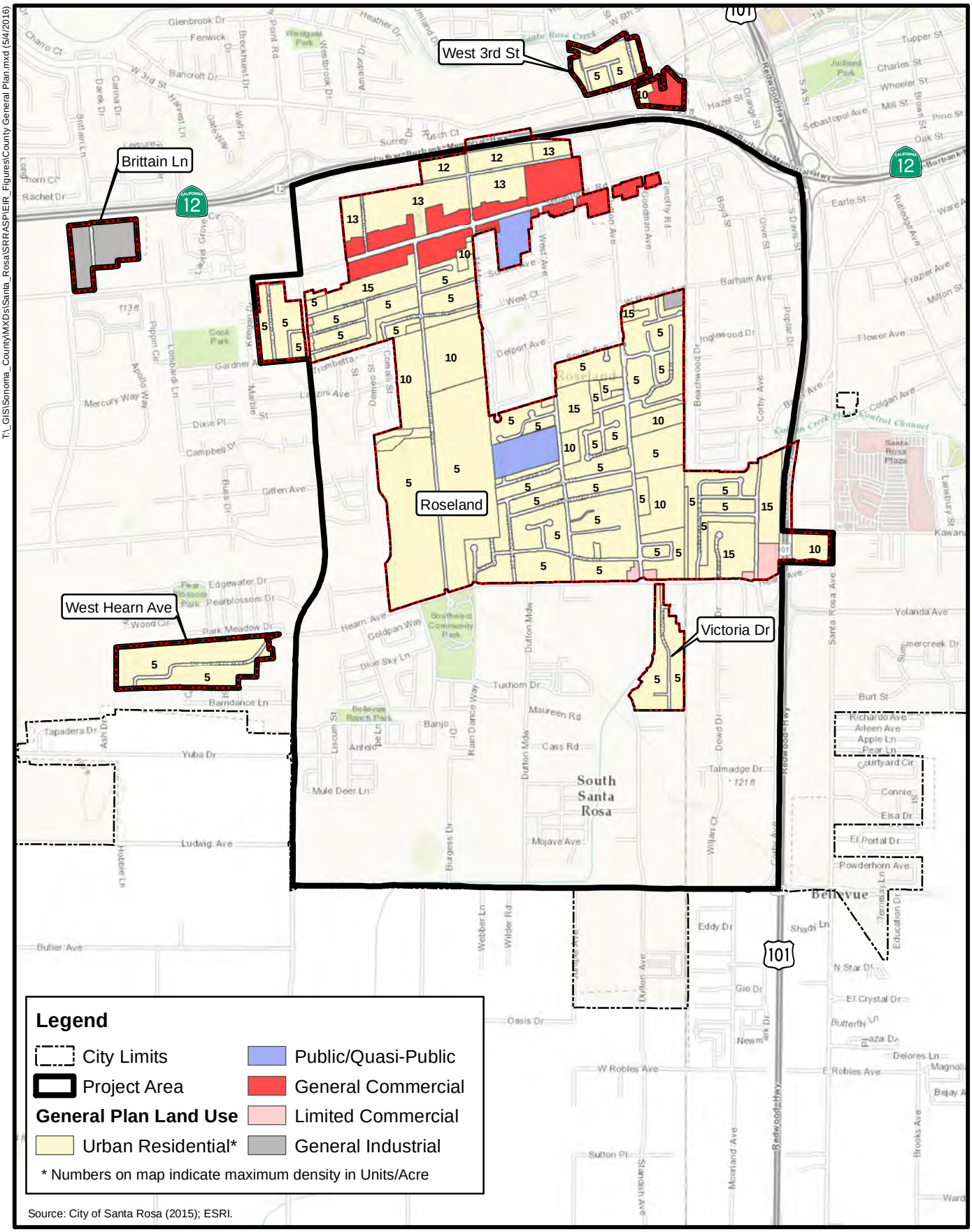


FIGURE 2.0-5
Sonoma County Existing General Plan

Michael Baker INTERNATIONAL

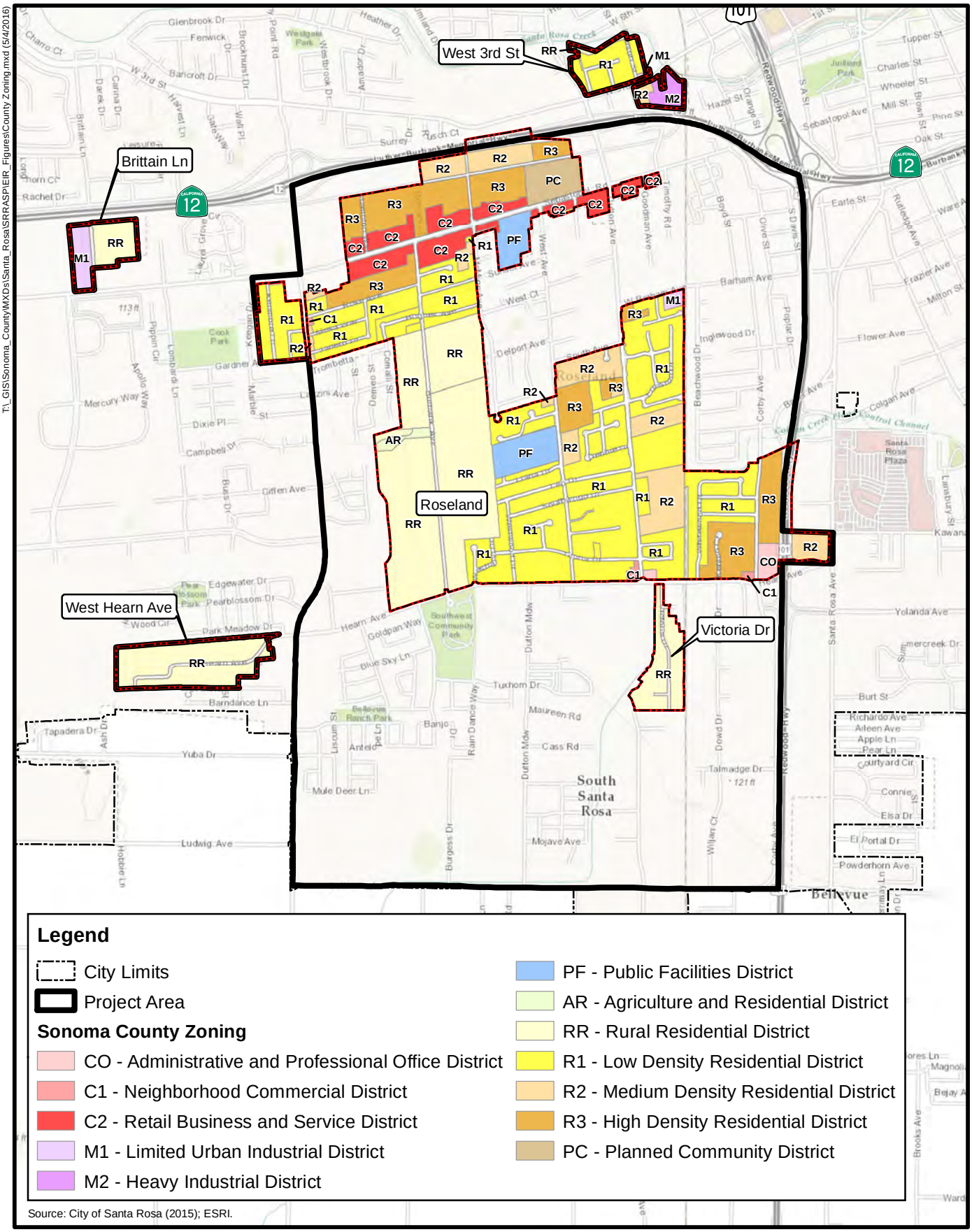


FIGURE 2.0-6
Sonoma County Existing Zoning

Michael Baker INTERNATIONAL

2.4 PROJECT CHARACTERISTICS

As described previously, the project consists of the proposed Roseland Area/Sebastopol Road Specific Plan and annexation of multiple parcels in southwestern Santa Rosa, described in detail in the following subsection.

ROSELAND AREA/SEBASTOPOL ROAD SPECIFIC PLAN

The Specific Plan provides an overall vision for future development in the plan area. The Specific Plan provides a land use diagram, circulation plan, and infrastructure improvement plan as well as goals and policies to guide development and redevelopment. The proposed Specific Plan is organized into six chapters: (1) Introduction; (2) Vision; (3) Land Use and Housing; (4) Circulation; (5) Public Services; and (6) Implementation and Financing.

Proposed Land Use Plan

The proposed land use plan for the plan area is shown in **Figure 2.0-7**. As shown, the proposed land use plan is substantially the same as the current Santa Rosa General Plan Land Use Diagram, with several exceptions. These exceptions are described below.

- West of Burbank Avenue and south of Hughes Avenue, land use designations would change from Low Density Residential and Medium Density Residential to Public/Institutional. These parcels are currently developed as Roseland Creek Elementary School and surrounded by residential uses. The surrounding residential areas will retain their low, medium low and medium density residential designations.

- East of Burbank Avenue and south of Hughes Avenue, land use designations would change from Medium Density Residential and Retail/Medium Density Residential to Parks/Recreation and Medium-Low Residential. The parcels to be designated Parks/Recreation are largely undeveloped, with the exception of a few single-family residential units and associated outbuildings, and are part of the proposed Roseland Creek Community Park. The parcels to be designated Medium-Low Residential are surrounded by the same designation and are currently vacant or developed as residential.

- Along the north side of Hearn Avenue, west of Burbank Avenue, land use designations would change from Low Density Residential and Medium Density Residential to Medium-High Density Residential.

- Change of land use designation at Colgan Creek Park site from Medium Density Residential to Parks and Recreation.

- Change of land use designation along the south side of Hearn Avenue, just east of Southwest Community Park, from Medium and Medium Low Density Residential to Medium High Density Residential/Public Institutional.

- Change of land use designation on Dutton Meadow, across from Meadow View Elementary School, from Medium Density/Retail and Business Services to Medium Low Density Residential.

- Within the West Hearn Annexation area, the existing land use designation of Low Density Residential would be changed to Very Low Density Residential.

Proposed Circulation Plan

Roadway Network

The proposed roadway network is shown in **Figure 2.0-8,** and the roadway and corridor configurations included in the proposed Specific Plan are summarized in **Table 2.0-1**. Many of the planned circulation network changes are the result of community input received during development of the Specific Plan. Others reflect the results of past adopted plans including the Santa Rosa General Plan and the Sebastopol Road Urban Vision Plan. Several roadway and intersection modifications were identified as being necessary to accommodate traffic volumes at project and regional buildout (approximately year 2040).

TABLE 2.0-1
PROPOSED ROADWAY MODIFICATIONS AND CONFIGURATIONS

Roadway	Description	General Plan Consistency
Sebastopol Road	East of Burbank Avenue: Provide one travel lane in each direction plus center turn lane or median consistent with the Sebastopol Road Urban Vision Plan	General Plan indicates two lanes in each direction; Specific Plan maintains regional/arterial classification but represents decrease in planned capacity
	West of Burbank Avenue: Maintain two lanes in each direction plus center turn lane or median consistent with the Sebastopol Road Urban Vision Plan	Consistent with General Plan and Sebastopol Road Urban Vision Plan
New east–west road between SR 12 and Sebastopol Road	Create two-lane local street north of Joe Rodota Trail between Hampton Way and West Avenue, extending southward to Sebastopol Road just west of Hampton Way and at West Avenue	Consistent with General Plan and Sebastopol Road Urban Vision Plan
Roberts Avenue	Maintain current limits of street on either side of SR 12	Change from General Plan, which shows street extension and connection under SR 12
Corby Avenue from Baker Avenue to Hearn Avenue	Maintain two-lane street configuration and redesignate as a transitional/collector (reclassification also includes the short segments of Boyd Street and Earle Street identified as arterials in the GP)	General Plan indicates four-lane arterial; Specific Plan changes classification to transitional/collector and decreases planned capacity
Campbell Drive extension	Extend Campbell Drive eastward from Stony Point Road to Burbank Avenue, including a new bridge over Roseland Creek, and designate as a two-lane transitional/collector	Segment from Stony Point Road to Trombetta Street is consistent; segment from Trombetta Street to Burbank Avenue is not identified in General Plan; bridge is not shown in the Citywide Creek Master Plan
Northpoint Parkway	Extend Northpoint Parkway eastward as a new regional/arterial street with one travel lane in each direction plus center turn lane or median from Stony Point Road to Burbank Avenue, including a new bridge over Roseland Creek	Road extension is consistent; General Plan indicates a four-lane regional/arterial; Specific Plan maintains classification but represents decrease in planned capacity
Hearn Avenue	Widen to two lanes in each direction plus center turn lane from just west of Dutton to the east side of the SMART railroad crossing	Consistent with General Plan roadway network and lane assumptions

Roadway	Description	General Plan Consistency
	Once the Northpoint Parkway extension is in place, on the section of Hearn Avenue between Burbank Avenue and Stony Point Road, retain existing one lane in each direction plus center turn lane, but reclassify this segment as a transitional/collector street	Classification changed from regional/arterial to transitional/collector
Stony Point Road	Widen to two lanes in each direction plus center turn lane or median from Sebastopol Road to West Hearn Avenue (under construction)	Consistent with General Plan roadway network and lane assumptions
	Widen to two lanes in each direction plus center turn lane or median from West Hearn to Bellevue (only needed at buildout)	Consistent with General Plan roadway network and lane assumptions
Bellevue Avenue	Realign western end of corridor to align with Ludwig Avenue	Consistent with General Plan roadway network diagram
	Provide one travel lane in each direction plus center turn lane or median from Stony Point Road to US 101 and maintain regional/arterial classification	General Plan indicates a four-lane regional/arterial; Specific Plan maintains classification but represents decrease in planned capacity
Dutton Avenue extension	Provide one travel lane in each direction plus center turn lane or median from Hearn Avenue to new bridge over Colgan Creek, maintaining regional/arterial classification	Extension is consistent; General Plan indicates four-lane regional/arterial; Specific Plan maintains classification but represents decrease in planned capacity
Dutton Meadow southern extension to Dutton	Provide one travel lane in each direction plus center turn lane or median, maintaining regional/arterial designation	Extension and classification are consistent; General Plan does not specify number of lanes
Dutton Meadow northern extension to Dutton	Provide one travel lane in each direction plus center turn lane or median, maintaining transitional/collector designation (aka "Northern New Street")	Extension and classification are consistent; GP does not specify number of lanes
Old Stony Point Road	Change designation from transitional/collector to local	Roadway classification differs from what is shown on the General Plan roadway network diagram
Corby Avenue Extension	Change designation from local to transitional/collector	Roadway classification differs from what is shown on the General Plan roadway network diagram
Local street extensions identified in General Plan	Extend Leo Drive to Burbank Avenue; extend Westland Drive toward Roseland Creek; connect segments of Trombetta Street; connect segments of Barndance Lane; extend Liscum Street to Barndance Lane; extend Liscum Street to Bellevue Avenue	Consistent with General Plan roadway network diagram; all classification remain as local streets
Local street extensions by approved projects	Extend Liana Drive westward to Burbank Avenue; extend Leo Drive eastward to SMART and connect to Vanderford Drive; create grid network of streets between Dutton Meadow and Rain Dance Way-Burgess Drive (These streets are identified here only for clarity; they are already approved and are not considered Specific Plan improvements.)	General Plan is non-specific with respect to these local street extensions and modifications; roadways reflect local streets proposed by approved development projects

Roadway	Description	General Plan Consistency
Specific Plan new local street extensions	Create new east–west street connecting Burbank Avenue to the north end of Westland Drive extension; extend Liscum Street from Barndance Lane to West Hearn Avenue; extend Tuxhorn Drive to Dutton Avenue	Not identified in the General Plan roadway network diagram

Source: W-Trans 2016

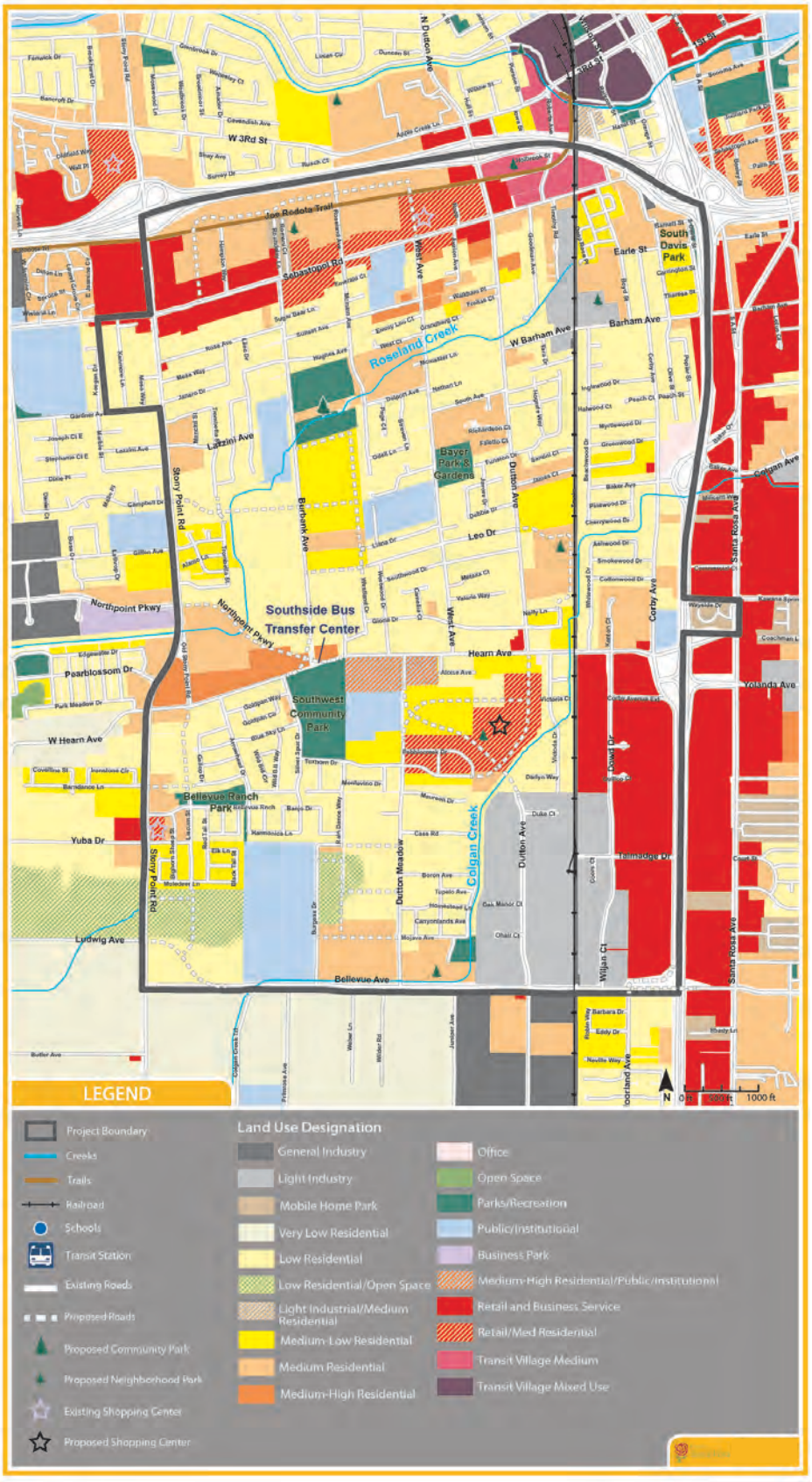
Notes: GP = General Plan

For new and improved streets throughout the project area, adopted City standards in place at the time of preparation of construction documents would be applied. As of the preparation of this Draft EIR, the applicable standards are outlined in the City of Santa Rosa Street Design and Construction Standards, adopted January 13, 2004. The City's standards specify roadway cross-section criteria such as the widths of travel lanes, medians, landscape buffers, bicycle lanes, on-street parking, and sidewalks. The City would make the determination of appropriate street standards, including any modifications necessary to suit existing physical constraints.

One exception to application of these standards is Burbank Avenue, for which the Specific Plan establishes a separate set of criteria including single 10-foot-wide vehicular travel lanes in each direction, 6-foot-wide bicycle lanes, and no on-street parking. On the segment north of Roseland Creek, a landscape buffer would be provided as allowed within the existing right-of-way, while south of Roseland Creek vegetated swales would be established between the roadway and sidewalks. The proposed Burbank Avenue street designs are shown on **Figure 2.0-9**.

Table 2.0-2 summarizes the intersection modifications associated with the above roadway modifications and identified as being needed to support buildout of the project area.

T:_CSWork\Santa Rosa, City ofRoseland Area Specific Plan\Figures



Source: W-Trans

FIGURE 2.0-7
Proposed Land Use Plan

Michael Baker INTERNATIONAL

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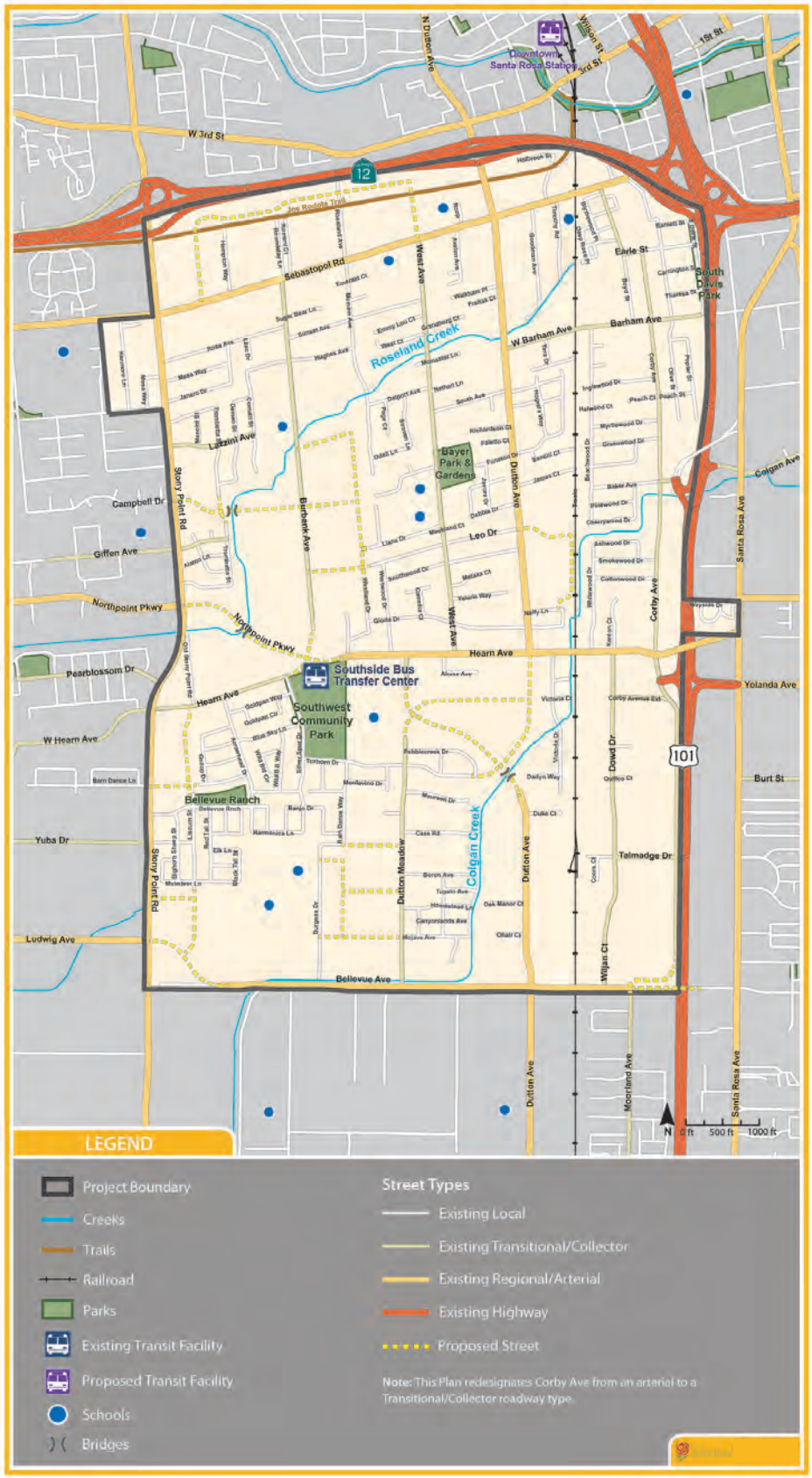

Source: W-Trans

FIGURE 2.0-8
Specific Plan Roadway Network

Michael Baker INTERNATIONAL

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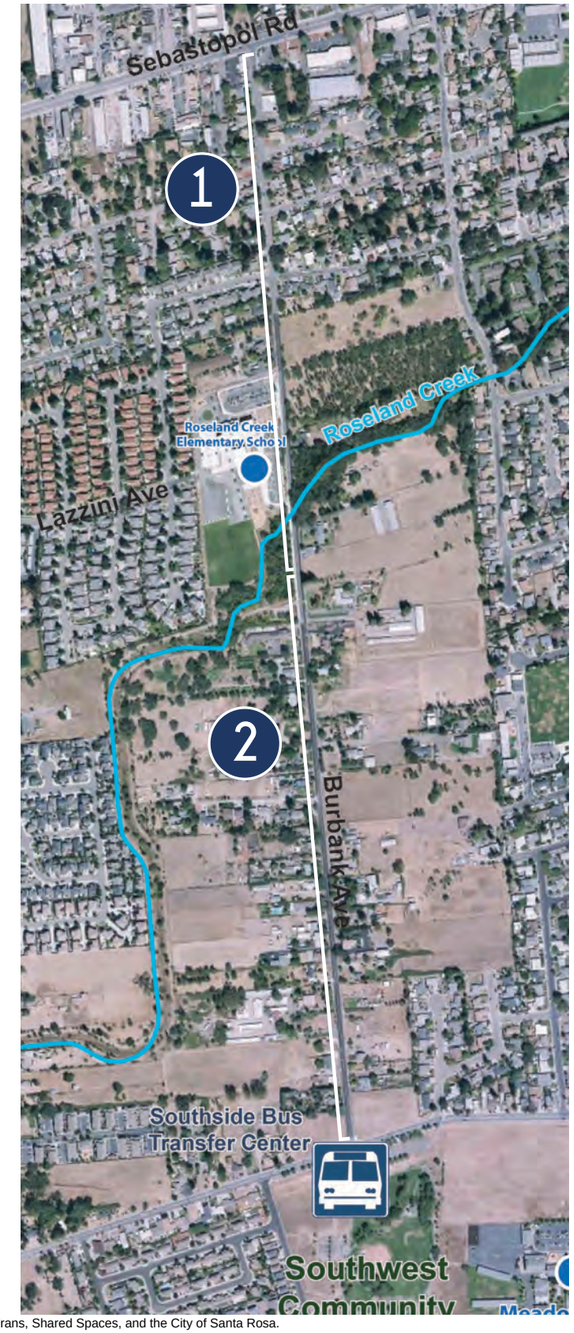
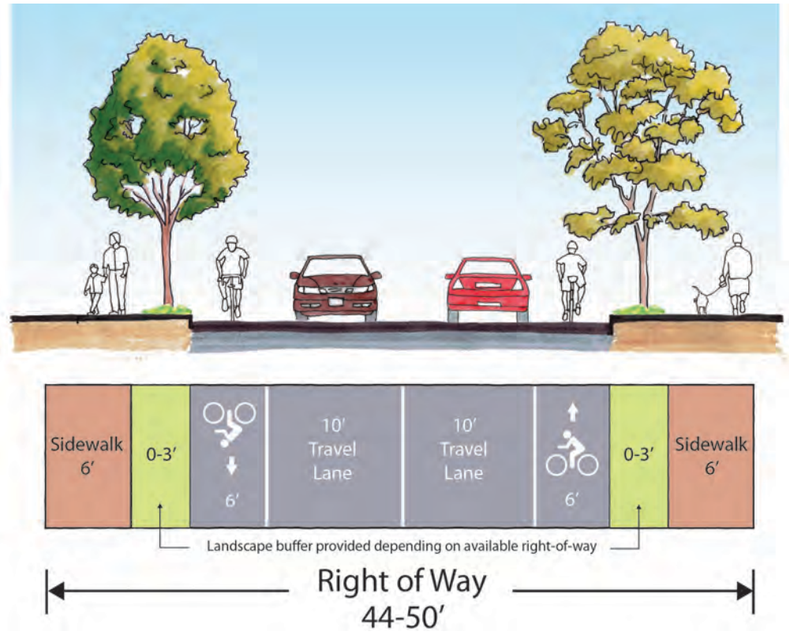


1 STREET DESIGN NORTH OF ROSELAND CREEK

44-50' Right-of-Way (44-50' Right-of-way available)

DISEÑO DE LA CALLE AL NORTE DE ROSELAND CREEK

Derecho-de-paso de 44-50' (derecho-de-paso de 44-50' disponible)



2 STREET DESIGN SOUTH OF ROSELAND CREEK

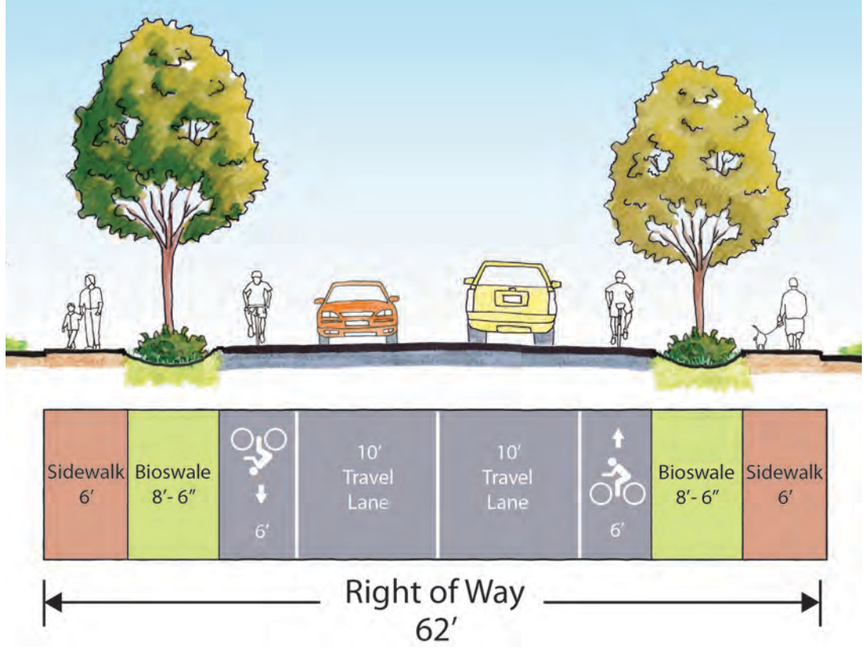
62' Right-of-Way (42–46' right-of-way available; requires easement and/or acquisition of private land)

DISEÑO DE LA CALLE AL SUR DE ROSELAND CREEK

Derecho-de-paso de 62' (derecho-de-paso de 42-46' disponible; (requiere servidumbres y/o adquisición de tierras privadas)

From the unadopted Burbank Ave Scenic Roadway Guidelines

De las aun no adoptadas Directrices de la Calzada Escénica de la Avenida Burbank



Source: W-Trans, Shared Spaces, and the City of Santa Rosa.

Not To Scale

FIGURE 2.0-9
Proposed Burbank Avenue Street Designs

Michael Baker INTERNATIONAL

TABLE 2.0-2
SPECIFIC PLAN INTERSECTION IMPROVEMENTS

Intersection	Improvement
Stony Point Road/SR 12 Eastbound Ramps/Joe Rodota Trail	Eliminate free (uncontrolled) northbound right turn and bring it under signal operation; add second southbound left turn lane from Stony Point Road onto the eastbound freeway ramp (requires no further widening)
Dutton Avenue/SR 12 Westbound Ramps	Lengthen westbound right turn pocket from 350 feet to 550 feet (only needed at buildout)
Sebastopol Road/Burbank Avenue	Modify to create three-lane section on east leg consistent with Vision Plan: eliminate outer westbound through lane and convert eastbound lanes from left turn, through, through/right turn (L-T-R) to left turn, through/right turn (L-TR)
Sebastopol Road/Roseland-McMinn	Signalize, eliminate eastbound and westbound right turn lanes
Sebastopol Road/Olive Street	Signalize, permitted phasing with west and north legs running as a through street (only needed at buildout)
Corby Avenue/Baker Avenue	Signalize; add northbound right turn pocket and southbound left turn pocket; coordinate with adjacent signal at Baker/US 101 southbound ramps
Baker Avenue/US 101 Southbound Ramps	Coordinate with new signal at Corby Avenue/Baker Avenue
Dutton Avenue/Barham Avenue	Signalize when warranted if desired by surrounding neighborhood
Stony Point Road/Northpoint Parkway	Add westbound Northpoint Parkway leg with left turn, through, and right turn (L-T-R) lanes
	Add southbound left turn lane
	Add left turn pocket in median on eastbound approach and convert lanes to left turn, through, right turn (L-T-R)
	Add second left turn lane eastbound (only needed at buildout)
Hearn Avenue-Northpoint Parkway/Burbank Avenue	Signalize; northbound create left turn, through, right turn (L-T-R) lanes; on remaining approaches, create left turn and through/right turn (L-TR) lanes
Hearn Avenue/Dutton Meadow	Add eastbound right turn lane
Hearn Avenue/Dutton Avenue	Create left turn and through/right turn (L-TR) lanes southbound; left turn, through, right turn (L-T-R) lanes northbound; left turn, through, through/right turn (L-TR) lanes eastbound with second eastbound through lane beginning just upstream of intersection
Stony Point Road/W Hearn Avenue	Change northbound from left turn, through, right turn (L-T-R) to left turn, through, through/right-turn (L-T-TR) with the widening of Stony Point Road to five-lane section
Stony Point Road/Ludwig Avenue-Bellevue Avenue Realigned Intersection	Create left turn, through, and right turn (L-T-R) lanes eastbound and westbound; left turn and through/right turn (L-TR) in near term and left turn, through, and through/right turn (L-T-TR) with widening of Stony Point Road to a five-lane section in the future

Intersection	Improvement
Bellevue Avenue/Dutton Meadow	Lengthen southbound right turn lane including bridge modification/widening (including bike lanes and sidewalks); add westbound right turn lane, add eastbound left turn lane in median
Bellevue Avenue/Dutton Avenue	Signalize; add left turn pockets on all four approaches; add westbound right turn lane
Bellevue Avenue/Corby Avenue	Signalize (only in future with construction of Bellevue overcrossing of US 101)

Source: W-Trans 2016

Notes: GP = General Plan

Bicycle and Pedestrian Network

All existing and planned bicycle facilities identified in the City's Bicycle and Pedestrian Master Plan, and the Citywide Creek Master Plan, would be maintained in the Specific Plan, and several new and/or upgraded facilities would be added. The existing and planned bicycle facilities are shown in **Figure 2.0-10**. The planned pedestrian and bicycle network modifications are summarized in **Table 2.0-3**.

T:_CSWork\Santa Rosa, City ofRoseland Area Specific Plan\Figures

Source: W-Trans

FIGURE 2.0-10
Specific Plan Bicycle Network

Michael Baker INTERNATIONAL

TABLE 2.0-3
PROPOSED PLAN BICYCLE AND PEDESTRIAN NETWORK

Facility	Description	
City of Santa Rosa Bicycle and Pedestrian Master Plan Paths (Class I)	Maintain or establish the following pathway facilities: • Joe Rodota Trail • SMART multi-use pathway (MUP) • Roseland Creek path from Stony Point Road to McMinn Avenue • Colgan Creek path along Bellevue Avenue from Burgess Drive, extending east and then north to Dutton Avenue extension	
City of Santa Rosa Bicycle and Pedestrian Master Plan Bike Lanes (Class II)	Maintain or establish the following bike lane facilities:	
	• Sebastopol Road • Stony Point Road • Olive Street (north of Sebastopol Road) • Burbank Avenue • West Avenue	• Dutton Avenue (and extensions) • Dutton Meadow (and extensions) • Northpoint Parkway • Hearn Avenue • Bellevue Avenue
City of Santa Rosa Bicycle and Pedestrian Master Plan Bike Routes (Class III)	Maintain or establish the following bike route facilities: • Corby Avenue/Dowd Drive north–south route (includes portions of Olive Street and Corby Avenue extension) • Earle Street between Olive Street and US 101 pedestrian/bicycle overcrossing • East–west route including Lazzini Avenue, Comalli Street, Hughes Avenue, McMinn Avenue, Delport Avenue, and South Avenue	
New Paths (Class I) designated by Specific Plan	Establish the following newly identified pathway facilities: • Create a new path along the north side of Bellevue Avenue between the Colgan Creek path and Stony Point Road • Colgan Creek Path north extension: extend from new Dutton Avenue bridge over creek to Hearn Avenue along Dutton Avenue extension • Connect Beachwood Drive to SMART multi-use path through an existing maintenance access (consistent with the Santa Rosa Citywide Creek Master Plan) • Establish an off-street pathway along the east side of Rain Dance Way, and extend southward from Rain Dance Way to the Colgan Creek path • Adjust path alignments in Southwest Community Park to create a seamless pedestrian-bicycle connection between Hearn Avenue and the new Rain Dance Way path • Create path through Bellevue Ranch Park to link adjacent planned bike routes	
New Bike Lanes (Class II) designated by Specific Plan	Establish the following newly identified bike lane facilities: • West Avenue from Sebastopol Road to Joe Rodota Trail • Barham Avenue between Dutton Avenue and Olive Street (represents an upgrade from previously planned bike route)	
New Bike Routes (Class III) designated by Specific Plan	Establish the following newly identified bike routes: • Roseland Avenue between Sebastopol Road and the Joe Rodota Trail • Entire length of Leo Drive and its extension to Burbank Avenue • New north–south route designated on Old Stony Point Road and Liscum Street (including future Liscum Street extensions to Bellevue Avenue) • Burgess Drive including easterly extension to Dutton Meadow • New east–west route designated on Barndance Lane, Blacksmith Way, Lone Star Court, and Tuxhorn Drive (integrates with planned path connections)	

Source: W-Trans 2016

ANNEXATIONS

The Sonoma Local Agency Formation Commission's (2014) adopted Policies, Procedures and Guidelines include policies specific to annexations in southwestern Santa Rosa. Consistent with these policies, the project includes annexation of all existing unincorporated islands in southwestern Santa Rosa. An unincorporated island is defined as an area of unincorporated land that is substantially surrounded by city land. There are five such areas in southwestern Santa Rosa, two located in the Specific Plan area and three located outside the plan area. These areas encompass 1,614 parcels and approximately 714 acres (see **Table 2.0-4** and **Figure 2.0-2**).

TABLE 2.0-4
SUMMARY OF PROPOSED ANNEXATIONS

Annexation Area	Location	Acres	Parcels
Inside Specific Plan Area			
Roseland	Northern portion of plan area	621.1	1,417
Victoria Drive	Southeastern portion of plan area	19.4	47
	Inside Plan Area Subtotal	640.5	1,464
Outside Specific Plan Area			
West Third Street	North of plan area	22.7	80
Brittain Lane	West of plan area	17	21
West Hearn Avenue	West of plan area	33.8	49
	Outside Plan Area Subtotal	73.5	150
	Total	**714**	**1,614**

DEVELOPMENT POTENTIAL OF PROPOSED PROJECT

Many of the parcels in the project area have been developed and are assumed to remain unchanged with project implementation.

In the plan area, it is assumed that the currently vacant parcels would be developed in the future consistent with the proposed Specific Plan land use diagram. In the Annexation areas, vacant parcels are assumed to be developed in the future consistent with the existing City of Santa Rosa General Plan land use designations, with the exception of West Hearn Avenue, which is proposed to be redesignated to Very Low Density Residential as part of the project.

Tables 2.0-5 and **2.0-6** summarize the average "mid-range" development potential in the project area that could result with implementation of the proposed project.

TABLE 2.0-5
DEVELOPMENT POTENTIAL OF PROPOSED PROJECT COMPARED TO EXISTING CONDITIONS

	Residential (units)			Nonresidential (square feet)			
	Single-Family	Multi-Family	Mobile Home	Office	Retail	Institutional	Industrial
Roseland Specific Plan Area							
Existing Condition	3,401	1,849	125	38,203	963,332	79,576	1,949,718
Specific Plan Buildout	5,759	3,093	125	41,300	1,497,898	99,576	2,270,732
Change in Development Potential Compared to Existing Conditions	2,358	1,244	0	3,097	534,566	20,000	321,014
Annexation Areas							
Existing Condition	140	18	1	0	6,090	0	47,719
Project Buildout	207	40	1	0	9,292	0	47,719
Change in Development Potential Compared to Existing Conditions	67	22	0	0	3,202	0	0
Total Development Potential	**2,425**	**1,266**	**0**	**3,097**	**537,768**	**20,000**	**321,014**

TABLE 2.0-6
DEVELOPMENT POTENTIAL OF PROPOSED PROJECT COMPARED TO EXISTING GENERAL PLAN LAND USE DESIGNATIONS

	Residential (units)			Nonresidential (square feet)			
	Single-Family	Multi-Family	Mobile Home	Office	Retail	Institutional	Industrial
Roseland Specific Plan Area							
General Plan Buildout	6,014	2,719	125	41,300	1,601,589	79,576	2,270,732
Specific Plan Buildout	5,759	3,093	125	41,300	1,497,898	99,576	2,270,732
Change in Development Potential Compared to General Plan	-255	374	0	0	-103,691	20,000	0
Annexation Areas							
General Plan Buildout	229	40	1	0	9,292	0	47,719
Project Buildout	207	40	1	0	9,292	0	47,719
Change in Development Potential Compared to General Plan	-22[1]	0	0	0	0	0	0
Total Development Potential	**-277**	**374**	**0**	**0**	**-103,691**	**20,000**	**0**

Note: 1. Assumes General Plan Amendment changing land use designation for certain parcels from Low Density Residential (LDR) to Very Low Density Residential (VLDR)

INFRASTRUCTURE IMPROVEMENTS

A Draft Infrastructure Report has been prepared for the project area to identify existing infrastructure and determine necessary improvements to accommodate anticipated development in the project area within the planning horizon of the proposed project. This report is provided as **Appendix 2.0** of this Draft EIR.

Water

Development of the project area was already considered in terms of generating demand for potable water in the City's General Plan, 2010 Urban Water Management Plan, and 2014 Water Master Plan Update and the proposed project's water demand would be less than that projected in the City's 2014 Water Master Plan Update. According to the Draft Infrastructure Report, a series of water pipe replacements are recommended based on the age of existing infrastructure. However, the report concluded that the net water demand anticipated from project implementation would be lower than that anticipated under the General Plan 2035 and that no additional system improvements would be required to serve the project (Michael Baker International 2016).

Wastewater

Development of the project area was already considered in terms of generating wastewater in the City's General Plan 2035 and 2014 Sanitary Sewer System Master Plan Update. Further, according to the Draft Infrastructure Report, a series of wastewater pipe replacements are recommended based on the age of existing infrastructure. However, modeling of future wastewater flows indicated that no upsizing or other improvements would be required to accommodate the proposed project (Michael Baker International 2016).

Storm Drainage

According to the Draft Infrastructure Report, no upgrades to the existing storm drain lines in the project area would be required to accommodate the proposed project (Michael Baker International 2016).

2.5 REGULATORY REQUIREMENTS, PERMITS, AND APPROVALS

Potential permits and approvals required by the City of Santa Rosa include:

- Certification of the Environmental Impact Report and adoption of a Mitigation Monitoring and Reporting Program
- Approval of the Specific Plan
- Rezoning and Pre-Zoning
- General Plan Amendments
- Bicycle and Pedestrian Master Plan Amendments

The EIR will be used to support subsequent actions, including but not necessarily limited to:

- Approval of annexations by the Sonoma Local Agency Formation Commission (LAFCO)

REFERENCES

Michael Baker International. 2016. *Draft Infrastructure Report for City of Santa Rosa*.

W-Trans. 2016. *Traffic Impact Study for the Roseland Area/Sebastopol Road Specific Plan and Annexation.*

3.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

The following is an introduction to the environmental analysis for the proposed project, including a discussion of general assumptions used in the environmental analysis and a discussion regarding the cumulative analysis. The reader is referred to the individual technical sections of this Draft EIR (Sections 3.1 through 3.15) for further information on the specific assumptions and methodologies used in the analysis for each particular technical subject.

ANALYSIS ASSUMPTIONS USED TO EVALUATE THE IMPACTS OF THE PROJECT

BASELINE ENVIRONMENTAL CONDITIONS ASSUMED IN THE DRAFT EIR

Section 15125(a) of the California Environmental Quality Act (CEQA) Guidelines requires that an EIR include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the Notice of Preparation (NOP) is published. The CEQA Guidelines also specify that this description of the physical environmental conditions will normally serve as the baseline physical conditions by which a lead agency determines whether impacts of a project are considered significant. The NOP for the proposed project EIR was published on January 15, 2016. Consistent with CEQA Guidelines Section 15125, each technical section of this EIR (Sections 3.1 through 3.15) contains a description of the physical setting at the time of the NOP. For most issue areas, impacts associated with implementation of the proposed project are measured against the existing conditions at the time the NOP was published.

As discussed in Chapter 2.0, Project Description, the proposed project does not propose specific development projects but proposes land use designations that are, in most cases, the same as those included for the project area in the City's General Plan (General Plan 2035). Thus, development of the project area as currently proposed was largely evaluated in the Santa Rosa General Plan 2035 EIR. Although the impacts associated with implementation of the proposed project are measured against the existing conditions at the time the NOP was published, where appropriate, impacts resulting from implementation of the proposed project under buildout of General Plan 2035 are also disclosed for comparison.

General Plan Policy LUL-A-3 requires development in unincorporated areas within the Santa Rosa Urban Growth Boundary (UGB) to be built to City of Santa Rosa standards to ensure consistency upon annexation. In addition, Santa Rosa City Council Policy Number 300-02, Utility Certificates for the Extension of Water or Sewer Service to Unincorporated Areas, stipulates that unincorporated parcels within the City's planning boundary must be consistent with the City's General Plan in order to receive utility services from the City (i.e., water and sewer service). Much of the unincorporated portions of the project area is currently provided such services by the City. Thus, when describing and/or analyzing future conditions, the Draft EIR assumes that these areas have been developed consistent with the Santa Rosa General Plan.

DEVELOPMENT ASSUMPTIONS FOR EIR ANALYSIS

The Specific Plan includes a range of densities and/or development intensity for each proposed land use designation. The Specific Plan assumes a future development based on a calculated average "mid-range" capacity, and the analysis in this Draft EIR is based on that capacity. The calculated average reflects historic and recent development patterns in Santa Rosa for similar land use categories. The buildout assumptions for residential density are consistent with those used for the General Plan 2035 update (Michael Baker International 2015). The specific development assumptions for the specific plan and annexations areas compared to existing conditions and existing General Plan designations, respectively, are listed in Table 2.0-5 and Table 2.0-6 in Section 2.0, Project Description.

A mixed-use development project, referred to as the Roseland Village Neighborhood Center Project, is being planned north of Sebastopol Road at the proposed West Avenue extension. However, the project is in the early stages of planning and an application for the project has not been submitted to the City or the County, as of April 2016. The conceptual plan includes 100 affordable apartments, 100 market-rate apartments, 40,000 square feet of commercial uses including retail, a child-care center, and a library, and a 1-acre public plaza. This project would be consistent with the proposed Roseland Area/Sebastopol Road Specific Plan land use plan. Because an application for this project has not been submitted, the project is not analyzed in this EIR.

STRUCTURE OF THE ENVIRONMENTAL IMPACT ANALYSIS

Sections 3.1 through 3.15 of this Draft EIR contain an evaluation of the direct and indirect environmental effects resulting from the implementation of the proposed project. These Sections describe feasible mitigation measures and identify whether significant environmental effects of the project would remain after application of the feasible mitigation measures. The individual technical sections of the Draft EIR include the following information:

Existing Setting

This subsection includes a description of the physical setting associated with the technical area of discussion, consistent with CEQA Guidelines Section 15125. The setting includes a description of local conditions and regional conditions. Environmental resources that are rare or unique to the region also are identified, where appropriate to the analysis.

Regulatory Framework

This subsection identifies applicable federal, state, regional, and local plans, policies, laws, and regulations that apply to the technical area of discussion.

The City's General Plan serves as the overall guiding policy document for Santa Rosa. The entire project area, including unincorporated areas, was included in the General Plan planning area, and buildout of the project area in accordance with General Plan 2035 was evaluated in the associated EIR. The proposed project would be generally consistent with the General Plan 2035 with a few exceptions, which are described in Section 2.0, Project Description. While the proposed project would include a General Plan amendment to ensure consistency with the City's General Plan in these areas of change, the City of Santa Rosa City Council will make the ultimate determination of the project's consistency with the General Plan.

Impacts and Mitigation Measures

This subsection identifies direct and indirect environmental effects associated with implementation of the proposed project. Standards of significance are identified and used to determine whether the environmental effects are considered "significant" and require the application of mitigation measures. Each environmental impact is identified numerically (e.g., Impact 3.10.1 – Divide an Established Community), and the associated analysis is supported by substantial evidence.

The proposed project consists of two components: the Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation, which is collectively referred to as the proposed project. The impact analysis evaluates the combined effects of both components, which comprise the "whole of an action" in accordance with CEQA Guidelines Section 153778(a) pertaining to the definition of a project.

For most resource topics, there is no difference in impacts between the two components. In that case, the analysis and impact conclusions apply to both the specific plan and annexation. If an impact would occur for the specific plan but not for the annexation areas or vice versa, those impacts are specifically noted.

This Draft EIR uses the following terminology to describe environmental effects of the proposed project:

- *Standards of Significance:* A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this EIR include the CEQA Guidelines; factual or scientific information; regulatory performance standards of local, state, and federal agencies; and City goals, objectives, and policies.

- *No Impact:* This is an impact for which there is clearly no environmental effect. There would be no difference in the environment between the existing condition and conditions with the project.

- *Less Than Significant Impact:* A less than significant impact would cause no substantial change in the environment. No mitigation is required.

- *Significant Impact (or Potentially Significant Impact):* A significant impact would cause, or would potentially cause, a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects using specified standards of significance. Mitigation measures and/or project alternatives are identified to reduce project effects to the environment.

- *Significant and Unavoidable Impact:* A significant and unavoidable impact would result in a substantial change in the environment that cannot be avoided or mitigated to a less than significant level if the project is implemented.

- *Cumulatively Significant Impact:* A cumulatively significant impact would result in a new substantial change in the environment from effects of the project when evaluated in the context of reasonably foreseeable development in the surrounding area.

Mitigation measures for the proposed project were developed through a review of the environmental effects of the project by consultants with technical expertise, as well as by environmental professionals. In some cases, the mitigation measures identified consist of "performance standards" that identify clear requirements that would avoid or minimize significant environmental effects (the use of performance standard mitigation is allowed under CEQA Guidelines Section 15126.4(a) and is supported by case law *Rio Vista Farm Bureau Center v. City of Solano* ([1st Dist. 1992] 5 Cal. App. 4th at pp. 371, 375–376 [7 Cal. Rptr. 2d 307]).

INCORPORATION BY REFERENCE

This Draft EIR uses technical information and analyses from previously prepared EIRs that are relevant to the consideration of environmental effects of the proposed project, as provided by CEQA Guidelines Section 15150 [Incorporation by Reference]). The following EIR has been utilized in this Draft EIR:

- Santa Rosa General Plan 2035 Environmental Impact Report. State Clearinghouse Number 2008092114. Certified November 2009.

By utilizing provisions of the CEQA Guidelines, the City, in preparing this Draft EIR, has been able to make maximum feasible and appropriate use of the technical information in the above-referenced EIR. This EIR and other referenced materials are available for review upon request at the City of Santa Rosa Planning and Economic Development Department, 100 Santa Rosa Avenue, Room 3, Santa Rosa, California, and are also available on the City's website at www.srcity.org/roseland.

APPROACH TO THE CUMULATIVE IMPACT ANALYSIS

Definition of Cumulative Setting

CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's incremental effect is considered cumulatively considerable. The project area was included in the Santa Rosa General Plan 2035 planning area, and its development was considered in the cumulative context of the General Plan 2035 EIR. Thus, this document generally uses the same cumulative context as the General Plan (i.e., the City of Santa Rosa and its UGB). However, the cumulative setting varies for each environmental issue area, depending on the resources affected and any relevant boundaries, such as the San Francisco Bay Area Air Basin (SFBAAB) for air quality resources or the service area of the Laguna wastewater treatment plant for sewer services. Each technical section of the Draft EIR (Sections 3.1 through 3.15) includes a description of the geographic extent of the cumulative setting for that resource based on the characteristics of the environmental issues under consideration as set forth in CEQA Guidelines Section 15130(b).

Consideration of Cumulative Impacts

Each technical section in the Draft EIR considers whether the project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). The determination of the project's impact on cumulative conditions is based on applicable public agency standards, consultation with public agencies, and/or expert opinion. Each technical section of the EIR provides a summary of the cumulative impacts associated with development of the project for that topic area.

EFFECTS FOUND NOT TO BE SIGNIFICANT

CEQA Guidelines Section 15128 requires an EIR to briefly describe any possible significant effects that were determined not to be significant and were therefore not discussed in detail in the EIR. For purposes of this Draft EIR, the following topic was eliminated from further evaluation in the scoping phase of the environmental analysis:

- Mineral Resources: The Santa Rosa General Plan designates land in the city on which known deposits of commercially viable mineral or aggregate deposits exist. None of the parcels in the project area are designated as such, and there are no active mineral resource extraction operations in the project area. Therefore, it was determined that the proposed project would have no potential to result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. This topic is not addressed further in the EIR.

CHANGES TO THE PROJECT SINCE CIRCULATION OF THE NOTICE OF PREPARATION

The City has been conducting workshops where the community was encouraged to share their views and develop a shared vision and plan for the Specific Plan and Annexation Areas. As the environmental process had begun, the City continued to engage the public regarding the Specific Plan and Annexation Areas. At the time the Notice of Preparation for the EIR for the project was circulated, the Specific Plan contemplated a change to the land use of five parcels located on the south side of Hearn Avenue, west of Victoria Drive, from the existing designations of Medium Low Residential and Office to a mixed-use designation of Medium Density Residential/Retail and Business Services. However, based on community input, the City amended the land use plan to retain the existing Santa Rosa General Plan land use designations. The change would result in approximately two fewer single-family residential units, nine fewer multi-family residential units, and 31,935 fewer square feet of retail use in the project area than originally anticipated at the time of the NOP.

Because the technical studies used to determine impacts for the Draft EIR had been completed when this change was made, the technical sections in the Draft EIR reflect the more intense use previously assumed. However, Chapter 2.0, Project Description, was revised to reflect the change back to the existing General Plan designation. Because the existing designation is less intense than that previously contemplated in the Specific Plan, the physical impacts of the project are less than disclosed in the technical sections. For instance, the land use designations currently proposed for this site would generate 1,492 fewer automobile trips on a daily basis at buildout compared to the original use assumed for the site. This equates to 37 fewer a.m. peak-hour trips and 95 fewer p.m. peak-hour trips on area roads. There would be proportional reductions in impacts associated with traffic-related air quality and greenhouse gas emissions as well as traffic-generated noise. Similarly, reductions in residential units and retail space would bring about reductions in demand for services and utilities. Because the EIR overstates the potential impacts of the proposed project related to this change, there would be no additional impacts beyond those identified and no changes are required.

REFERENCES

Michael Baker International. 2015. Memorandum from Jeanine Cavalli to Jessica Jones, City of Santa Rosa RE: Land Use Assumptions and Build-Out Scenario.

W-Trans. 2016. Memorandum from Zack Matley to Patrick Hindmarsh and Jeanine Cavalli of Michael Baker International RE: SRRASP Traffic Analysis Implications of Retaining Current General Plan Designations on Five Parcels.

3.1 Aesthetics

This section describes the visual conditions and resources of the project area, summarizes existing landscape characteristics, and discusses the impacts associated with implementation of the proposed project.

3.1.1 EXISTING SETTING

REGIONAL SETTING

Santa Rosa's downtown area serves as the city's primary activity node and comprises primarily mixed office and retail uses. The city's residential neighborhoods are diverse, ranging from the traditional—such as the Junior College, Burbank Gardens, and West End—with grid street patterns and moderately high densities to low-density hillside neighborhoods such as Chanate/Hidden Valley, Rincon Valley, and Fountaingrove.

Rural vistas on the edges of Santa Rosa contribute to the city's identity. Old farmhouses and ranches provide reminders of local agricultural history. Views of the Sonoma Mountain foothills in the eastern portion of the city are available from most parts of Santa Rosa.

SPECIFIC PLAN AREA

In the Specific Plan area, there are residential, commercial, office, and industrial uses. Residential neighborhoods are compact in development pattern. Most residential development in the plan area is well established and either low or medium density. Commercial and industrial uses have large building footprints and large open spaces between buildings.

Residential Development

Most residential development in the plan area was constructed between 1950 and 1990. Residential development that occurred between 1950 and 1970 was neighborhoods of single-family homes. The years between 1970 and 1990 were characterized mostly by higher-density, multi-family infill residential developments. **Figure 3.1-1** illustrates examples of existing residential development in the project area.

Commercial Development

Commercial space in the plan area consists of retail and business services. Prominent commercial development includes an auto mall with numerous dealerships located along Corby Avenue, which runs parallel to US Highway 101 (US 101) as well as strip retail along Sebastopol Road. Most buildings are one or two stories in height (under 35 feet). **Figure 3.1-2** illustrates examples of existing commercial space in the area.

Industrial and Office Development

Industrial uses in the plan area are concentrated along US 101 and the rail corridor, south of Hearn Avenue, with some additional industrial land located along the rail corridor between Sebastopol Road and Barham Avenue. Types of industrial uses include self-storage, goods distribution centers, manufacturing, wholesale suppliers, and auto repair and tire shops. Most buildings are one or two stories in height (under 35 feet) with some surrounded by fenced storage yards.

Office uses in the plan area are limited. The most prominent office building is a two-story building with large reflective glass windows located on Talmadge Drive behind the auto mall. The remainder of the office uses are generally characterized as older one-story buildings. **Figure 3.1-3** shows examples of industrial and office development.

Vacant Areas

A number of vacant properties are located throughout the plan area. The largest vacant areas (totaling nearly 200 acres) are located south of Hearn Avenue (see **Figure 3.10-1** in Section 3.10, Land Use and Planning). **Figure 3.1-4** shows examples of vacant areas in the Specific Plan area.

Scenic Views

Santa Rosa is framed by the Sonoma Mountain foothills that are prominently visible from many locations in the flatland areas of the city. While the City has not officially designated any scenic vistas, General Plan 2035 Policies UD-A-1 and UD-A-8 direct the City to protect views of natural hillsides and natural ridgelines such as Taylor Mountain and Bennett Mountain (Santa Rosa 2009a). **Figure 3.1-5** shows examples of views of the foothills from the area.

Scenic Roads and Local Roads

A scenic road is defined as a highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and human-made scenic resources. Scenic roads direct views to areas of exceptional beauty, natural resources, or landmarks or of historic or cultural interest.

The City's General Plan designates Burbank Avenue and State Route (SR) 12, from its interchange with US 101 west to Fulton Road, as scenic roads. US 101 throughout the city is designated as a scenic road. These roadways have unique scenic qualities because of their natural setting and/or historic and cultural features and are subject to General Plan policies intended to preserve and enhance the roads. Portions of the plan area are visible from US 101 and SR 12.

Local roads in the plan area include a wide variety of street types, from two-lane neighborhood roads to wide, multiple-lane arterials with bicycle lanes and sidewalks. **Figure 3.1-6** shows examples of some of the roadways in the Specific Plan area.

Lighting and Glare

Lighting and glare are commonly found throughout the plan area, due to the area's existing developed urban character. Existing sources of light include streetlights, parking lot lighting, storefront and signage lighting, vehicle headlights, residential porch lights, and interior lights from homes and buildings that spill over to the exterior of buildings through windows. Glare can also be created by reflection of sunlight and artificial light off windows and building surfaces.

FIGURE 3.1-1

Examples of Existing Residential Development within Project Area

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FIGURE 3.1-2

Examples of Existing Commercial Development within Project Area

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FIGURE 3.1-3

Examples of Existing Industrial and Office Development within Project Area

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FIGURE 3.1-4
Examples of Vacant Parcels within Project Area

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FIGURE 3.1-5
Examples of Rural Vistas from Project Area

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FIGURE 3.1-6
Examples of Roadways within Project Area

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ANNEXATION AREAS

The following describes the existing setting for the three annexation areas located outside of the Specific Plan boundaries.

West Third Street

The West Third Street Annexation area north of Third Street is primarily developed as a low-density, suburban residential neighborhood with few vacant lots. Close-range views are dominated by older single-family homes and duplexes, small yards with turf and trees, narrow roadways with unimproved shoulders, low fencing, and overhead utility lines. South of Third Street, the area is developed with primarily industrial uses including automotive and other repair shops, contractors and wholesale warehouses, and manufacturing. Several single-family homes also front Third Street. Close-range views in this area are dominated by single-story industrial buildings with roll-up garage doors and few windows, large paved parking areas, fenced and screened storage areas, overhead utility lines, and limited landscaping. Because of the flat terrain, long-range views are obscured by nearby buildings and trees. The West Third Street Annexation is not visible from US 101 but is adjacent to and visible from SR 12. Existing light sources include street lights, porch lights on residences, building-mounted parking lot and security lighting, vehicle headlights, and interior light emanating from doors and windows.

Brittain Lane

The Brittain Lane Annexation area is primarily developed as a low-density, rural residential neighborhood with scattered vacant parcels. Close-range views are dominated by older single-family homes, large yards with turf and trees, narrow roadways with unimproved shoulders, low fencing, and overhead utility lines. Long-range views are largely obscured by the abundant mature trees and vegetation present throughout the area. The Joe Rodota Trail and adjacent SR 12 corridor are partially visible to the north where existing vegetation is thin. The area is not visible from US 101. Existing light sources are limited to typical residential lighting including porch lights, vehicle headlights, and interior light emanating from doors and windows.

West Hearn Avenue

The West Hearn Avenue Annexation area is developed as a low-density, rural residential neighborhood with scattered vacant parcels. Close-range views are dominated by older single-family homes, large yards with turf and trees, narrow roadways with unimproved shoulders, low fencing, farm animals and associated accessory buildings and overhead utility lines. Long-range views are largely obscured by the abundant mature trees and vegetation present throughout the area. The area is not visible from US 101 or SR 12. Existing light sources are limited to typical residential lighting including porch lights, vehicle headlights, and interior light emanating from doors and windows.

3.1.2 REGULATORY FRAMEWORK

STATE

State Scenic Highway Systems

The California Department of Transportation (Caltrans) administers the California Scenic Highway Program. The program's goal is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the highways. US Highway 101 runs along the eastern portion of the Specific Plan area and State Route 12 is along the northern part, but neither is identified as a state scenic highway by the California Department of Transportation (Caltrans 2014).

Nighttime Sky – Title 24 Outdoor Lighting Standards

The California Energy Commission (CEC) Building Energy Efficiency Standards (Title 24 Parts 1 and 6) regulate outdoor lighting for both the public and private sectors. The standards regulate lighting characteristics, such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off, and are intended to improve the quality of outdoor lighting and help to reduce the impacts of light pollution, light trespass, and glare. Different lighting standards are set by classifying areas by lighting zone. The classifications are based on population figures of the 2010 Census, with ambient illumination defined as LZ1 (dark), LZ2 (low), or LZ3 (medium). The City of Santa Rosa, including the project area, is an urban area as defined by the 2010 Census and therefore the applicable classification is LZ3.

LOCAL

City of Santa Rosa General Plan

The Santa Rosa General Plan 2035 serves as the overall guiding policy document for the city. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project in regard to aesthetics.

Transportation Element

Goal T-G: Identify, preserve, and enhance scenic roads throughout Santa Rosa in both rural and developed areas.

Policy T-G-1: Develop protective standards for the scenic roads identified below so that they may be added to the Scenic Roads Overlay zone. Roads marked with an asterisk (*) should be paid special attention as they provide a transition between the rural countryside and the city's Urban Growth Boundary.

- Fountaingrove Parkway
- Bennett Valley Road (south of Farmers Lane)
- Farmers Lane Extension (planned south of Bennett Valley Road)*
- Montgomery Drive (from Mission Boulevard to Melita Road)
- Chanate Road (from Mendocino Avenue to Fountaingrove Parkway)

- Petaluma Hill Road (from Colgan Avenue to UGB)*
- Highway 12 (from Farmers Lane to Calistoga Road)
- Highway 12 (from Highway 101 west to Fulton Road)
- Highway 101 (contiguous from northern to southern city limit)
- Newanga Avenue
- Channel Drive
- Francisco Avenue*
- Wright Road South*
- Ludwig Avenue*
- Burbank Avenue

Policy T-G-5: Retain existing trees and vegetation along scenic roads, as possible. Enhance roadway appearance through landscaping, using native plant material.

Policy T-G-6: Provide large setbacks from scenic roads, as possible, to avoid encroachment of buildings on the view of the roadway.

Policy T-G-10: Ensure any signage along scenic roads does not detract from the area's scenic character.

Policy T-G-11: Underground utility lines along scenic roads.

Policy T-G-13: Plant graded areas to avoid erosion and maintain a pleasing appearance.

Policy T-G-14: Use of natural materials such as stone, brick, and wood is preferable to metal posts and rails for roadside appurtenances.

Policy T-G-15: Require that scenic road rights-of-way are wide enough to preserve natural vegetation. Provide appropriate construction setbacks to retain views along the corridor.

Urban Design Element

Goal UD-A: **Preserve and enhance Santa Rosa's scenic character, including its natural waterways, hillsides, and distinctive districts.**

Policy UD-A-1: Maintain view corridors to natural ridgelines and landmarks, such as Taylor Mountain and Bennett Mountain.

Policy UD-A-2: Strengthen and emphasize community focal points, visual landmarks, and features that contribute to the identity of Santa Rosa using design concepts and standards implemented through the Zoning Code, Design Guidelines, Preservation District Plans, Scenic Roads policies, the Downtown Station Area Specific Plan, and the Citywide Creek Master Plan.

Examples of landmarks and community focal points are Old Courthouse Square, DeTurk Round Barn, the Railroad Square water tower, St. Rose School, Hotel La Rose, Santa Rosa Creek, Luther Burbank Home and Gardens, and views to the hills.

Policy UD-A-3: Use changes in tree species, scale, color and spacing to define neighborhoods and to differentiate street types. Update the Master Street Tree Planting Plan to accomplish this.

Street trees should relate to scale, function, and visual importance of the street, as well as the character of the neighborhood or district in which they are located.

Policy UD-A-4: In new developments, minimize overall grading by limiting site grading to the minimum necessary for driveways, parking areas, and understructure areas.

Policy UD-A-5: Require superior site and architectural design of new development projects to improve visual quality in the city.

Policy UD-A-7: Continue the city's program of utility undergrounding.

Policy UD-A-10: Relate landscape design to the natural setting. Require that graded areas within new development be revegetated.

Goal UD-C: **Enhance and strengthen the visual quality of major entry routes into the city, as well as major corridors that link neighborhoods with downtown.**

Policy UD-C-4: Work with Caltrans to beautify Highway 101 and Highway 12. Encourage Caltrans to incorporate more landscaping, planting of trees, and soundwall mitigation into any improvements planned for these highways. Lessen the impact of new soundwalls through the use of vegetation.

Policy UD-C-6: Require that buildings, soundwalls, and other structures highly visible from Highway 101 or Highway 12 and adjoining neighborhoods be designed to enhance and improve scenic character.

Goal UD-D: **Avoid strip patterns of commercial development. Improve the appearance and functioning of existing commercial strip corridors, such as Santa Rosa Avenue and Sebastopol Road.**

Policy UD-D-2: Maintain a uniform setback of structures from the street. Require parking areas to be placed to the side or rear of structures, not in front.

Policy UD-D-5: Provide planting strips with large canopy trees between the road and sidewalk to buffer pedestrians from traffic, and help define the street space along commercial streets. Install pedestrian amenities in the planting strip such as:

- Street lighting;
- Seating;
- Bus stop shelters;
- Bicycle racks; and
- Mail boxes.

Goal UD-F: **Maintain and enhance the diverse character of Santa Rosa's neighborhoods. Promote the creation of neighborhoods—not subdivisions—in areas of new development.**

Policy UD-F-2: Protect natural topographic features such as hillsides, ridgelines and mature trees and stands of trees. Minimize grading of natural contours in new development.

Land Use and Livability Element

Goal LUL-K: **Protect industrial land supply and ensure compatibility between industrial development and surrounding neighborhoods.**

Policy LUL-K-1: Require industrial development adjacent to residential areas to provide buffers, and institute setback, landscaping, and screening requirements intended to minimize noise, light, and glare and other impacts.

Policy LUL-K-2: Require that outdoor storage areas be screened from any public right-of-way.

City of Santa Rosa Design Guidelines and Design Review

Santa Rosa's Design Guidelines and design review process ensure that new or remodeled development in the city will enhance the city's environment and blend into the style of the surrounding area. All nonresidential and multi-family developments are subject to design review. Projects are reviewed for site planning, circulation, architectural design, quality and type of materials, colors, and landscaping. The Zoning Administrator reviews minor projects, as defined by the Santa Rosa Zoning Code, and the Design Review Board reviews major projects, such as those that are proposing 10,000 square feet or more of new floor area and projects located in visually sensitive areas.

The City has adopted Design Guidelines to implement the Urban Design Element of the General Plan. The guidelines strive to achieve superior design in all developments. They incorporate such traditional development patterns as pedestrian-oriented residential neighborhoods organized around centers that include mixed uses and open space, interconnected street systems, housing variety, and mixed uses in the downtown.

3.1.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G standards. An aesthetics impact is considered significant if the project would:

1) Have a substantial adverse effect on a scenic vista.

2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

3) Substantially degrade the existing visual character or quality of the site and its surroundings.

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

METHODOLOGY

The following impact analysis is based on information provided in the Santa Rosa General Plan 2035 and its associated Environmental Impact Report; Chapter 2 of the proposed Specific Plan (Existing Conditions and Opportunities); and aerial and street view photography of the area, as well as site visits with associated photographs.

PROJECT IMPACTS AND MITIGATION MEASURES

Scenic Vistas (Standard of Significance 1)

Impact 3.1.1 The proposed project would result in development on previously undeveloped parcels in the project area that could block views of scenic vistas from surrounding properties. Compliance with existing City policies and Design Guidelines would protect scenic vistas and ensure this impact is **less than significant**.

Scenic views and vistas, including long-range views of the Sonoma Mountain foothills and the foothills to the west of Santa Rosa, contribute to the overall visual character of the project area. Views of rolling hills are visible to the north, northeast, east, and southeast. Buildings in some locations, such as the area near the Burbank Avenue/Hearn Avenue intersection and the Southside Bus Transfer Center, could be taller than existing buildings in the project area. The proposed project thus has the potential to result in taller buildings that could obstruct scenic views and vistas.

Although the Specific Plan would change the land use designations of some properties, allowing for increase in development in some locations, it would integrate existing General Plan goals, policies, and guidelines that seek to preserve scenic views and vistas. Upon annexation, the Annexation areas would be subject to these same goals, policies, and guidelines.

General Plan Goal UD-A requires the preservation and enhancement of Santa Rosa's scenic character. Policy UD-A-1 supports this goal by requiring the City to maintain view corridors to natural ridgelines and landmarks. Policy UD-A-2 requires the City to strengthen and emphasize

community focal points, visual landmarks, and features that contribute to the city's identity. Taken together, the existing goals, policies, and those proposed by the Specific Plan would result in **less than significant** impacts to scenic vistas.

Mitigation Measures

None required.

Scenic Resources (Standard of Significance 2)

Impact 3.1.2 The proposed project would not substantially damage scenic resources within a state scenic highway. There would be **no impact**.

Caltrans does not identify the portion of US 101 that runs along the eastern portion of the Specific Plan area as a state scenic highway. Because the proposed project does not include portions of a state scenic highway, it would have **no impact** on scenic resources within a state scenic highway.

Segments of US 101 and SR 12 that adjoin the plan area, Burbank Avenue within the plan area, as well as the West Third and Brittain Lane Annexation areas, are identified by the City as scenic roadways. General Plan Goal T-G requires the City to identify, preserve, and enhance scenic roads throughout Santa Rosa. Several policies requiring preservation and enhancement of scenic roads support this goal.

To avoid encroachment of buildings on the views of scenic resources from scenic roadways, Policy T-G-6 requires large setbacks from City-designated scenic roads, as possible, to avoid encroachment of buildings on the view of the roadway. Policy UD-C-6 requires that buildings, soundwalls, and other structures highly visible from US 101 or SR 12 and adjoining neighborhoods be designed to enhance and improve scenic character. Implementation of the City's Design Guidelines and Zoning Code would preserve and protect scenic resources along these locally designated highways in the project area.

Mitigation Measures

None required.

Visual Character (Standard of Significance 3)

Impact 3.1.3 The proposed project could change the existing visual character of the project area by allowing new development on currently vacant and underutilized parcels. This impact would be **less than significant**.

Currently, the majority of the project area is developed with residential, retail, office, institutional, and industrial uses. Neither the Specific Plan area nor the Annexation areas contain visual features that would be considered unique or out of character within the built environment. Future development that would occur under the Specific Plan or in the Annexation areas would be in areas that are currently undeveloped. The introduction of new uses on vacant lands has the potential to alter the visual character and quality of those places, which could potentially result in degradation of the community's aesthetic character if the uses are not developed in an appropriate manner.

Future development projects proposed in the project area would be subject to the goals and policies of the General Plan 2035 Urban Design Element. For example, Policy UD-A-1 requires the maintenance of view corridors to natural ridgelines and landmarks. Policy UD-A-5 requires superior site and architectural design of new development projects to improve visual quality in the city. Adherence to the City's adopted Design Guidelines would also prevent development from having significant impacts on the existing visual quality and character by regulating site design and layout, building heights and stepbacks, building form and materials, landscaping, and lighting. Upon annexation, the Annexation areas would also be subject to these existing City policies and guidelines.

With continued adherence to applicable General Plan policies and City Design Guidelines, as well as with the implementation of Specific Plan, the proposed project would have a **less than significant** impact on the visual character of the project area.

Mitigation Measures

None required.

Light and Glare (Standard of Significance 4)

Impact 3.1.4 The proposed project would introduce new sources of light or glare. This impact would be **less than significant**.

Future development in the project area would introduce new sources of light associated with residential, retail, parking lot, and street lighting, as well as glare from vehicles.

Section 20-30.080 of the City's Zoning Code regulates outdoor lighting in new development. Per this code section, the Zoning Code specifies that no permanently installed lighting may blink, flash, or be of unusually high intensity or brightness, as determined by the City. The code regulates the height and shielding of lighting fixtures. The code specifies that an outdoor light fixture is limited to a maximum height of 17 feet in single-family residential, 14 feet in multi-family residential, 16 feet in business and light industrial parks, and 16 feet in retail centers and commercial districts. The Zoning Code further specifies that lighting fixtures should confine glare and reflections within the boundaries of the site to the maximum extent feasible.

The City's Design Guidelines, which contain numerous standards limiting the intensity, direction, and height of lighting fixtures, would further limit new sources of light, as well as glare, when specific projects are developed in the project area. With adherence to the Zoning Code regulations and Design Guidelines, the project's impacts from increased outdoor lighting would be **less than significant**.

At some locations, construction of taller buildings than those that currently exist and are currently allowed could result in new sources of glare, depending on the building's orientation and the materials used. The City's Design Guidelines discourage the use of highly reflective building materials, and the use of such materials would be evaluated during the design review process to ensure that a project would not result in glare on adjacent uses. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

3.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for aesthetics includes the project area and all surrounding properties that have views of the project area, along with future development anticipated in the City of Santa Rosa Urban Growth Boundary (UGB), as identified in the General Plan 2035.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Visual Impacts

Impact 3.1.5 The proposed project, in combination with other planned and recently approved projects in the project area, would result in a **less than cumulatively considerable** impact on the visual character of the city.

The General Plan EIR determined that implementation of the General Plan would result in changes to the city's urban visual character and that with implementation of General Plan goals and policies, potential visual impacts would be reduced to less than significant levels.

Overall, the proposed project would maintain the existing urban development pattern of the surrounding area. The majority of the project area is currently developed with residential, retail, office, institutional, and industrial uses. The project area does not contain visual features that would be considered unique or out of character in the built environment. However, the project would potentially alter the visual characteristics of the project area by allowing denser development and taller building heights in some locations than currently exist or are planned in those locations under the General Plan. This development would also introduce additional sources of light and glare.

Development of vacant parcels in the project area would not contribute to an overall shift in Santa Rosa's visual character. Development in some areas of the Specific Plan area would result in increased density of residential land uses compared to existing and currently allowed under the General Plan. However, with adherence to the General Plan policies and proposed Specific Plan policies intended to protect and enhance the visual character of the city, existing City Design Guidelines, and Santa Rosa Zoning Code regulations, cumulative impacts would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

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3.2 Agricultural Resources

This section addresses the potential environmental impacts of the proposed project on agriculture and forest resources. The impact analysis focuses on potential direct and indirect conversion of agriculture resources as well as potential conflicts with existing zoning for agricultural uses. Information used in the preparation of this section was obtained primarily from the California Department of Conservation and the Santa Rosa General Plan 2035.

3.2.1 EXISTING SETTING

FARMLAND MAPPING

The Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) maps important farmlands throughout California. Important farmlands are divided into the following five categories based on their suitability for agriculture:

- Prime Farmland: Has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods.

- Farmland of Statewide Importance: Similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.

- Unique Farmland: Does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but has been used for the production of specific high-economic-value crops.

- Farmland of Local Importance: Land of importance to the local agricultural economy, as determined by each county's board of supervisors and local advisory committees.

- Grazing Land: Land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock.

REGIONAL SETTING

Rural residential, open space and resource protection, and agricultural uses constitute the majority of activities outside of the city. The agricultural resources found in Santa Rosa primarily consist of Farmland of Local Importance (9,657 acres). Additionally, 3,121 acres of Prime Farmland and 3,203 acres of Farmland of Statewide Importance are located in the vicinity, a majority of which is located outside of Santa Rosa's Urban Growth Boundary. Such farmland is focused along the western edge of the city, adjacent to Laguna de Santa Rosa (Santa Rosa, 2009, p. 4.L-3).

IMPORTANT FARMLAND IN PROJECT AREA

Figure 3.2-1 illustrates the current FMMP designations in the project area. As shown, the majority of the Specific Plan area is designated Urban and Built-Up Land and Other Land, with three areas totaling 94.7 acres designated Farmland of Local Importance. Each of the three Annexation Areas located outside of the Specific Plan boundaries are designated Urban and Built-Up Land.

Farmland of Local Importance is land of importance to the local economy, as defined by each county's local advisory committee and adopted by its Board of Supervisors. In Sonoma County, Farmland of Local Importance is defined as the hayland-producing areas of the Santa Rosa Plains, Petaluma Valley, and Tubbs Island Naval Reservation. Farmland of Local Importance is also

defined as those lands that are classified has having the capability for producing locally important crops such as grapes, corn, etc., but may not be planted at the present time (DOC 2000).

WILLIAMSON ACT CONTRACT LANDS

The Williamson Act is a mechanism for protecting agricultural and open space land from premature and unnecessary urban development. For lands under Williamson Act contract, landowners receive property tax assessments that are much lower than normal, in exchange for restricting the land to agricultural or related open space use for a defined period of time (see subsection 3.2.2, Regulatory Framework for further details). There are no active Williamson Act contracts in the project area (DOC 2013b).

FOREST RESOURCES

The project area does not contain any forest resources. None of the parcels in the project area are zoned for forest resource production.

3.2.2 REGULATORY FRAMEWORK

FEDERAL

Farmland Protection Policy Act

The Natural Resources Conservation Service (NRCS) is a federal agency in the US Department of Agriculture that is primarily responsible for implementation of the Farmland Protection Policy Act (FPPA). The act's purpose is to minimize federal programs' contribution to the conversion of farmland to nonagricultural uses by ensuring that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. The NRCS provides technical assistance to federal agencies, state and local governments, tribes, or nonprofit organizations that desire to develop farmland protection programs and policies. The FPPA also established the Farmland Protection Program and Land Evaluation and Site Assessment. The NRCS summarizes Farmland Protection Policy Act implementation in an annual report to Congress.

Farmland Protection Program

The NRCS administers the Farmland Protection Program, a voluntary program aimed at keeping productive farmland in agricultural uses. Under the program, the NRCS provides matching funds to state, local, or tribal government entities and nonprofit organizations with existing farmland protection programs to purchase conservation easements. The goal of the program is to protect between 170,000 and 340,000 acres of farmland per year (USDA-NRCS 2007). Participating landowners agree not to convert the land to nonagricultural use and retain all rights to use the property for agriculture. A minimum of 30 years is required for conservation easements and priority is given to applications with perpetual easements. The NRCS provides up to 50 percent of the fair market value of the easement being conserved (USDA-NRCS 2007).

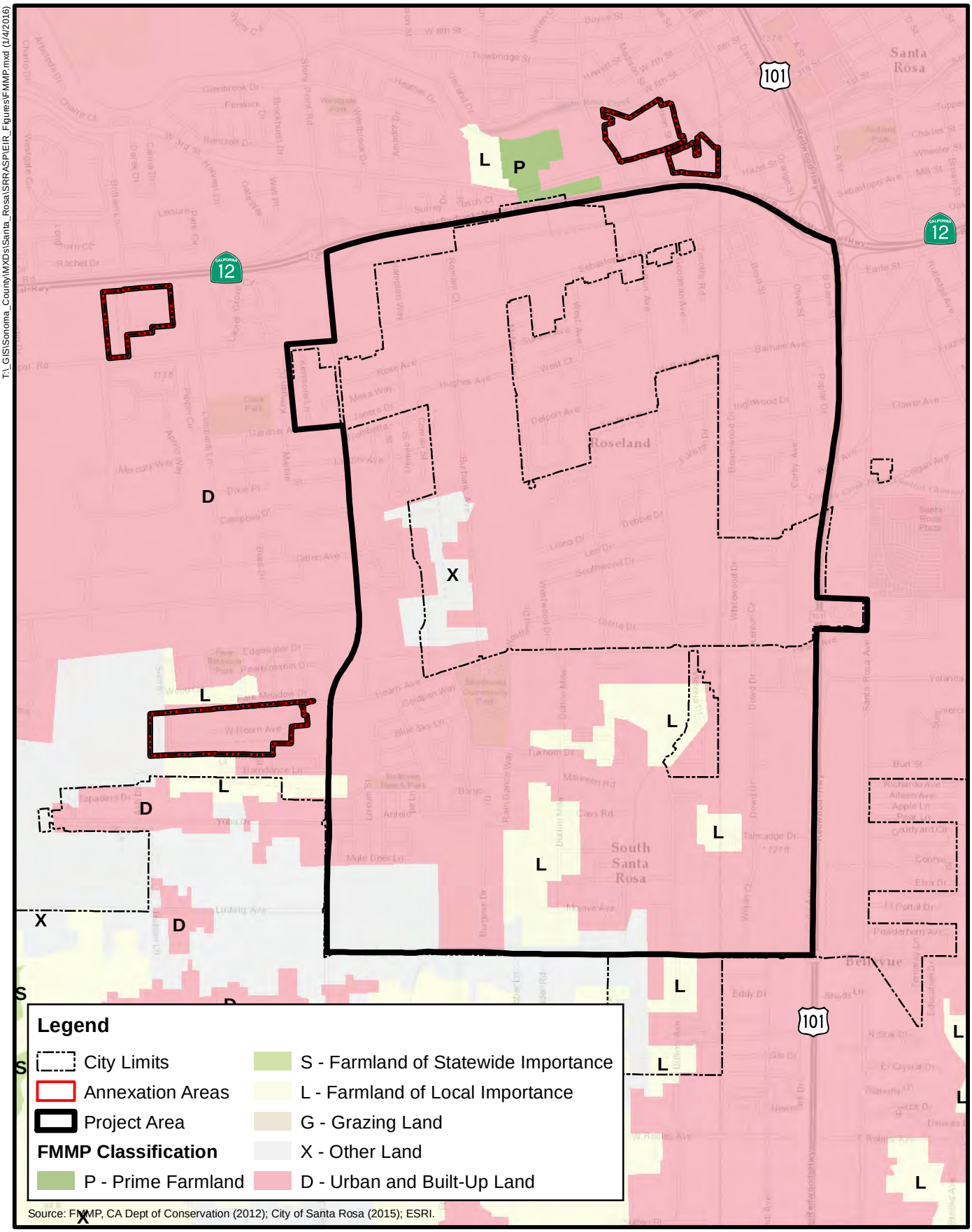

FIGURE 3.2-1
Prime Farmland Classification For Sonoma County

Michael Baker INTERNATIONAL

To qualify for a conservation easement, farmland must meet several criteria. The land must be:

- Prime, unique, or other productive soil, as defined by the NRCS based on factors such as water moisture regimes, available water capacity, developed irrigation water supply, soil temperature range, acid-alkali balance, water table, soil sodium content, potential for flooding, erodibility, permeability rate, rock fragment content, and soil-rooting depth.
- Included in a pending offer to be managed by a nonprofit organization, state, tribal, or local farmland protection program.
- Privately owned.
- Placed under a conservation plan.
- Large enough to sustain agricultural production.
- Accessible to markets for the crop that the land produces.
- Surrounded by parcels of land that can support long-term agricultural production.

STATE

California Environmental Quality Act Definition of Agricultural Lands

Public Resources Code Section 21060.1 defines *agricultural land* as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, as defined by the US Department of Agriculture land inventory and monitoring criteria, as modified for California. This Draft EIR uses this definition to evaluate impacts associated with the loss of agricultural lands as a result of the project.

California Department of Conservation

The Department of Conservation administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program, the Williamson Act Easement Exchange Program, and the Farmland Mapping and Monitoring Program. These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. The Department of Conservation is responsible for approving Williamson Act Easement Exchange Program agreements.

Important Farmland Inventory System and Farmland Mapping and Monitoring Program

The Important Farmland Inventory System initiated in 1975 by the US Soil Conservation Service (now the NRCS) classifies land based on 10 soil and climatic characteristics. The Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) is a similar system of mapping and monitoring for California, started in 1980.

Under the California Environmental Quality Act (CEQA), the lead agency is required to evaluate agricultural resources in environmental assessments at least in part based on the FMMP. The state's system was designed to document how much agricultural land in California was being converted to nonagricultural land or transferred into Williamson Act contracts. The definitions of important farmland types are provided in the Farmland Mapping discussion in subsection 3.2.1, Existing Setting.

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. There are no Williamson Act contracts in the project area.

LOCAL

City of Santa Rosa General Plan

The Santa Rosa General Plan 2035 serves as the overall guiding policy document for the city. The following are the applicable General Plan goals and policies most pertinent to the project with regard to agricultural resources.

Open Space and Conservation Element

Goal OSC-C: Conserve agricultural soils.

Policy OSC-C-3: Preserve and enhance agriculture within the Planning Area as a component of the economy and as a part of Santa Rosa's environmental quality.

3.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on State CEQA Guidelines Appendix G. An impact to agriculture and forest resources is considered significant if the project would:

1) Result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.

2) Conflict with existing zoning for agricultural use, or a Williamson Act contract.

3) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

4) Result in the loss of forestland or conversion of forestland to non-forest use.

5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to nonagricultural use, or conversion of forestland to non-forest use.

METHODOLOGY

This analysis of agriculture and forest resources was based on review of current uses in the project area, soil characteristics of the project area, and the project area's farmland classifications per the USDA-NRCS and the FMMP. This information was used to determine the proposed project's specific agriculture-related impacts, paying particular attention to the potential direct and indirect conversion of farmland and whether existing regulations would mitigate impacts.

Impacts Not Evaluated in Detail

No parcels in the project area are zoned for agricultural use or are subject to an active Williamson Act contract. Therefore, there would be no impacts relative to Standard of Significance 2, and these issues are not further evaluated.

The Specific Plan area and the Annexation Areas do not contain forestlands as defined in Public Resources Code Section 12220(g) or timberland as defined in the Public Resources Code Section 4526, nor are they currently designated or zoned for timberland production or other forestry-related uses nor are they in a designated Timberland Production Zone. Therefore, there would be no impacts relative to Standards of Significance 3 or 4, and these issues are not further evaluated.

IMPACTS AND MITIGATION MEASURES

Convert Important Farmland (Standards of Significance 1 and 5)

Impact 3.2.1 The Specific Plan area and the Annexation Areas do not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed project would not convert any important farmland. There would be **no impact.**

Neither the Specific Plan area nor the Annexation Areas contain land designated by the FMMP as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, there would be no impact related to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses.

The Specific Plan area contains approximately 94.7 acres designated by the FMMP as Farmland of Local Importance and additional acreage that is designated by the FMMP as Urban and Built-Up Land or Other Land that is currently used for agricultural production, but has soils of poorer quality that are not afforded state protection. While these properties would be annexed into the City these areas were previously designated for urban uses in the Santa Rosa General Plan. With respect to the West Hearn Annexation area, the project only proposes a change in land use designation from low-density residential to very low-density residential. This would not involve physical changes in land use, and the proposed actions would not preclude continued agricultural operations on existing agricultural properties or directly result in their conversion to non-agricultural use.

Because the proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use or otherwise convert agricultural lands to nonagricultural uses, there would be **no impact**.

Mitigation Measures

None required.

3.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Agriculture resources are of statewide importance. Consequently, the cumulative setting consists of all agriculture resources in California. Throughout the state, development pressures are resulting in the conversion of thousands of acres of agricultural land. According to the latest statewide study by the DOC (2013a), approximately 107,798 acres of agricultural land were converted to nonagricultural use between 2008 and 2010.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts on Agricultural Resources

Impact 3.2.2 The proposed project would not contribute to cumulative impacts on agricultural resources. This impact would be **less than cumulatively considerable.**

The Santa Rosa General Plan 2035 EIR identified that with implementation of the policies included in the General Plan, buildout of the General Plan planning area, which includes the project area, would result in a less than significant cumulative impact related to agricultural resources. Development of the project area was considered as part of the General Plan. As indicated in Impact 3.2.1, the proposed project would result in no impact related farmland conversion. Thus, the proposed project would not result in any additional impact related to agriculture resources, and the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

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3.3 Air Quality

This section examines the air quality for the proposed project area in Santa Rosa, includes a summary of applicable air quality regulations, and analyzes potential air quality impacts associated with the proposed project. Mitigation measures are recommended, as necessary, to reduce significant air quality impacts.

3.3.1 EXISTING SETTING

SAN FRANCISCO BAY AREA AIR BASIN

The project area is located in the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) is the regional air quality agency for the SFBAAB, which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County.

The air basin's topography is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays. This complex terrain, especially the higher elevations, distorts the normal wind flow patterns in the air basin. 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. The climate of the Bay Area is determined largely by a high-pressure system that is often present over the eastern Pacific Ocean. High-pressure systems are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, resulting in subsidence inversions. During summer and fall, locally generated emissions can, under the restraining influences of topography and subsidence inversions, cause conditions that are conducive to the formation of photochemical pollutants, such as ozone and secondary particulates, such as nitrates and sulfates. In the winter, the Pacific high pressure system shifts southward, allowing storms to pass through the area. (Santa Rosa 2009).

Cotati Valley Climatological Subregion

The project area is located within the Cotati Valley, a subregion in the SFBAAB that stretches from Santa Rosa to the San Pablo Bay. The Petaluma Valley to the south comprises the other part of the subregion. Wind patterns in the Cotati Valley are strongly influenced by the Petaluma Gap, with winds flowing predominantly from the west. As marine air travels through the Petaluma Gap, it splits into northward and southward paths moving into the Cotati and Petaluma valleys. The southward path crosses San Pablo Bay and moves eastward through the Carquinez Strait. The northward path contributes to Santa Rosa's prevailing winds from the south and southeast.

When the ocean breeze is weak, strong winds from the east can predominate, carrying pollutants from the Central Valley and the Carquinez Strait. During these periods, upvalley flows can carry the polluted air as far north as Santa Rosa and the proposed project area.

Winds are usually stronger in the Petaluma Valley than in the Cotati Valley because the former is directly in line with the Petaluma Gap. Average annual wind speed at Petaluma Airport is 7 miles per hour (mph). The Cotati Valley, being slightly north of the Petaluma Gap, experiences lower wind speeds. The annual average wind speed in Santa Rosa is 5 mph.

Air temperatures are very similar in the two valleys. Summer maximum temperatures for this subregion are in the low to mid 80s (in degrees Fahrenheit), while winter maximum temperatures are in the high 50s to low 60s. Summer minimum temperatures are around 50 degrees, and winter minimum temperatures are in the high 30s.

The Cotati Valley has a higher pollution potential than does the Petaluma Valley. The Cotati Valley's high pollution potential is a function of its lack of a gap to the sea, large population, and natural barriers at its northern and eastern ends. There are also industrial facilities in and around Santa Rosa. Population and motor vehicle use are increasingly significant, and housing costs and the suburbanization of employment are leading to more and longer commutes traversing the subregion (BAAQMD 2011).

AIR POLLUTANTS OF CONCERN

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as criteria air pollutants and are categorized into primary and secondary pollutants. Primary air pollutants are those emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$), lead, and fugitive dust are primary air pollutants. Of these, CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants. Presented in **Table 3.3-1** are descriptions of each of the primary and secondary criteria air pollutants and their known health effects.

TABLE 3.3-1
CRITERIA AIR POLLUTANTS SUMMARY OF COMMON SOURCES AND EFFECTS

Pollutant	Major Man-Made Sources	Human Health Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (NOx) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Particulate Matter (PM_{10} & $PM_{2.5}$)	Produced by power plants, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

Source: CAPCOA 2011

AMBIENT AIR QUALITY

Ambient air quality in Santa Rosa can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections in Santa Rosa are documented by measurements made by the Bay Area Air Quality Management District, the air pollution regulatory agency in the SFBAAB that maintains air quality monitoring stations which process ambient air quality measurements.

As described in more detail under the Regulatory Framework subsection below, ozone, PM_{10}, and $PM_{2.5}$ are the primary pollutants affecting the SFBAAB. The Santa Rosa–5th Street air quality monitoring station is the closest station to the project area, approximately 1 mile to the northeast. This station monitors ambient concentrations of ozone and $PM_{2.5}$. PM_{10} ambient concentrations are monitored at the Healdsburg-133 Matheson Street monitoring station, approximately15 miles from the project area. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in Santa Rosa. **Table 3.3-2** summarizes the published ozone and $PM_{2.5}$ data since 2012 from the Santa Rosa-5th Street air quality monitoring station for each year that monitoring data is provided. PM_{10} data from the Healdsburg-133 Matheson Street air quality monitoring station is also included.

TABLE 3.3-2
SUMMARY OF LOCAL AMBIENT AIR QUALITY DATA

Pollutant Standards	2012	2013	2014
Ozone			
Max 1-hour concentration (ppm)	0.064	0.074	*
Max 8-hour concentration (ppm) (state/federal)	0.052 / 0.051	0.065 / 0.064	* / *
Number of days above state 1-hour standard	0	0	*
Number of days above state/federal 8-hour standard	* / *	* / *	* / *
Respirable (Course) Particulate Matter (PM_{10})			
Max 24-hour concentration ($\mu g/m^3$) (state/federal)	38.0 / 35.0	55.0 / 54.0	45.6 / 42.9
Number of days above state/federal standard	* / *	* / 0	0 / 0
Fine Particulate Matter ($PM_{2.5}$)			
Max 24-hour concentration ($\mu g/m^3$) (state/federal)	25.7 / 25.7	28.1 / 28.1	* / *
Number of days above federal standard	*	*	*

Source: CARB 2015

Notes: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million

** = No data is currently available from CARB to determine the value.*

Areas with air quality that exceed adopted air quality standards are designated as nonattainment areas for the relevant air pollutants, while areas that comply with air quality standards are designated as attainment areas for the relevant air pollutants. The attainment status for the Santa Rosa portion of the SFBAAB is shown in **Table 3.3-3**. The region is nonattainment for state ozone, PM_{10}, and $PM_{2.5}$ standards in addition to federal ozone and $PM_{2.5}$ standards (BAAQMD 2015a).

TABLE 3.3-3
FEDERAL AND STATE AMBIENT AIR QUALITY ATTAINMENT STATUS FOR SANTA ROSA

Pollutant	Federal	State
Ozone (O_3)	Nonattainment	Nonattainment
Coarse Particulate Matter (PM_{10})	Unclassified	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Unclassified/Attainment	Attainment
Nitrogen Dioxide (NO_2)	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment

Source: BAAQMD 2015a

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally rather than regionally.

To date, the California Air Resources Board (CARB) has designated nearly 200 compounds as TACs. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds.

Most recently, CARB identified diesel particulate matter (diesel PM) as a toxic air contaminant. Diesel PM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. Diesel PM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. Diesel PM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of diesel PM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (EPA 2002, pp. 1-1 and 1-2). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. Diesel PM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Toxic air contaminant sources in the project area are identified under Impact 3.3.6 and include US Highway 101 (US 101), State Route (SR) 12, and stationary sources in the area.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others because of the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children are considered more susceptible to the health effects of air pollution due to their immature immune systems and developing organs (OEHHA 2007). As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities.

3.3.2 REGULATORY FRAMEWORK

During construction and operation of uses in the proposed project area (e.g., residential, commercial, and industrial uses), there is potential that gaseous emissions of criteria pollutants and dust into the ambient air would be emitted; therefore, development activities under the project fall under the ambient air quality standards promulgated at the local, state, and federal levels. The federal Clean Air Act of 1971 and the Clean Air Act Amendments (1977) required the U.S. Environmental Protection Agency (EPA) to establish the national ambient air quality standards (NAAQS). (TACs could be emitted as well. TAC-related regulations are discussed below.) The State of California has also adopted its own California ambient air quality standards (CAAQS), which are promulgated by CARB. Implementation of the project would occur in the San Francisco Bay Area Air Basin, which is under the air quality regulatory jurisdiction of the BAAQMD and is subject to the rules and regulations adopted by the air district to achieve the national and state ambient air quality standards. Federal, state, regional, and local laws, regulations, plans, and guidelines are summarized below.

AMBIENT AIR QUALITY STANDARDS

The Clean Air Act established NAAQS, with states retaining the option to adopt more stringent standards or to include other pollution types. The State of California has exercised that option. These standards, both federal and state, are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect those sensitive receptors most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both the State of California and the federal government have established health-based ambient air quality standards for six air pollutants. As shown in **Table 3.3-4**, these pollutants include ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. As noted above, these standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

TABLE 3.3-4
AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	National Standards
Ozone (O_3)	8 Hour	0.070 ppm (137$\mu g/m^3$)	0.075 ppm
	1 Hour	0.09 ppm (180 $\mu g/m^3$)	—
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 $\mu g/m^3$)	100 ppb
	Annual Arithmetic Mean	0.030 ppm (57 $\mu g/m^3$)	53 ppb (100 $\mu g/m^3$)
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 $\mu g/m^3$)	N/A
	3 Hour	—	N/A
	1 Hour	0.25 ppm (665 $\mu g/m^3$)	75 ppb
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	N/A
	24 Hour	50 $\mu g/m^3$	150 $\mu g/m^3$
Particulate Matter – Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$
	24 Hour	N/A	35 $\mu g/m^3$
Sulfates	24 Hour	25 $\mu g/m^3$	N/A
Lead	Calendar Quarter	N/A	1.5 $\mu g/m^3$
	30 Day Average	1.5 $\mu g/m^3$)	N/A
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)	N/A
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 $\mu g/m^3$)	N/A
Visibility-Reducing Particles	8 Hour (10:00 to 18:00 PST)	—	N/A

Source: BAAQMD 2015a

Notes: mg/m^3 = milligrams per cubic meter; ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per cubic meter

AIR QUALITY ATTAINMENT PLANS

The Bay Area Air Quality Management District is responsible for preparing plans to attain ambient air quality standards in the SFBAAB. The BAAQMD prepares ozone attainment plans for the national ozone standard and clean air plans for the California standard, both in coordination with the Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG).

With respect to applicable air quality plans, the BAAQMD prepared the Bay Area 2010 Clean Air Plan to primarily address nonattainment of the national 1-hour ozone standard in the air basin. However, the Clean Air Plan defines a control strategy that the BAAQMD and its partners will implement to (1) reduce emissions and decrease ambient concentrations of multiple types of harmful pollutants; (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and (3) reduce greenhouse gas (GHG) emissions to protect the climate. It is important to note that, in addition to updating the previously prepared ozone plan, the Clean Air Plan also serves as a multipollutant plan to protect public health and the climate. This effort to

develop its first-ever multipollutant air quality plan is a voluntary initiative by the BAAQMD. The district believes that an integrated and comprehensive approach to planning is critical to respond to air quality and climate protection challenges in the years ahead. In its dual roles as an update to the state ozone plan and a multipollutant plan, the Bay Area 2010 Clean Air Plan addresses four categories of pollutants (BAAQMD 2010):

- Ground-level ozone and its key precursors, ROG and NOX
- Particulate matter: primary PM2.5, as well as precursors to secondary PM2.5
- Air toxics
- Greenhouse gases

The Clean Air Plan provides local guidance for State Implementation Plans (SIP), which provide the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards (CAAQS and NAAQS). Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. Areas for which there is insufficient data available are designated unclassified.

TOXIC AIR CONTAMINANT REGULATIONS

The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as toxic air contaminants. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. CARB has, to date, established formal control measures for eleven TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings. Stationary sources of air toxics in Santa Rosa include gasoline fuel stations, diesel-powered backup generators, and dry cleaning facilities.

California Diesel Risk Reduction Plan

CARB has adopted the Diesel Risk Reduction Plan (DRRP), which recommends many control measures to reduce the risks associated with diesel PM and achieve a reduction goal of 85 percent by 2020. The DRRP incorporates measures to reduce emissions from diesel-fueled vehicles and stationary diesel-fueled engines. CARB's ongoing efforts to reduce diesel-exhaust emissions from these sources include the development of specific statewide regulations, which are designed to further reduce diesel PM emissions. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce diesel PM emissions.

Since the initial adoption of the DRRP in September 2000, CARB has adopted numerous rules related to the reduction of diesel PM from mobile sources as well as the use of cleaner-burning fuels. Transportation sources addressed by these rules that pertain to projects in Santa Rosa include public transit buses, school buses, on-road heavy-duty trucks, and off-road heavy-duty construction equipment.

Bay Area Air Quality Management District

The BAAQMD seeks to improve air quality conditions in the SFBAAB through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The BAAQMD's clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. The BAAQMD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the federal Clean Air Act, the Clean Air Act Amendments, and the California Clean Air Act.

Rules and Regulations

The BAAQMD develops regulations to improve air quality and protect the health and welfare of Bay Area residents and their environment. BAAQMD rules and regulations most applicable to the project area include but are not limited to the following:

- ***Regulation 2, Rule 2: New Source Review.*** Requires any new source resulting in an increase of any criteria pollutant to be evaluated for adherence to best available control technology. For compression internal combustion engines, best available control technology requires that the generator be fired on California diesel fuel (fuel oil with a sulfur content less than 0.05 percent by weight and less than 20 percent by volume of aromatic hydrocarbons). All stationary internal combustion engines larger than 50 horsepower must obtain a Permit to Operate. If the engine is diesel fueled, it must also comply with the BAAQMD-administered Statewide Air Toxics Control Measure for Stationary Diesel Engines.

- ***Regulation 7: Odorous Substances.*** Establishes general limitations on odorous substances and specific emission limitations on certain odorous compounds.

- ***Regulation 8, Rule 3: Architectural Coatings.*** Limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the district.

- ***Regulation 8, Rule 15: Emulsified and Liquid Asphalts.*** Limits the emissions of volatile organic compounds caused by the use of emulsified and liquid asphalt in paving materials and paving and maintenance operations.

- ***Regulation 14: Mobile Source Emissions Reduction Measures.*** Includes measures to reduce emissions of air pollutants from mobile sources by reducing motor vehicle use and/or promoting the use of clean fuels and low-emission vehicles.

The above list represents rules and regulations most applicable to the project area. Additional rules and regulations may apply, depending on the sources proposed and the activities conducted.

BAAQMD Construction Mitigation Measures

The BAAQMD recommends quantifying a proposed project's construction-generated emissions and implementing the Basic Construction Mitigation Measures as mitigation for dust and exhaust construction impacts in the California Environmental Quality Act (CEQA) compliance documentation. If additional construction measures are required to reduce construction-generated emissions, the Additional Construction Mitigation Measures should be applied to mitigate construction impacts, according to the BAAQMD. **Table 3.3-6** identifies the air district's Basic and Additional Construction Mitigation Measures. In addition, all projects must implement any applicable air toxic control measures. For example, projects that have the potential to disturb asbestos (from soil or building materials) must comply with all the requirements of CARB's air toxic control measures for construction, grading, quarrying, and surface mining operations.

TABLE 3.3-6
BAAQMD BASIC AND ADDITIONAL CONSTRUCTION MITIGATION MEASURES

BAAQMD Basic Construction Mitigation Measures	
1.	All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2.	All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3.	All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4.	All vehicle speeds on unpaved roads shall be limited to 15 mph.
5.	All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6.	Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
7.	All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified visible emissions evaluator.
8.	Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The air district's phone number shall also be visible to ensure compliance with applicable regulations.
BAAQMD Additional Construction Mitigation Measures	
1.	All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
2.	All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
3.	Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
4.	Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
5.	The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
6.	All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
7.	Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.
8.	Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.

9. Minimize the idling time of diesel-powered construction equipment to 2 minutes.
10. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project-wide fleet average 20 percent NOx reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
11. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
12. Require that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.
13. Require all contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.

Source: BAAQMD 2011

City of Santa Rosa General Plan

The Santa Rosa General Plan 2035 serves as the overall guiding policy document for the city. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project in regard to air quality.

Land Use and Livability Element

Goal LUL-A: **Foster a compact rather than a scattered development pattern in order to reduce travel, energy, land, and materials consumption while promoting greenhouse gas emissions reductions citywide.**

Policy LUL-A-1: As part of plan implementation – including development review, capital improvements programming, and preparation of detailed area plans – foster close land use/transportation relationships to promote use of alternative transportation modes and discourage travel by automobile.

Urban Design Element

Goal UD-D: **Avoid strip patterns of commercial development. Improve the appearance and functioning of existing commercial strip corridors, such as Santa Rosa Avenue and Sebastopol Rod.**

Policy UD-D-4: Provide continuous sidewalks and bicycle lanes on both sides of major regional/arterial streets.

Policy UD-E-4: Enhance pedestrian activity and safety by designing streets, buildings, pathways, and trails to provide a visual connection with public spaces such as parks and Santa Rosa Creek. Review and revise the Zoning Code and Subdivision Guidelines to support this policy.

Policy UD-G-2: Locate higher density residential uses adjacent to transit facilities, shopping, and employment centers, and link these areas with bicycle and pedestrian paths.

Policy UD-G-3: Design new residential streets to be in scale with the adjacent structures and uses, and appropriate to their intended purpose. Neighborhood streets should

be scaled for slow moving traffic, pedestrian and bicycle access, and children's play.

Policy UD-G-4: Provide through-connections for pedestrians and bicyclists in new developments. Avoid cul-de-sac streets, unless public pedestrian/bikeways interconnect them.

Policy UD-G-8: Promote personal safety in project design, particularly in multifamily development, by locating windows and walkways to assure visual access to common areas. Locate children's play space within view of the nearest units, and discourage designs with unutilized open space.

Policy UD-G-9: Encourage pedestrian-oriented village character, rather than strip malls, in neighborhood centers for local shops and services. Shops should front on streets rather than parking lots. Parking areas should be located in less visible locations behind buildings and away from the street edge.

Transportation Element

Goal T-B: **Provide a safe, efficient, free-flowing circulation system.**

Policy T-B-1: Require site design to focus through-traffic on regional/arterial streets. Employ the following design techniques to increase driver safety and traffic efficiency:

- Reduce the number of driveways and intersections;
- Combine driveways to serve numerous small parcels;
- Avoid residential access;
- Install and facilitate timing of traffic signals; and
- Ensure continuous sidewalks.

Policy T-B-2: Locate uses generating heavy traffic so that they have direct access or immediate secondary access to regional/arterial streets or highways.

Policy T-B-4: Promote the use of roundabouts in lieu of stop/signal controlled intersections to improve safety, reduce delay and idling time, and lower vehicle emissions at new/existing intersections.

Policy T-H-3: Require new development to provide transit improvements, where a rough proportionality to demand from the project is established. Transit improvements may include:

- Direct and paved pedestrian access to transit stops;
- Bus turnouts and shelters; and
- Lane width to accommodate buses.

Policy T-K-4: Require construction of attractive pedestrian walkways and areas in new residential, commercial, office, and industrial developments. Provide landscaping or other appropriate buffers between sidewalks and heavily

traveled vehicular traffic lanes, as well as through and to parking lots. Include pedestrian amenities to encourage and facilitate walking.

Policy T-L-8: Require new development to dedicate land and/or construct/install bicycle facilities, and provide bicycle parking as specified in the Zoning Code, where a rough proportionality to demand from the project is established. Facilities such as showers and bicycle storage shall also be considered.

Open Space and Conservation Element

Goal OSC-J: **Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards.**

Policy OSC-J-1: Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the Bay Area Air Quality Management District.

Policy OSC-J-3: Reduce particulate matter emissions from wood burning appliances through implementation of the city's Wood Burning Appliance code.

City of Santa Rosa City Code

City Code Chapter 17-35 states that it is unlawful to install a wood-burning appliance that is not a pellet-fueled heater; an EPA-Certified Phase II wood heater or newer; a solid fuel burning appliance certified for use by the Northern Sonoma County Air Pollution Control District; a gas log fireplace; or a fireplace certified by the EPA should the EPA develop a fireplace certification program. Under Section 20-30.090(C), no visible dust, gasses, or smoke shall be emitted, except as necessary for the heating or cooling of structures, and the operation of motor vehicles on a site. City Code Section 20-30.090(J) regulates odors, which requires that no obnoxious odor or fumes shall be emitted that are perceptible without instruments by a reasonable person at the property line of the site.

3.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. An impact to air quality is considered significant if the project would:

1) Conflict with or obstruct implementation of the applicable air quality plan.

2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

3) Expose sensitive receptors to substantial pollutant concentrations.

4) Create objectionable odors affecting a substantial number of people.

5) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

CEQA Guidance

The BAAQMD publishes CEQA Air Quality Guidelines to assist local jurisdictions and lead agencies in complying with the requirements of CEQA regarding potentially adverse impacts to air quality. The district's guidelines were updated in June 2010 to include new thresholds of significance (2010 thresholds) adopted by the BAAQMD Governing Board on June 2, 2010. The BAAQMD's guidelines were further updated in May 2011. The 2010 thresholds included new thresholds of significance for construction emissions, cumulative toxic air contaminant impacts, and fine particulate matter concentration increases.

On March 5, 2012, the Alameda County Superior Court issued a judgment in connection with a lawsuit filed by the Building Industry Association, finding that the BAAQMD had failed to comply with CEQA when it adopted the 2010 thresholds. The court did not determine whether the 2010 thresholds were valid on the merits, but found that adoption of the 2010 thresholds was a "project" under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the 2010 thresholds and cease dissemination of them until the district had complied with CEQA. The court did not address the Building Industry Association's remaining arguments. The BAAQMD appealed the Alameda County Superior Court's decision and the case went to the Court of Appeal, First Appellate District.

In light of the Alameda County Superior Court's decision, the BAAQMD stopped recommending the 2010 thresholds be used as a generally applicable measure of a project's significant air quality impacts. The BAAQMD released a new version of its CEQA Air Quality Guidelines in May 2012 removing the 2010 thresholds. The BAAQMD recommended that lead agencies themselves determine appropriate air quality thresholds of significance based on substantial evidence in the record.

On August 13, 2013, the Court of Appeals reversed the Superior Court's decision, finding that the BAAQMD's thresholds were not a "project" under CEQA and as such, did not require CEQA review. The Court of Appeals rejected the Building Industry Associations other arguments as well. On November 26, 2013, the California Supreme Court by unanimous vote granted review, but solely to address the legal issue of whether CEQA review is confined to an analysis of a proposed project's impacts on the existing environment or also requires analysis of the existing environment's impacts on the proposed project and its future occupants and users. On December 17, 2015, the Supreme Court of California issued its ruling, concluding that agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the *project's* impact on the environment—and not the *environment's* impact on the project. Given the recent date of the Supreme Court decision compared with the writing of this DEIR, the BAAQMD has yet to announce a recommendation regarding use of its 2010 thresholds. In the meantime, jurisdictions may exercise their discretion and utilize said thresholds based on a determination that they are supported by substantial evidence. For purposes of this analysis, the City of Santa Rosa has determined, in its discretion, to utilize the BAAQMD's thresholds, finding that the thresholds are supported by substantial evidence. Using these criteria, an air quality impact is considered significant if the project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations.

Air Pollutant Emissions Analysis

The BAAQMD CEQA Guidelines do not contain numeric thresholds related to criteria pollutant emissions resulting from implementation of a long-range plan, such as implementation of the proposed project. According to the BAAQMD CEQA Guidelines, in order to ensure that a plan would not violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation, the proposed plan (i.e., the proposed project) must demonstrate consistency with the control measures contained in the Bay Area 2010 Clean Air Plan, described above, and show that projected vehicle miles traveled (VMT) increases as a result of the plan are less than or equal to projected population increases over the planning period of the plan.

CO Hot-Spot Analysis

The California 1-hour and 8-hour CO standards are:

- 1-hour = 20 parts per million
- 8-hour = 9 parts per million

The significance of localized impacts depends on whether ambient carbon monoxide levels within or in the vicinity of the project area are above state and federal CO standards. Carbon monoxide concentrations in Santa Rosa no longer exceed the CAAQS or NAAQS criteria, and the SFBAAB has been designated as attainment under the 1-hour and 8-hour standards. Based on BAAQMD guidance (BAAQMD 2011: Section 3.3), projects meeting all of the following screening criteria would be considered to have a less than significant impact on localized carbon monoxide concentrations if:

1) The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plans, and local congestion management agency plans.

2) The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

3) The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Toxic Air Contaminant Analysis

In addition to criteria air pollutants and CO hot spots, this Draft EIR evaluates the project's impacts with respect to toxic air contaminants. The BAAQMD regulates levels of air toxics through a permitting process that covers both construction and operation. Per BAAQMD guidance, all other sources within 1,000 feet of a proposed sensitive receptor need to be identified and analyzed. If emissions of TAC concentrations at a new sensitive receptor generated from all TAC sources in a 1,000-foot radius result in the exceedance of an excess cancer risk level of more than 100 in one million, or a non-cancer hazard index greater than 10, the project would result in a significant impact. In terms of the placement of a source of TAC emissions in the vicinity of existing sensitive receptors, if emissions of TACs exceed an excess cancer risk level of more than 10 in one million or a non-cancer hazard index greater than 1.0, the proposed source would result in a significant impact.

Methodology

Air quality-related impacts were assessed in accordance with methodologies recommended by the BAAQMD. Where quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

PROJECT IMPACTS AND MITIGATION MEASURES

Conflict with or Obstruct Implementation of the Bay Area 2010 Clean Air Plan (Standard of Significance 1)

Impact 3.3.1 Subsequent land use activities associated with implementation of the proposed project would not conflict with the Bay Area 2010 Clean Air Plan. This impact is **less than significant**.

The project's consistency with Clean Air Plan control measures is demonstrated by assessing whether the project implements all of the applicable Clean Air Plan control measures. The Bay Area 2010 Clean Air Plan (BAAQMD 2010) includes approximately 55 control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. The control measures are divided into five categories: 18 measures to reduce stationary and area sources; 10 mobile source measures; 17 transportation control measures; 6 land use and local impact measures; and 4 energy and climate measures.

In developing the control strategy, the BAAQMD identified the full range of tools and resources available, both regulatory and non-regulatory, to develop each measure.

This approach relies on lead agencies to assist in implementing some of the control measures. A key tool for local agency implementation is the development of land use policies and implementing measures that address new development or redevelopment in local communities. The consistency of the proposed project is evaluated with respect to each set of control measures.

The Clean Air Plan includes stationary source control measures that the BAAQMD adopts as rules or regulations through its authority to control emissions from stationary and area sources. The BAAQMD is the implementing agency, since these control measures are applicable to sources of air pollution that must obtain BAAQMD permits. The City uses the BAAQMD's CEQA Air Quality Guidelines to evaluate air pollutant emissions from new sources. Additionally, the Clean Air Plan includes mobile source measures that would reduce emissions by accelerating the replacement of older, dirtier vehicles and equipment through programs such as the BAAQMD's Vehicle Buy-Back and Smoking Vehicle programs and by promoting advanced technology vehicles that reduce emissions. The implementation of these measures relies heavily on incentive programs, such as the Carl Moyer Program and the Transportation Fund for Clean Air, to achieve voluntary emission reductions in advance of or in addition to CARB requirements. CARB has new regulations that require the replacement or retrofit of on-road trucks, construction equipment, and other specific equipment that is diesel powered. The Clean Air Plan also includes transportation control measures (TCMs) that are strategies meant to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions. While most of the TCMs are implemented at the regional level (that is, by MTC or the California Department of Transportation [Caltrans]), the Clean Air Plan relies on local communities to assist with implementation of some measures. In addition, the Clean Air Plan includes land use measures

and energy and climate measures whose implementation is aided by proper land use planning decisions.

The BAAQMD's 2010 Clean Air Plan includes various control strategies to reduce emissions of local and regional pollutants and promote public health and energy conservation. Consistent with the control strategies identified in the Clean Air Plan, the proposed project is required to comply with the City's General Plan, which includes numerous provisions to reduce emissions of local and regional pollutants and to promote public health and energy conservation. The Clean Air Plan control strategies and policy provisions that are most applicable are summarized in **Table 3.3-7**.

TABLE 3.3-7
CONSISTENCY WITH BAY AREA 2010 CLEAN AIR PLAN CONTROL STRATEGIES

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies	Specific Plan Policies
Transportation Control Measures		
TCM A: Improve Transit Services A-1: Improve Local & Areawide Bus Service A-2: Improve Local & Regional Rail Service	T-H-1: Provide convenient, efficient routes to major employment centers throughout the city. T-H-2: Implement the Long and Short Range Transit Plans which include CityBus proposals for transit and TSM improvements. T-H-3: Require new development to provide transit improvements, where a rough proportionality to demand from the project is established. Transit improvements may include: • Direct and paved pedestrian access to transit stops; • Bus turnouts and shelters; and • Lane width to accommodate buses. T-H-8: Improve transit service along corridors where increased densities are planned.	RN-2.4 Increase transit service along Sebastopol Road to provide bus service every 15-minutes. RN-3.2 Include transit facilities and amenities along Hearn Avenue to support frequent transit service. RN-3.3 Ensure convenient pedestrian and bicycle connections to and from the bus transit center with new linked bike lanes and paths, as shown on the Circulation Plan (Figure 4-3). RN-5.1 Ensure all paths, streets, and crossings are designed to be safely accessed by all users, in accordance with the Americans with Disabilities Act (ADA). RN-5.3 Ensure proper connectivity and accessible pathways to and from transit stops and amenities since transit riders typically start and end trips as pedestrians PBN-1.6 Develop and install wayfinding signage to the downtown Sonoma-Marin Area Rail Transit (SMART) station, SMART multi-use path, Sebastopol Road commercial district, and other key destinations. Wayfinding should be designed to help create a sense of place and strengthen project area identity. PBN-2.2 Implement streetscape improvements resulting in attractive, functional streets with overall enhanced access, lighting, and safety for pedestrians, bicyclists, transit users, and motorists. PBN-3.1 Coordinate with SMART to ensure safe railway crossings for all users. T-1.1 Provide well-lit shelters with benches and bicycle parking at bus stops near schools and

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies	Specific Plan Policies
		shopping areas consistent with CityBus standards for bus stop amenities and accessibility. T-1.2 Support increased connectivity and frequency of transit routes serving the Southside Transfer Center, in keeping with the CityBus long-range plan for southwest Santa Rosa service. T-1.3 Ensure that public transit service connects major destinations in the Roseland area, including educational institutions, community facilities, parks, and major commercial corridors, as well as to the downtown and destinations outside of the plan area.
TCM B: Improve System Efficiency B-1: Freeway & Arterial Operational Strategies B-2: Transit Efficiency & Use Strategies B-3: Bay Area Express Lane Network B-4: Goods Movement Improvements & Emission Reduction Strategies	**Not directly applicable to the project**. However, the City's General Plan contains policies intended to protect and sustain a high quality of life in Santa Rosa by participating in coordinated land use and transportation planning in the region. For example: T-A-4 Cooperate with Caltrans and public transit providers to establish park-and-ride lots. T-A-5 Pursue cooperation between local and regional transportation agencies to coordinate multi-modal connections throughout the city. T-F-1 Participate in discussions addressing regional through-traffic with the County of Sonoma, the Metropolitan Transportation Commission, and other municipalities	RET-2.3 Encourage activity-generating uses along Roseland Creek and Colgan Creek to provide eyes on the creek. RN-1.1 Improve connections by creating new streets or extensions of existing streets, as identified in Figure 4-1 and Table 4-2. RN-1.3 Enhance existing intersections along major arterials to improve traffic flow through use of coordinated or adaptive signal timing and/or dedicated turn pockets, as identified in Table 4-2. RN-1.4 Implement coordinated or adaptive signal timing along arterials to improve traffic flow, using intelligent transportation systems (ITS) strategies rather than roadway widening to maximize roadway efficiency, minimize congestion, and reduce greenhouse gas emissions. RN-1.5 Support the planned construction of a new US Highway 101 overpass at Bellevue Avenue and a widened overpass at Hearn Avenue to improve east–west multimodal connectivity to and from the Roseland area. RN-2.2 Design a raised roadway median to balance the need for access to businesses while

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies	Specific Plan Policies
		enhancing pedestrian safety and the streetscape environment. RN-3.1 Prioritize and secure funding for the planned widening of the Hearn Avenue overcrossing and associated interchange improvements to relieve existing congestion and improve multimodal connectivity. PBN-1.2 Design streets to safely serve and accommodate all travel modes and users. PBN-2.2 Implement streetscape improvements resulting in attractive, functional streets with overall enhanced access, lighting, and safety for pedestrians, bicyclists, transit users, and motorists. PBN-2.3 Install high-visibility crosswalk markings and signage in areas with high pedestrian activity. PBN-2.4 Enhance safety at the Joe Rodota Trail crossing of Stony Point Road by eliminating the free-flow right-turn island at the SR 12 eastbound ramps intersection, using curb extensions to reduce crossing distances where possible, and implementing pedestrian- and bicycle-friendly signal timing strategies. PBN-3.2 Consider adding a new bike and pedestrian crossing of the SMART rail corridor between Barham and Hearn Avenues. PBN-4.3 Prioritize pedestrian crossing signal timing enhancements at signals around schools to promote safety for pedestrians, including techniques such as early release pedestrian crossing phases (in which pedestrians receive a "walk" signal several seconds before drivers see a green light), dedicated pedestrian phases, and reduced cycle lengths (to minimize wait times).
TCM C: Encourage Sustainable Travel Behavior	UD-D-4: Provide continuous sidewalks and bicycle lanes on both sides of major regional/arterial streets.	RET-1.3 Encourage small neighborhood stores, such as corner food markets, in residential areas to provide services within walking and bicycling

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies		Specific Plan Policies	
C-1: Voluntary Employer Based Trip Reduction Program C-2: Safe Routes to School & Safe Routes to Transit C-3: Rideshare Services and Incentives C-4: Conduct Public Outreach & Education C-5: Smart Driving	UD-E-4:	Enhance pedestrian activity and safety by designing streets, buildings, pathways, and trails to provide a visual connection with public spaces such as parks and Santa Rosa Creek. Review and revise the Zoning Code and Subdivision Guidelines to support this policy.		distance. Location of such stores is allowed where they can be economically supported.
	UD-G-2:	Locate higher density residential uses adjacent to transit facilities, shopping, and employment centers, and link these areas with bicycle and pedestrian paths.	RET-2.2	Encourage small-scale, local-serving, and active retail uses that encourage walking, browsing, and social interaction.
	UD-G-3:	Design new residential streets to be in scale with the adjacent structures and uses, and appropriate to their intended purpose. Neighborhood streets should be scaled for slow moving traffic, pedestrian and bicycle access, and children's play.	RET-2.3	Encourage activity-generating uses along Roseland Creek and Colgan Creek to provide eyes on the creek.
	UD-G-4:	Provide through-connections for pedestrians and bicyclists in new developments. Avoid cul-de-sac streets, unless public pedestrian/bikeways interconnect them.	SR-1.1	Promote a mix of land uses and increased development densities to ensure Sebastopol Road is Roseland's commercial core, and to encourage pedestrian, bicycle, and transit modes of travel for local trips.
	UD-G-8:	Promote personal safety in project design, particularly in multifamily development, by locating windows and walkways to assure visual access to common areas. Locate children's play space within view of the nearest units, and discourage designs with unutilized open space.	AH-1.4	Encourage the integration of market-rate housing with affordable units at the project level as well as at the neighborhood level to encourage housing for all income levels within the plan area.
	UD-G-9:	Encourage pedestrian-oriented village character, rather than strip malls, in neighborhood centers for local shops and services. Shops should front on streets rather than parking lots. Parking areas should be located in less visible locations behind buildings and away from the street edge.	ED-1.1	Encourage job creation in the plan area, and enhance connections to allow Roseland residents to walk or bike to work within and outside the plan area.
	T-A-7:	Expand non-motorized and bus infrastructure throughout the city such that greater amenities exist for cyclists, pedestrians and transit users	RN-1.5	Support the planned construction of a new US Highway 101 overpass at Bellevue Avenue and a widened overpass at Hearn Avenue to improve east–west multimodal connectivity to and from the Roseland area.
			RN-2.1	Create a lush and colorful landscaped ambiance along Sebastopol Road through the use of broader sidewalks, landscaped medians, historic-style street lamps, shade trees, flowers, and bike lanes.
			RN-2.2	Design the raised roadway median to balance the need for access to businesses while enhancing pedestrian safety and the streetscape environment.
			RN-2.3	Design Sebastopol Road as a focal gathering point and pedestrian-oriented main street.

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies		Specific Plan Policies	
		in order to promote a healthy, sustainable city and further reduce GHG emissions.	RN-2.4	Increase transit service along Sebastopol Road to provide bus service every 15-minutes.
	T-J-1:	Pursue implementation of walking and bicycling facilities as envisioned in the city's Bicycle and Pedestrian Master Plan.	RN-3.1	Prioritize and secure funding for the planned widening of the Hearn Avenue overcrossing and associated interchange improvements to relieve existing congestion and improve multimodal connectivity.
	T-J-2:	Provide street lighting that is attractive, functional, and appropriate to the character and scale of the neighborhood or district, and that contributes to vehicular and pedestrian safety.	RN-3.2	Include transit facilities and amenities along Hearn Avenue to support frequent transit service.
	T-J-3:	Strengthen and expand east-west linkages across the Highway 101 corridor.	RN-3.3	Ensure convenient pedestrian and bicycle connections to and from the bus transit center with new linked bike lanes and paths, as shown on the Circulation Plan (Figure 4-3).
	T-J-4:	Provide street trees to enhance the city's livability and to provide identity to neighborhoods and districts.	RN-4.2	Balance the desire to maintain rural character with pedestrian and bicycle safety along Burbank Avenue.
	T-J-5:	Support Safe Routes to School by pursuing available grants for this program and ensuring that approaches to schools are safe for cyclists and pedestrians by providing needed amenities such as sidewalks, crosswalks, bike lanes, and traffic calming on streets near schools.	RN-5.3	Ensure proper connectivity and accessible pathways to and from transit stops and amenities since transit riders typically start and end trips as pedestrians.
	T-K-5:	Ensure provision of safe pedestrian access for students of new and existing school sites throughout the city.	PBN-1.1	Ensure convenient opportunities to walk and bike to daily destinations.
			PBN-1.2	Design streets to safely serve and accommodate all travel modes and users.
			PBN-1.3	Identify gaps and build sidewalks to complete the pedestrian network in neighborhoods.
			PBN-1.4	Develop a system to prioritize bicycle and pedestrian improvements for future funding opportunities.
			PBN-1.5	Require dedication of right-of-way for improvements and/or expansion of pedestrian and bicycle facilities where insufficient right-of-way currently exists.
			PBN-1.6	Develop and install wayfinding signage to the downtown Sonoma-Marin Area Rail Transit (SMART) station, SMART multi-use path, Sebastopol Road commercial district, and

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies	Specific Plan Policies
		other key destinations. Wayfinding should be designed to help create a sense of place and strengthen project area identity. PBN-2.1 Provide pedestrian and bicycle amenities such as directional signs, benches, drinking fountains, etc., in high travel locations to serve the recreational and travel needs of residents and visitors. PBN-2.2 Implement streetscape improvements resulting in attractive, functional streets with overall enhanced access, lighting, and safety for pedestrians, bicyclists, transit users, and motorists. PBN-2.3 Install high-visibility crosswalk markings and signage in areas with high pedestrian activity. PBN-2.4 Enhance safety at the Joe Rodota Trail crossing of Stony Point Road by eliminating the free-flow right-turn island at the SR 12 eastbound ramps intersection, using curb extensions to reduce crossing distances where possible, and implementing pedestrian- and bicycle-friendly signal timing strategies. PBN-2.5 Ensure that pedestrian and bicyclist safety and convenience are maintained where paths and trails cross streets through a variety of measures such as signing, special pavement markings or colors, raised crosswalks, and/or warning lights alerting motorists to the presence of bicyclists and pedestrians at major crossings. PBN-2.6 Support bike education events and classes. PBN-3.1 Coordinate SMART to ensure safe railway crossings for all users. PBN-3.2 Consider adding a new bike and pedestrian crossing of the SMART rail corridor between Barham and Hearn avenues. PBN-3.4 Encourage SMART to provide lighting along the railway corridor multiuse path.

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies	Specific Plan Policies
		PBN-4.1 Ensure safe routes to school, including safe pedestrian crossings and clearly marked routes near schools. PBN-4.2 Provide crosswalk enhancements near schools, parks, and high-volume pedestrian areas. PBN-4.3 Prioritize pedestrian crossing signal timing enhancements at signals around schools to promote safety for pedestrians, including techniques such as early release pedestrian crossing phases (in which pedestrians receive a "walk" signal several seconds before drivers see a green light), dedicated pedestrian phases, and reduced cycle lengths (to minimize wait times).
TCM D: Support Focused Growth D-1: Bicycle Access & Facilities Improvement D-2: Pedestrian Access & Facilities Improvement D-3: Local Land Use Strategies	UD-D-4: Provide continuous sidewalks and bicycle lanes on both sides of major regional/arterial streets. UD-D-5: Provide planting strips with large canopy trees between the road and sidewalk to buffer pedestrians from traffic, and help define the street space along commercial streets. Install pedestrian amenities in the planting strip such as: • Street lighting; • Seating; • Bus stop shelters; • Bicycle racks; and • Mail boxes. T-A: Provide a safe and sustainable transportation system. T-A-2: Work with employers and business associations to meet employee transportation needs that will lead to reduction of the use of single occupant vehicles. T-K-1: Link the various citywide pedestrian paths, including street sidewalks, downtown	R-1.1 Include a variety of housing types near workplaces, schools, parks, stores, and amenities. RET-1.1 Expand local-serving retail and personal services uses to accommodate the daily needs of Roseland area residents, visitors, and employees. RET-1.2 Encourage unique neighborhood-serving uses in the new shopping center south of Hearn Avenue at Dutton Avenue. RET-1.3 Encourage small neighborhood stores, such as corner food markets, in residential areas to provide services within walking and bicycling distance. Location of such stores is allowed where they can be economically supported. RET-2.2 Encourage small-scale, local-serving, and active retail uses that encourage walking, browsing, and social interaction. SR-1.1 Promote a mix of land uses and increased development densities to ensure Sebastopol Road is Roseland's commercial core, and encourage pedestrian, bicycle, and transit modes of travel for local trips.

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies		Specific Plan Policies	
		walkways, pedestrian areas in shopping centers and work complexes, park pathways, and other creekside and open space pathways.	AH-1.1	Promote inclusion of second dwelling units in new and existing single-family neighborhoods to provide a smaller, more affordable housing option.
	T-K-2:	Allow the sharing or parallel development of pedestrian walkways with bicycle paths, where this can be safely done, in order to maximize the use of public rights-of-way.	HF-1.3	Support location/operation of healthy food purveyors such as full-service grocery stores, ethnic food markets, farm stands, community gardens, edible schoolyards, and farmers' markets.
	T-K-3:	Orient building plans and pedestrian facilities to allow for easy pedestrian access from street sidewalks, transit stops, and other pedestrian facilities, in addition to access from parking lots.	HF-1.5	Support development of small-scale neighborhood nodes that provide a range of neighborhood-serving retail, public amenities, and services to residents within walking distance of their homes.
	T-K-4:	Require construction of attractive pedestrian walkways and areas in new residential, commercial, office, and industrial developments. Provide landscaping or other appropriate buffers between sidewalks and heavily traveled vehicular traffic lanes, as well as through and to parking lots. Include pedestrian amenities to encourage and facilitate walking.	ED-1.1	Encourage job creation in the plan area, and enhance connections to allow Roseland residents to walk or bike to work within and outside the plan area.
			ED-1.2	Encourage local-serving retail especially on Sebastopol Road.
TCM E: Implement Pricing Strategies E-1: Value Pricing Strategies E-2: Promote Parking Pricing to Reduce Motor Vehicle Travel E-3: Implement Transportation Parking Reform	T-A-1:	Expand Transportation Systems Management programs for employers, and reduce peak hour single-occupancy automobile trips through the following techniques. • Promotion of transit service; • Staggering of work shifts; • Flextime (e.g. 9/80 work schedule); • Telecommuting; • Carpool and vanpool incentives; • Provision of bicycle facilities; • Trip reduction incentive programs; • Parking disincentives for single-occupant vehicles; and • Car sharing programs.	None	

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies	Specific Plan Policies
Land Use & Local Impact Measures		
LUM 1: Goods Movement LUM 4: Land Use Guidance	LUL-A: Foster a compact rather than a scattered development pattern in order to reduce travel, energy, land, and materials consumption while promoting greenhouse gas emission reductions citywide. LUL-A-1: As part of plan implementation—including development review, capital improvements programming, and preparation of detailed area plans—foster close land use/transportation relationships to promote use of alternative transportation modes and discourage travel by automobile. LUL-E: Promote livable neighborhoods by requiring compliance with green building programs to ensure that new construction meets high standards of energy efficiency and sustainable material use. Ensure that everyday shopping, park and recreation facilities, and schools are within easy walking distance of most residents. LUL-E-1: Provide new neighborhood parks and recreation facilities, elementary schools, and convenience shopping in accordance with the General Plan Land Use Diagram and Table 2-4. LUL-E-2: As part of planning and development review activities, ensure that projects, subdivisions, and neighborhoods are designed to foster livability. LUL-E-6: Allow residential or mixed use development in the Retail and Business Services or Office designations.	RN-1.1 Improve connections by creating new streets or extensions of existing streets, as identified in Figure 4-1 and Table 4-2. RN-1.4 Implement coordinated or adaptive signal timing along arterials to improve traffic flow, using intelligent transportation systems (ITS) strategies rather than roadway widening to maximize roadway efficiency, minimize congestion, and reduce greenhouse gas emissions. RN-1.5 Support the planned construction of a new US Highway 101 overpass at Bellevue Avenue and a widened overpass at Hearn Avenue to improve east–west multimodal connectivity to and from the Roseland area. PBN-1.2 Design streets to safely serve and accommodate all travel modes and users. PBN-2.2 Implement streetscape improvements resulting in attractive, functional streets with overall enhanced access, lighting, and safety for pedestrians, bicyclists, transit users, and motorists.

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies	Specific Plan Policies
Energy & Climate Measures		
ECM 1: Energy Efficiency ECM 2: Renewable Energy ECM 3: Urban Heat Island Mitigation ECM 4: Shade Tree Planting	H-G-1: Maximize energy efficiency in residential areas. Utilize the following techniques: • Implement CALGreen Tier 1 standards. • Fund energy conservation through the Housing Authority's rehabilitation loans. • Promote home improvement strategies for energy efficiency. • Promote energy efficiency improvements that are sensitive to the historic significance of the residential structure. • Consider a program that would require energy efficiency improvements when a residential structure undergoes transfer of title or major renovation. • Promote the Sonoma County Energy Independence Program, which funds energy and water conservation improvements. • Consider a program that requires energy audits and cost-effective energy upgrades for existing residential structures. H-G-2: Promote energy efficiency through site planning and building design by establishing a technical assistance program to aid residential developers in identifying energy conservation and efficiency measures appropriate to the Santa Rosa area. Measures may include: use of site daylight; solar orientation; cool roofs; window design and insulation; shade landscaping; solar water heaters; solar heating of swimming pools; bicycle and pedestrian connections; and mixed land uses to reduce vehicle trips. UD-A-13: Review guidelines for parking lot trees to ensure adequate summertime shading.	AH-1.1 Promote inclusion of second dwelling units in new and existing single-family neighborhoods to provide a smaller, more affordable housing option.

Bay Area 2010 Clean Air Plan Strategies	General Plan Policies	Specific Plan Policies
	OSC-K-1: Promote the use of site planning, solar orientation, cool roofs, and landscaping to decrease summer cooling and winter heating needs. Encourage the use of recycled content construction materials.	

As described in Section 3.14, Traffic and Transportation, the proposed project has been developed to support and expand upon current policies regarding alternative transportation. The project meets the goals of the Sonoma County Transportation Authority's Comprehensive Transportation Plan through policies designed to increase transit use through intensification of development around transit hubs, improve accessibility for pedestrians around activity centers, and support completion of the planned facilities outlined in the Countywide Bicycle and Pedestrian Master Plan (e.g., Specific Plan policies PBN-1.1, PBN 1.2, PBN-2.2, RN-1.5, RN-2.1, RN-2.3, RN3.1 through RN-3.4). The project also supports and/or strengthens the alternative transportation policies set forth in the City's General Plan and incorporates new alternative transportation facilities designated in the City's Bicycle and Pedestrian Master Plan. In addition, the proposed project would result in a beneficial impact to pedestrian and bicycle circulation. The proposed project includes new street and pathway connections that improve east–west circulation, enhanced connectivity to and within neighborhoods, and integration with the future multi-use paths along Roseland and Colgan creeks as well as the SMART corridor (see Figure 2.0-8 and Figure 2.0-10 in Section 2.0, Project Description). The proposed mix of land uses, combined with current uses, also creates a diverse environment with a concentration of housing, jobs, and shopping all within walking and bicycling distance of one another. As demonstrated in Section 3.14, Traffic and Transportation, multimodal levels of service for pedestrian and bicycle modes improve on at least a portion of every corridor analyzed with implementation of the project, and in many cases along the entire corridor.

As noted previously, the BAAQMD's 2010 Clean Air Plan includes various control strategies to reduce emissions of local and regional pollutants and promote public health and energy conservation. Consistent with the control strategies identified in the Clean Air Plan, the proposed project includes numerous provisions to reduce emissions of local and regional pollutants and to promote public health (see **Table 3.3-7**).

The proposed project supports the goals of the 2010 Clean Air Plan, as it includes applicable pollutant control mechanisms. Therefore, this impact is considered **less than significant**.

Mitigation Measures

None required.

Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation During Long-Term Operations (Standard of Significance 2)

Impact 3.3.2 Subsequent land use activities associated with implementation of the proposed project would not conflict with the Bay Area 2010 Clean Air Plan or result in vehicle miles traveled increases greater than the projected population increases over the project's planning period. Therefore, consistent with BAAQMD guidance, the project would not result in an air quality violation and this impact is **less than significant**.

As previously described, the BAAQMD CEQA Guidelines do not contain numeric thresholds related to criteria pollutant emissions resulting from plan implementation, such as the proposed project. According to the BAAQMD CEQA Guidelines, in order to ensure that the proposed project would violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation, the proposed project must demonstrate consistency with the control measures contained in the Bay Area 2010 Clean Air Plan and show that projected vehicle miles traveled (VMT) increases as a result of the proposed project are less than or equal to projected population increases over the project's planning period. As demonstrated in Impact 3.3.1, the proposed

project would be consistent with the 2010 Clean Air Plan. Therefore, the proposed project would be considered to have a less than significant impact if projected increases in VMT are less than or equal to projected increases in population growth. (Emissions resulting from operations within the project area at project buildout have been estimated for disclosure purposes.)

According to Section 3.12, Population and Housing, of this EIR, the proposed project would result in an estimated additional 9,662 residents over existing conditions by the year 2040 (5.5 percent more than analyzed in the General Plan EIR). Population within the project area and daily VMT estimates were based on existing 2016 conditions and buildout of the project area in 2040. **Table 3.3-8** identifies the VMT and population for the proposed project area.

TABLE 3.3-8
SUMMARY OF EXISTING AND 2040 BUILDOUT DAILY VEHICLE MILES TRAVELED AND SERVICE POPULATION IN PROJECT AREA

Metric/Variable	2016 (Existing Conditions)	Proposed Project 2040	Percentage Change
Daily VMT[1]	549,880	821,914	49.4%
Population[2]	19,341	29,003	49.9%
Are Increases in VMT Greater Than Increases in Population Compared with Existing Conditions?			**No**

*Source: [1] CalEEMod 2013.2.2 (see **Appendix 3.3**)*

[2] Population projections for existing conditions and the proposed project are derived from Section 3.12, Population and Housing.

In comparison to existing conditions, VMT attributable to the project is anticipated to increase 49.4 percent. The increase in population is estimated at 86.1 percent. As a result, VMT would increase at a lower rate than population growth in comparison to existing conditions, so this impact would be less than significant.

As shown, the proposed project is consistent with the 2010 Clean Air Plan and VMT would increase at a lower rate than population growth in comparison to existing conditions. This impact would be **less than significant**.

Mitigation Measures

None required.

Violate Air Quality Standard or Contribute Substantially to an Air Quality Violation During Short-Term Construction Activities (Standard of Significance 2)

Impact 3.3.3 The proposed project could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards. This impact is considered **potentially significant**.

Development allowed under the proposed project could include the construction of up to 3,702 homes and 913,814 square feet of nonresidential land uses. Emissions commonly associated with construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. During construction, fugitive dust, the dominant source of PM_{10} and $PM_{2.5}$ emissions, is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby.

Demolition and renovation of buildings can also generate PM_{10} and $PM_{2.5}$ emissions. Off-road construction equipment is often diesel-powered and can be a substantial source of nitrogen oxide (NO_X) emissions, in addition to exhaust PM_{10} and $PM_{2.5}$ emissions. Worker commute trips and architectural coatings are dominant sources of reactive organic gas (ROG) emissions.

Quantifying the air quality pollutant emissions from future, short-term, temporary construction activities allowed under the proposed project is not possible due to project-level variability and uncertainties related to future individual projects in terms of detailed site plans, construction schedules, equipment requirements, etc., which are not currently determined. However, depending on how development proceeds, construction-generated emissions associated with the project area could potentially exceed BAAQMD thresholds of significance. Therefore, future project-level analyses of air quality impacts will be conducted as needed on a case-by-case basis as individual, future development projects proceed. The BAAQMD has promulgated methodology protocols for the preparation of air quality analyses. For instance, the BAAQMD has adopted thresholds of significance depicting the approximate level of construction-generated emissions that would result in a potentially significant impact (i.e., violation of an ambient air quality standard) for each pollutant of concern in the SFBAAB. The significance criteria established by the BAAQMD may be relied upon to make a determination of impact significance level. In addition, the BAAQMD recommends appropriate emissions modeling input parameters for the air basin in addition to other recommended procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements.

Projects estimated to exceed BAAQMD significance thresholds are required to implement mitigation measures in order to reduce air pollutant emissions as much as feasible. Such measures could include the requirement that all construction equipment employ the use of the most efficient diesel engines available, which are able to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions by 60–90 percent (e.g., EPA-classified Tier 3 and/or Tier 4 engines[1]) and/or that construction equipment be equipped with diesel particulate filters. Furthermore, all development projects in the SFBAAB are subject to BAAQMD rules and regulations adopted to reduce air pollutant emissions. For example, BAAQMD Regulation 8, Rule 3, Architectural Coatings, limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the district. Regulation 8, Rule 15, Emulsified and Liquid Asphalts, limits the emissions of volatile organic compounds caused by the use of emulsified and liquid asphalt in paving materials and paving and maintenance operations.

[1] NOx emissions are primarily associated with use of diesel-powered construction equipment (e.g., graders, excavators, rubber-tired dozers, tractor/loader/backhoes). The Clean Air Act of 1990 directed the EPA to study, and regulate if warranted, the contribution of off-road internal combustion engines to urban air pollution. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the EPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the EPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 horsepower and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards.

On May 11, 2004, the EPA signed the final rule introducing Tier 4 emission standards, which are currently phased-in over the period of 2008-2015. The Tier 4 standards require that emissions of PM and NOx be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

In addition, Santa Rosa General Plan Policy OSC-J-1 requires dust abatement actions as contained in the BAAQMD CEQA Handbook. As a result of this policy provision, the City of Santa Rosa must ensure that the BAAQMD basic construction mitigation measures from Table 8-1 of the BAAQMD CEQA Air Quality Guidelines (or subsequent updates) are noted on the construction documents. These basic construction mitigation measures include the following:

1) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, unpaved access roads) shall be watered two times per day.

2) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4) All vehicle speeds on unpaved roads shall be limited to 15 mph.

5) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7) All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8) A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

As previously mentioned, the quantification of air quality emissions from short-term, temporary construction activities associated with the proposed project is not possible due to project-level variability and uncertainties related to future individual projects in terms of timing of development, site plan details, construction schedules, equipment requirements, etc. However, all construction projects can produce ozone precursors and nuisance dust emissions. Therefore, future project-level analyses of air quality impacts, in accordance with CEQA requirements, may be required to be conducted on a case-by-case basis as individual, future development projects allowed in the project area proceed.

While the BAAQMD has promulgated methodology protocols for the preparation of air quality analyses, and future development projects allowed under the project that are projected to exceed BAAQMD significance thresholds are required to implement mitigation measures in order to reduce air pollutant emissions as much as feasible, BAAQMD significance thresholds may still be exceeded during project construction. Since it cannot be guaranteed that construction of future projects allowed under the project would generate air pollutant emissions below BAAQMD significance thresholds due to the programmatic and conceptual nature of the proposed project and uncertainties related to future individual projects, this is considered a **potentially significant** impact.

Mitigation Measures

MM 3.3.3 Where projects in the project area are subject to subsequent CEQA review, the City of Santa Rosa must ensure that in addition to the BAAQMD basic construction mitigation measures from Table 8-1 of the BAAQMD CEQA Air Quality Guidelines (or subsequent updates), BAAQMD additional mitigation measures from Table 8-2 of the BAAQMD CEQA Air Quality Guidelines (or subsequent updates) are noted on the construction documents and implemented. These measures include the following:

1. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

2. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

3. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

4. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

5. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

6. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

7. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.

8. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

9. Minimizing the idling time of diesel powered construction equipment to two minutes.

10. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO_X reduction and 45 percent PM reduction compared to the most recent CARB fleet average.

11. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).

12. Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.

13. Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy duty diesel engines.

Timing/Implementation: *Implemented during construction activities for subsequent projects within the project area*

Enforcement/Monitoring: *City of Santa Rosa Planning and Economic Development Department, Planning Division*

Implementation of the above mitigation measure would reduce construction emissions from development under the project below BAAQMD thresholds. For instance, all construction allowed under the proposed project would be required to demonstrate that the off-road equipment to be used in the construction project would achieve a project wide fleet-average 20 percent NO_X reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and the use of late model engines. As previously described, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards and all off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards. Tier 3 engines reduce PM and NOx emissions by as much as 60 percent and Tier 4 standards require that emissions of PM and NOx be further reduced by about 90 percent. The availability of such emission reducing technology ensures that all future construction instigated under the project would be reduced to levels below BAAQMD thresholds and this impact is **less than significant**.

Expose Sensitive Receptors to Substantial Carbon Monoxide Pollutant Concentrations (Standard of Significance 3)

Impact 3.3.4 The proposed project would not contribute to localized concentrations of mobile-source CO that would exceed applicable ambient air quality standards. This is considered a **less than significant** impact.

The primary mobile-source criteria pollutant of local concern is carbon monoxide. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. CO disperses rapidly with distance from the source under normal meteorological conditions, so transport of this criteria pollutant is extremely limited. Under certain meteorological conditions, however, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak

commute hours.[2] Modeling is therefore typically conducted for intersections that are projected to operate at unacceptable levels of service during peak commute hours.

Based on BAAQMD guidance (BAAQMD 2011: Section 3-3), projects meeting all of the following screening criteria would be considered to have a less than significant impact on localized carbon monoxide concentrations:

1) The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

2) The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

According to the traffic impact analysis prepared for the project (W-Trans 2016, Figures 7 and 8, Tables 22 and 23; see **Appendix 3.14**), no intersection or freeway ramp would experience more than 44,000 vehicles per hour. Similarly, the project would not result in 24,000 vehicles per hour where vertical and/or horizontal mixing of pollutants and atmosphere is substantially limited (i.e., an enclosed parking structure). As a result, this impact would be considered **less than significant**.

Mitigation Measures

None required.

Expose Sensitive Receptors to Substantial Toxic Air Contaminant Concentrations During Construction (Standard of Significance 3)

Impact 3.3.5 The proposed project could result in increased exposure of existing or planned sensitive land uses to construction-source toxic air contaminant (TAC) emissions. This impact is considered **potentially significant**.

Sensitive land uses are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The project would result in the construction of new housing units and nonresidential square footage. Sources of construction-related TACs potentially affecting sensitive receptors include off-road diesel-powered equipment. Construction would result in the generation of diesel PM emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. Concentrations of mobile-source diesel

[2] Level of service (LOS) is a measure used by traffic engineers to determine the effectiveness of transportation infrastructure. Level of service is most commonly used to analyze intersections by categorizing traffic flow with corresponding safe driving conditions. LOS A is considered the most efficient level of service and LOS F the least efficient.

PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (CARB 2005). 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.

In the case of most construction projects that would occur in the project area, duration would be short term, lasting less than one year. According to the BAAQMD (2011), construction-generated diesel PM emissions contribute to negative health impacts when construction is extended over lengthy periods of time. The use of diesel-powered construction equipment during construction would be temporary and episodic and would occur in various locations isolated from one another. Furthermore, future development projects would be subject to and would comply with California regulations limiting idling to no more than 5 minutes, which would further reduce nearby sensitive receptors exposure to temporary and variable diesel PM emissions. Many of the individual construction projects would span small areas. Construction projects contained on a site of less than 5 acres are generally considered to represent less than significant health risk impacts due to (1) limitations on the off-road diesel equipment able to operate and thus a reduced amount of generated diesel PM, (2) the reduced amount of dust-generating ground disturbance possible compared to larger construction sites, and (3) the reduced duration of construction activities compared to the development of larger sites. For these reasons and because diesel fumes disperse rapidly over relatively short distances, diesel PM generated by most construction activities, in and of itself, would not be expected to create conditions where the probability of contracting cancer is greater than 10 in one million for nearby receptors. In addition, mitigation measure **MM 3.3.3** requires that off-road diesel-fueled equipment employed during construction activities be CARB Tier 3 Certified or better when construction activities are projected to exceed NO_X and PM thresholds. Implementation of this mitigation measure would reduce the emissions of toxic pollutants generated by heavy-duty diesel-powered equipment during larger-scale construction projects. Also, Santa Rosa General Plan Policy OSC-J-1 requires the employment of BAAQMD basic construction mitigation measures during all construction projects. These basic construction mitigation measures include actions that would substantially reduce nuisance fugitive dust.

Nonetheless, larger-scale construction projects may occur within the project area. Additionally, there is a potential for construction to occur in proximity to residential and other sensitive land uses, making this impact **potentially significant** and requiring the following mitigation.

Mitigation Measures

MM 3.3.5 Projects within the project area that have a construction area greater than 5 acres and which are scheduled to last more than two years shall be required to prepare a site-specific construction pollutant mitigation plan in consultation with Bay Area Air Quality Management District (BAAQMD) staff prior to the issuance of grading permits. A project-specific construction-related dispersion model acceptable to the BAAQMD shall be used to identify potential toxic air contaminant impacts, including diesel particulate matter. If BAAQMD risk thresholds (i.e., probability of contracting cancer is greater than 10 in one million) would be exceeded, mitigation measures shall be identified in the construction pollutant mitigation plan to address potential impacts and shall be based on site-specific information, such as the distance to the nearest sensitive receptors, project site plan details, and construction schedule. The City shall ensure construction contracts include all identified measures. Construction pollutant mitigation plan measures shall include but not be limited to limiting the amount of acreage to be graded in a single day, requiring the

use of advanced particulate filters on construction equipment, and requiring the use of alternative fuels, such as biodiesel, to power construction equipment.

Timing/Implementation: *Modeling shall be completed prior to grading permit issuance, and measures implemented during construction activities for subsequent projects with a construction area greater than 5 acres and construction lasting more than two years*

Enforcement/Monitoring: *City of Santa Rosa Planning and Economic Development Department, Planning Division*

As previously stated, implementation of mitigation measure **MM 3.3.3** requires the use of specified off-road construction equipment manufactured to Tier 3 standards or higher during all construction activities. Compared to current standards, Tier 3 standards for heavy-duty vehicles represent approximately a 60 percent reduction in per vehicle PM emissions compared with equipment that does not meet the Tier 3 standard (EPA 2014). Implementation of this mitigation measure would reduce the emissions of toxic pollutants generated by heavy-duty diesel-powered equipment during construction. Also, General Plan Policy OSC-J-1 requires that BAAQMD basic construction mitigation measures be employed. These basic construction mitigation measures include actions that would substantially reduce nuisance fugitive dust. Mitigation measure **MM 3.3.5** requires a site-specific analysis of large-scale construction projects (greater than 5 acres lasting longer than two years) for the potential for construction-generated air pollutant impacts based on specific project details of future development, and the development of adequate measures, in consultation with the BAAQMD, to reduce any such impacts below thresholds. As a result, implementation of these mitigation measures would reduce the impact to **less than significant**.

Expose Sensitive Receptors to Substantial Toxic Air Contaminant Concentrations During Operations (Standard of Significance 3)

Impact 3.3.6 The proposed project could result in the development of housing units (sensitive land uses) near stationary or mobile-source TACs. This impact is **potentially significant**.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs potentially affecting sensitive receptors include mobile sources, such as freeways and diesel locomotive trains. These mobile sources are sources of diesel PM, which CARB has listed as a toxic air contaminant. Sensitive receptors can also be exposed to stationary sources, such as gasoline stations, dry cleaners, certain manufacturing operations, and backup generators. There is a potential that future sensitive receptors in the project area could be exposed to TAC emissions from stationary and/or mobile sources, depending on location.

Mobile Sources

The primary mobile sources affecting the project area include the US 101 corridor and the SR 12 corridor. Per BAAQMD guidance, all other sources within 1,000 feet of a proposed sensitive receptor need to be identified and analyzed. According to the BAAQMD's (2012a) Highway Screening Analysis Tool, three segments of US 101 and two segments of SR 12 are located adjacent to the project area. These segments have been modeled for health risk by the BAAQMD. **Table**

3.3-9 identifies the $PM_{2.5}$ concentration, cancer risk, and non-cancer hazard index exposure at distances of 10 through 1,000 feet from the segments of US 101 and SR 12 in locations adjacent to the project area.

The BAAQMD CEQA Air Quality Guidelines consider exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard to be significant. Per BAAQMD guidance, all other sources within 1,000 feet of a proposed sensitive receptor need to be identified and analyzed. If emissions of TAC concentrations at a new sensitive receptor generated from all air toxics sources within a 1,000-foot radius result in the exceedance of an excess cancer risk level of more than 100 in one million, or a non-cancer hazard index greater than 10, the project would result in a significant impact.[3] The BAAQMD CEQA Guidelines also consider exposure to annual $PM_{2.5}$ concentrations that exceed 0.8 micrograms per cubic meter ($\mu g/m^3$) from all TAC sources within a 1,000-foot radius to be significant.

In addition to these existing mobile sources, the proposed project would include development of land uses close to the planned Sonoma-Marin Area Rail Transit (SMART) corridor. Health-related air quality risks associated with the planned operation of transit passenger trains were evaluated in the Sonoma-Marin Area Rail Transit Draft Environmental Impact Report (SMART 2005). As part of this analysis, a screening-level assessment was conducted using the SCREEN3 computer program to estimate hourly concentrations of diesel PM in $\mu g/m^3$. The screening-level assessment evaluated exposure of residents located along the SMART corridor. Train idling associated with regular passenger stops at the SMART station, idling associated with potential train layovers, and idling of shuttle buses at the station were also included in the assessment. Predicted concentrations obtained from the SCREEN3 computer model were converted to an annual average concentration by applying a factor of 0.08, consistent with EPA-recommended methodologies, which is considered to provide a conservative estimation of emissions concentrations. Potential cancer risks were calculated assuming an average exposure period of 70 years (SMART 2005).

Based on the analysis conducted for the SMART DEIR, predicted cancer risks along the SMART corridor was 0.6 in one million at 30 feet from the track (SMART 2005). Based on the analysis conducted for the SMART DEIR, increased exposure to pollutant concentrations along the planned SMART corridor and near the SMART station would be considered less than significant.

In addition to the evaluation of health-related air quality risks prepared in the Sonoma-Marin Area Rail Transit DEIR, the BAAQMD has modeled this planned railway for air quality health risk. According to the BAAQMD's (2015b) Railway Screening Analysis Tool, three separate railway segments traverse and are adjacent to the project area. **Table 3.3-10** identifies the $PM_{2.5}$ concentration, cancer risk, and non-cancer hazard index exposure at distances of 10 through 1,000 feet for each of the three railway segments traversing and adjacent to the project area.

[3] The Hazard Index is the ratio of the computed receptor exposure level to the level known to cause acute or chronic adverse health impacts, as identified by the BAAQMD.

TABLE 3.3-9
US HIGHWAY 101 AND STATE ROUTE 12 HEALTH RISK

Highway Segment	Health Risk Type[1]	Distance West (feet)										
		10	25	50	75	100	200	300	400	500	750	1,000
US 101 Link 654 *(just south of W. Third Street to SR 12 Interchange)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.45	0.33	0.23	0.17	0.14	0.07	0.04	0.02	0.01	0.01	0.00
	Cancer Risk (BAAQMD Threshold = 100)	50.02	36.96	25.97	19.85	15.90	8.06	4.79	3.14	2.22	1.17	0.75
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.05	0.04	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.05	0.04	0.03	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00
US 101 Link 651 *(just south of SR 12 Interchange to Nissan Auto Dealer)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.70	0.54	0.40	0.32	0.27	0.15	0.10	0.07	0.05	0.30	0.01
	Cancer Risk (BAAQMD Threshold = 100)	71.87	56.20	42.01	33.77	28.22	16.55	11.14	8.03	6.04	3.30	1.99
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.08	0.06	0.04	0.03	0.03	0.01	0.01	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.07	0.05	0.04	0.03	0.03	0.02	0.01	0.01	0.04	0.00	0.00
US 101 Link 652 *(Nissan Auto Dealer to Santa Rosa Avenue Off-Ramp)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.86	0.66	0.48	0.37	0.30	0.15	0.08	0.05	0.03	0.01	0.00
	Cancer Risk (BAAQMD Threshold = 100)	82.71	64.06	46.41	36.11	29.18	14.84	8.60	5.44	3.69	1.71	1.01
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.09	0.07	0.05	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.06	0.05	0.04	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.00
US 101 Link 619 *(Santa Rosa Avenue Off-Ramp to Rohnert Park)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.75	0.60	0.46	0.38	0.33	0.22	0.17	0.14	0.11	0.08	0.07
	Cancer Risk (BAAQMD Threshold = 100)	79.44	63.99	49.78	41.45	35.81	23.98	18.45	15.18	12.99	9.63	7.70
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.08	0.07	0.05	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.09	0.07	0.06	0.05	0.04	0.03	0.03	0.02	0.02	0.01	0.01

Highway Segment	Health Risk Type[1]	Distance West (feet)										
		10	25	50	75	100	200	300	400	500	750	1,000
SR 12 Link 653 *(Santa Rosa Avenue Off-Ramp to US 101 Interchange)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.20	0.16	0.12	0.09	0.08	0.04	0.03	0.02	0.01	0.00	0.00
	Cancer Risk (BAAQMD Threshold = 100)	16.24	12.94	9.78	7.85	6.52	3.75	2.46	1.74	1.31	0.74	0.48
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.04	0.03	0.03	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.00
SR 12 Link 645 *(US 101 Interchange to SMART Corridor)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.25	0.20	0.15	0.12	0.10	0.05	0.03	0.02	0.02	0.01	0.00
	Cancer Risk (BAAQMD Threshold = 100)	21.74	17.38	13.12	10.45	8.62	4.88	3.22	2.31	1.75	0.96	0.60
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.03	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00
SR 12 Link 639 *(SMART Corridor to Fulton Road)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.22	0.18	0.14	0.12	0.10	0.07	0.05	0.04	0.04	0.03	0.02
	Cancer Risk (BAAQMD Threshold = 100)	19.56	15.86	12.42	10.41	9.07	6.24	4.90	4.11	3.55	2.70	2.19
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.02	0.01	0.01	0.01	0.1	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.05	0.04	0.03	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.00

Source: BAAQMD 2015a

Note: [1] The BAAQMD thresholds are cumulative thresholds. The health risk from all local sources (i.e., stationary and mobile sources within a 1,000-foot radius) to a proposed new sensitive receptor would be added together and compared to these thresholds on a project-by-project basis.

TABLE 3.3-10
SMART CORRIDOR HEALTH RISK

Railway Segment	Health Risk Type[1]	Distance West (feet)										
		10	25	50	75	100	200	300	400	500	750	1,000
SMART Link 416 *(just north of 9th Street to just south of Marriot on 3rd Street)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (BAAQMD Threshold = 100)	3.06	2.42	1.85	1.50	.28	0.80	0.57	0.43	0.33	0.19	0.12
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SMART Link 418 *(just south of Marriot on 3rd Street to SR 12)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (BAAQMD Threshold = 100)	1.19	0.88	0.60	0.43	0.32	0.13	0.06	0.04	0.02	0.01	0.01
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SMART Link 410 *(SR 12 to Petaluma)*	$PM_{2.5}$ Concentration (BAAQMD Threshold = 0.8)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (BAAQMD Threshold = 100)	1.82	1.48	1.17	0.99	0.87	0.61	0.49	0.41	0.36	0.28	0.24
	Non-Cancer Chronic Hazard Index (BAAQMD Threshold = 10)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Acute Hazard Index (BAAQMD Threshold = 10)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: BAAQMD 2015b

Note: [1] The BAAQMD thresholds are cumulative thresholds. The health risk from all local sources (i.e., stationary and mobile sources within a 1,000-foot radius) to a proposed new sensitive receptor would be added together and compared to these thresholds on a project-by-project basis.

Stationary Sources

Stationary sources include but are not limited to refineries, gasoline dispensing facilities, dry cleaners, diesel internal combustion engines, natural gas turbines, crematories, landfills, waste water treatment facilities, hospitals, and coffee roasters. The BAAQMD CEQA Air Quality Guidelines recommend evaluation of risks for receptors located within 1,000 feet of TAC and $PM_{2.5}$ emission sources or at distances approved/recommended by the BAAQMD.

To aid in the identification and evaluation of stationary sources, the BAAQMD has provided maps that identify permitted stationary sources, as well as the cancer risk, chronic non-cancer hazard index, and $PM_{2.5}$ concentration associated with these sources. It is important to note that the health risks and $PM_{2.5}$ concentrations identified for these sources were calculated using a highly conservative screening methodology. Actual risks for nearby sensitive receptors would be significantly lower than those identified. Furthermore, these stationary sources are subject to the BAAQMD's permitting requirements. As part of the BAAQMD's permitting requirements, sources having the potential to emit localized concentrations of pollutants are required to implement measures designed to ensure that potential health risks to nearby existing receptors are reduced.

There are 34 identified stationary sources of TACs both in, and within 1,000 feet of, the project area. However, only 13 of these sources emit quantifiable amounts of TACs. **Table 3.3-11** provides a summary of these 13 stationary sources identified in, and within 1,000 feet of, the project area, as well as the cancer risk, $PM_{2.5}$ concentration, and non-cancer hazard index associated with these sources. The cancer risk, $PM_{2.5}$ concentration, and non-cancer hazard index associated with each source is identified both at the source itself, and at varying distances from the source, up to 1,000 feet. Source and risk data were obtained from the BAAQMD's (2012b) Stationary Source Screening Analysis Tool. The BAAQMD calculated identified cancer risks, pollutant concentrations, and non-cancer hazards based on conservative modeling parameters and assumptions and do not take into account site-specific conditions. As a result, actual risks and pollutant concentrations would be expected to be substantially lower. When the pollutant source is identified as a gasoline dispenser or a diesel-powered backup generator, the BAAQMD's Distance Adjustment Multiplier Tool [Gasoline Dispensing Facility & Diesel Internal Combustion Engine] is applied.

As shown of **Table 3.3-11**, of the stationary sources identified, one is estimated to have predicted cancer risks in excess of the BAAQMD's risk thresholds only at the source itself, while three exceed the cancer risk threshold up to a distance of approximately 100 feet from the source. One source exceeds the cancer risk threshold up to a distance of approximately 200 feet. (See **Appendix 3.3** for a list of all 34 stationary sources of TACs located in, and within 1,000 feet of, the project area.)

TABLE 3.3-11
STATIONARY SOURCE HEALTH RISK

Facility Number, Name & Address	Health Risk Type[1]	Distance (feet)							
		At source (< 100)	100	200	300	400	500	750	1,000
G9819 – Quick Stop #35 816 McMinn Avenue Source Type: Gasoline Dispensing	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cancer Risk (Single Source Threshold = 10)	9.56	5.34	1.87	0.99	0.63	0.44	0.22	0.14
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18573 – Exxon Mobile Oil Corp 565 Sebastopol Road Source Type: Gasoline Dispensing	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (Single Source Threshold = 10)	0.67	0.37	0.13	0.06	0.04	0.03	0.01	0.01
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G7228 – Unocal #4320 370 Sebastopol Road Source Type: Gasoline Dispensing	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cancer Risk (Single Source Threshold = 10)	21.23	11.86	4.17	2.21	1.40	0.97	0.48	0.31
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G12304 – Dutton Shell 255 Dutton Avenue Source Type: Gasoline Dispensing	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (Single Source Threshold = 10)	26.34	14.72	5.17	2.74	1.73	1.21	0.60	0.39
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
17692 – Equilon Enterprises LLC. 255 Dutton Avenue Source Type: No Data	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (Single Source Threshold = 10)	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Facility Number, Name & Address	Health Risk Type[1]	Distance (feet)							
		At source (< 100)	100	200	300	400	500	750	1,000
16288 – Chevron Environmental Co. 1075 Santa Rosa Avenue Source Type: No Data	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (Single Source Threshold = 10)	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G10583 – Fast Gas & Market 1410 Santa Rosa Avenue Source Type: Gasoline Dispensing	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cancer Risk (Single Source Threshold = 10)	17.00	9.50	3.34	1.77	1.12	0.78	0.39	0.25
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
18271 – Council of Aging 30 Kawana Springs Road Source Type: Backup Generator	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (Single Source Threshold = 10)	21.15	15.43	8.67	5.28	3.38	2.53	1.48	0.84
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.00
G11902 – 7-Eleven #33277 2648 Santa Rosa Avenue Source Type: Gasoline Dispensing	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cancer Risk (Single Source Threshold = 10)	4.74	2.64	0.93	0.49	0.31	0.21	0.10	0.07
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G7711 – Corby Avenue Shell 2575 Corby Avenue Source Type: Gasoline Dispensing	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cancer Risk (Single Source Threshold = 10)	3.82	2.13	0.75	0.39	0.25	0.17	0.08	0.05
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G8645 – A&M Mini Market 440 Hearn Avenue Source Type: Gasoline Dispensing	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cancer Risk (Single Source Threshold = 10)	92.19	51.53	18.11	9.61	6.08	4.25	2.12	1.37
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.08	0.04	0.01	0.00	0.00	0.00	0.00	0.00

Facility Number, Name & Address	Health Risk Type[1]	Distance (feet)							
		At source (< 100)	100	200	300	400	500	750	1,000
16175 – Verizon Wireless 3001 Corby Avenue Source Type: Backup Generator	$PM_{2.5}$ Concentration (Single Source Threshold = 0.3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cancer Risk (Single Source Threshold = 10)	4.53	3.30	1.85	1.13	0.72	0.54	0.31	0.18
	Non-Cancer Hazard Index (Single Source Threshold = 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: BAAQMD 2012b, 2012c

Note: [1] The BAAQMD thresholds are single-source thresholds, i.e.,10 in one million for cancer risk, 0.3 µg/m³ for $PM_{2.5}$ concentration, and 1.0 for non-cancer hazard index. However, the health risk from all local sources (i.e., stationary and mobile sources within a 1,000-foot radius) to a proposed new sensitive receptor would be added together and compared to cumulative thresholds (100 in one million for cancer risk, 0.8 µg/m³ for $PM_{2.5}$ concentration, and 10 for non-cancer hazard index) on a project-by-project basis.

As previously stated, BAAQMD guidance recommends that all other sources within 1,000 feet of a proposed sensitive receptor be identified and analyzed. **Table 3.3-9** identifies the $PM_{2.5}$ concentration, cancer risk, and non-cancer hazard index exposure at distances of 10 through 1,000 feet from the portions of US 101 and SR 12 adjacent to the project area. **Table 3.3-10** identifies the $PM_{2.5}$ concentration, cancer risk, and non-cancer hazard index exposure at distances of 10 through 1,000 feet from the portions of the planned SMART corridor traversing and adjacent to the project area. **Table 3.3-11** identifies the $PM_{2.5}$ concentration, cancer risk, and non-cancer hazard index exposure at the sites of permitted stationary sources in and around the project area, as well as at distances from 100 through 1,000 feet (also see **Appendix 3.3**).

The impact of these sources on future sensitive receptors in the project area can only be addressed on a project-by-project basis, since impacts are generally localized and specific development projects have not yet been proposed. Subsequent analysis for specific development proposals within the project area can rely on **Tables 3.3-9** through **3.3-11** to identify the health risk at the proposed receptor. The health risk from all local sources (i.e., stationary and mobile sources within a 1,000-foot radius) to a proposed new sensitive receptor would be added together and compared to these thresholds on a project-by-project basis. **Tables 3.3-9** through **3.3-11** are based on BAAQMD health risk screening tools intended to assist with air quality analyses. The BAAQMD health risk screening tools interface with Google Earth to allow a user to identify stationary, freeway, and train sources within 1,000 feet of a receptor (BAAQMD 2012a, 2012b, 2015b). In addition to source identification, the tools identify conservative screening levels of cancer risk, non-cancer hazards, and $PM_{2.5}$ concentrations. TAC sources that show the potential for significant community risk impacts after this first level of review are further analyzed by contacting the BAAQMD for additional information and applying distance adjustment factors. A refined modeling analysis would be required if there are sources that still have potentially significant impacts after this level of review. A refined analysis would include dispersion modeling of the source using emissions and source information provided by the BAAQMD. If the source still has significant community risk impacts following this level of effort, the development project would be required to implement risk reduction strategies on a case-by-case basis.

Sensitive receptors can also be exposed to toxic air contaminant concentrations from future nonresidential land uses proposed by the project. For instance, development projects that involve numerous heavy-duty truck trips on-site create substantial quantities of diesel PM emissions and therefore can negatively affect sensitive land uses. According to CAPCOA's (2009) Health Risk Assessments for Proposed Land Use Projects, operations that require fewer than 100 delivery trucks daily are not considered a potential health risk. It is anticipated that the majority of nonresidential land uses developed in the project area would generate less than 100 delivery truck trips daily.

Because portions of the project area include sources of air toxics that could exceed established health criteria, this would be considered a **potentially significant** impact. The following mitigation is required in order to protect sensitive receptors in the project area from substantial concentrations of air toxics.

Mitigation Measures

MM 3.3.6 The following measures shall be utilized in site planning and building designs to reduce TAC and $PM_{2.5}$ exposure where new receptors are located within 1,000 feet of emissions sources:

- Future development in the project area that includes sensitive receptors (such as residences, schools, hospitals, daycare centers, or retirement homes) located within 1,000 feet of US 101, SR 12 and/or stationary sources shall require site-specific analysis to determine the level of health risk. This analysis shall be conducted following procedures outlined by the BAAQMD. If the site-specific analysis reveals significant exposures from all sources (i.e., health risk in terms of excess cancer risk greater than 100 in one million, acute or chronic hazards with a hazard Index greater than 10, or annual $PM_{2.5}$ exposures greater than 0.8 $\mu g/m^3$), measures shall be employed to reduce the risk to below the threshold (e.g., electrostatic filtering systems or equivalent systems and location of vents away from TAC sources).

- Future nonresidential developments projected to generate more than 100 heavy-duty truck trips daily and/or include the need for a BAAQMD permit to operate a stationary source shall include measures to protect public health to ensure they do not cause a significant health risk in terms of excess cancer risk greater than 10 in one million, acute or chronic hazards with a Hazard Index greater than 1.0, or annual $PM_{2.5}$ exposures greater than 0.3 $\mu g/m^3$.

  Timing/Implementation: *Prior to issuance of building permits*

  Enforcement/Monitoring: *City of Santa Rosa Planning and Economic Development Department, Planning Division*

Implementation of mitigation measure **MM 3.3.6** in addition to BAAQMD permitting requirements would ensure that adequate measures and associated performance standards are in place to mitigate this impact to **less than significant**.

Expose Sensitive Receptors to Odorous Emissions (Standard of Significance 4)

Impact 3.3.7 Future development within the project area would not result in exposure of sensitive receptors to substantial odorous emissions. This impact is considered **less than significant**.

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact. Land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, asphalt batch plants, agricultural feedlots, and dairies. Short-term construction activities may also result in localized increases of odorous emissions. Short- and long-term increases in localized concentrations of odors are discussed below.

Short-Term Exposure to Odors

Construction within the project area is not anticipated to expose nearby receptors to objectionable odors. Construction-generated odors are typically associated with exhaust emissions from diesel-fueled equipment and the application of architectural coatings and paving materials, which may be considered objectionable to some individuals. However, because construction-related odors would be intermittent, temporary, and would disperse rapidly with distance from the source, construction-related odors would not result in the frequent exposure of a substantial number of individuals to objectionable odors. It is also important to note that projects developed as part of the project would be required to comply with BAAQMD Regulation 8, Rule 3, Architectural Coatings, and Rule 15, Emulsified Asphalt, which establish volatile organic compound (VOC) content limits for these construction materials. VOCs are the main sources of odors from these sources. Therefore, compliance with these regulatory requirements would further reduce odor impacts associated with these sources. Short-term exposure to odorous emissions would therefore be considered **less than significant.**

Long-Term Exposure to Odors

Residential, institutional, office, and commercial land uses are not considered major sources of odorous emissions. However, the project would also allow for the development of industrial land uses, which have the potential to produce odorous emissions during operation. Responses to odors are subjective and vary by individual and type of use. Sensitive land uses that include outdoor uses, such as residences, are likely to be affected most by odors. Compliance with policies in the Santa Rosa General Plan would reduce the exposure of additional people to odors. For instance, General Plan Land Use Element Policy LUL-K-1 requires industrial development adjacent to residential areas to provide buffers and institute setback, landscaping, and screening requirements to minimize compatibility-related impacts. Housing Element Policy H-A-3 seeks to discourage intrusion of incompatible uses into residential neighborhoods that would erode the character of established neighborhoods or lead to use conflicts. Adherence to City Design Guidelines would also reduce the exposure of people to odors. The City Design Guidelines provide direction to designers as well as establish criteria for review of projects. The purpose of the Design Guidelines is to provide a clear set of design policies to project sponsors such as developers, property owners, architects, designers, and public agencies. These are the primary design criteria which the City staff, boards and commissions, and the City Council will use to evaluate project proposals. These guidelines apply to all projects that require design review, including development in the project area. The City Design Guidelines ensure all new development in the project area would incorporate adequate transition areas between industrial and residential development in order to buffer neighborhoods from odors. City Code Section 20-30.090(J) also regulates odors, which requires that no obnoxious odor or fumes shall be emitted that are perceptible without instruments by a reasonable person at the property line of the site.

Additionally, potential odor sources are located throughout the city that could affect new sensitive receptors. While no existing major stationary sources of odors have been identified in the project area, an existing asphalt batch plant is located at 1060 Maxwell Drive, south of College Avenue (approximately 0.8 miles north of the project area). The BAAQMD CEQA Air Quality Guidelines include recommended odor screening criteria for the evaluation of various odor-generating facilities. According to these screening criteria, receptors located within approximately 2 miles of an asphalt batch plant, which would include land uses located in the project area, could be adversely affected. The BAAQMD has not received odor-related complaints for this facility, but the City has received complaints. The proposed project would not contribute to odors at the asphalt batch plant. Therefore, the project's impact with regard to long-term exposure to odorous emissions would be considered **less than significant**.

Mitigation Measures

None required.

3.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

The cumulative setting for air quality includes Santa Rosa and the San Francisco Bay Area Air Basin. The SFBAAB is designated as a nonattainment area related to the state standards for ozone, PM_{10}, and $PM_{2.5}$ in addition to federal ozone and $PM_{2.5}$ standards. The basin is designated as being unclassified and/or attainment for all other pollutants. Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards. Thus, the setting for this cumulative analysis consists of the SFBAAB and associated growth and development anticipated in the air basin.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Air Quality Impacts (Standard of Significance 5)

Impact 3.3.8 The proposed project, in combination with cumulative development in the SFBAAB, could result in a significantly cumulative increase of criteria air pollutants for which the air basin is designated nonattainment. This would be a significant cumulative impact, and the project's contribution to the impact would be considered **cumulatively considerable**.

By its very nature, air pollution is largely a cumulative impact. According to the BAAQMD, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. According to the BAAQMD, if a project exceeds its identified significance thresholds, the project's impact would be cumulatively considerable (BAAQMD 2011). As stated under Impact 3.3.3, it cannot be guaranteed, despite mitigation, that construction of subsequent projects allowed under the proposed project would generate air pollutant emissions below BAAQMD significance thresholds because of the programmatic and conceptual nature of the proposed project and uncertainties related to future subsequent projects. Therefore, significant cumulative impacts would result and the project's contribution to those impacts would be **cumulatively considerable**.

Mitigation Measures

Implementation of mitigation measure **MM 3.3.3** and compliance with General Plan Policy OSC-J-1 would likely mitigate most construction emissions from development in the project area. However, the extent of construction that may occur in any specific period of time is currently unknown to determine whether the above mitigation measures would fully mitigate this temporary impact below BAAQMD thresholds. Therefore, the project's contribution to this impact is **significant and unavoidable.**

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3.4 Biological Resources

3.4.1 EXISTING SETTING

The Roseland Area/Sebastopol Road Specific Plan and the Annexation areas (together identified as the project area) are located in Santa Rosa, California. The project area is generally bounded by State Route (SR) 12 to the north, Bellevue Avenue to the south, US Highway 101 (US 101) to the east, and Stony Point Road to the west, but also includes three small pockets just outside those boundaries. Elevations in the project area range from 105 to 135 feet above mean sea level (amsl). The proposed project includes annexation of all existing unincorporated islands in southwestern Santa Rosa. An unincorporated island is defined as an area of unincorporated land that is substantially surrounded by city land. There are five such areas in southwestern Santa Rosa, two located within the area of the Roseland Area/Sebastopol Road Specific Plan and three located outside the plan area.

WILDLIFE AND PLANT COMMUNITIES

The plant and land use communities occurring in the project area are discussed below. The discussion includes species that may not have been specifically identified in current surveys, but which nevertheless may be expected to occur in the project area. The project area is highly urbanized. Habitat that occurs in the project area include non-native annual grassland, riparian woodland, vernal pool complexes, aquatic channels, and urban development. Vegetation and land use communities are shown in **Figure 3.4-1.**

Non-Native Annual Grassland

Aside from developed areas, non-native grassland is the dominant community in the project area. The dominant species are mostly annuals and include filaree (*Erodium moschatum*), hare barley *(Hordeum gussoneanum* ssp. *leprinum)*, and rip-gut brome (*Bromus diandrus*). Other species include common chickweed (*Stellaria media*), white clover (*Trifolium repens*), and subterranean clover (*Trifolium subterraneum*).

Many of the grasslands in the project area may contain some ruderal species and may be the remains of old agricultural fields. Rural residential, with the exception of buildings and driveways, are also mapped as non-native grasslands.

Grasslands attract reptiles and amphibians such as western fence lizard (*Sceloperus occidentalis*), common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalis viridis*). Bird species commonly found in non-native grassland include California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), and western meadowlark *(Sturnella neglects*). Grasslands are common foraging habitat for aerial birds and ground foraging species such as *Myotis* bat species and pallid bats (*Antrozous pallidus*). Mammals and small rodents that may occur in this community include coyote (*Canis latrans*), black-tailed deer (*Odocoileus hemionus columbianus*), California ground squirrel (*Spermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*). Red-tailed hawk (*Buteo jamaicensis*) and other birds of prey may forage on smaller wildlife species in grasslands.

Riparian Woodland

Portions of Roseland Creek in the project area are surrounded by riparian woodland. Species in this community could include buckeye (*Aesculus* sp.), valley oak (*Quercus lobata*), coast live oak (*Q. agrifolia*), and snowberry *(Symphoricarpos albus* var. l*aevigatus*). Other species that may occur include blue elderberry (*Sambucus mexicana*), box elder (*Acer negundo*), Oregon ash (*Fraxinus latifolia*), Fremont cottonwood (*Populus fremontii*), and willows (*Salix* spp.).

A variety of birds could forage in the riparian habitat including Bewick's wren (*Thryomanes bewickii*), black phoebe (*Sayornis nigricans*), white-breasted nuthatch *(Sitta carolinensis*), bushtit (*Psaltriparus minimus*), oak titmouse (*Baeolophus inornatus*), and belted kingfisher (*Megaceryle alcyon*). A variety of other species may occur in this community, including western toad (*Anaxyrus boreas*), Pacific tree frog (Pseudacris regilla), Virginia opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*). A variety of mammal species may use this community, including mountain lion (*Puma concolor*), black-tailed deer, and bobcat (*Lynx rufus*). Sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), and a variety of other raptors could use riparian woodland for nesting.

Vernal Pool Complexes

Vernal pools are seasonal wetlands that generally occur in grasslands and are typically located in slight depressions that form over bedrock or hardpan soils that allow water to pool during winter and spring rains. Although vernal pools occur naturally in grassland and woodland settings, they may also occupy disturbed locations where the underlying soils conditions remain intact or where disturbance has resulted in soil compaction.

Vegetation in undisturbed vernal pools is typically characterized by native annual species that are capable of completing their life cycles by producing viable seed in a variable habitat that is ponded at times and dry at others. Common vernal pool species in the project area include fringed downingia (*Downingia concolor*), spiny coyote thistle (*Eryngium armatun*), sedge species (*Eleochris* ssp.), and California goldfields (*Lasthenia californica*).

Vernal pools provide seasonal aquatic habitat for invertebrates and tree frogs and are temporary water sources for birds and terrestrial wildlife. They are habitat for the federally and state listed California tiger salamander (*Ambystoma californiense*).

Channels

Two creeks flow through the project area. Roseland Creek is an ephemeral stream that surfaces from an outfall west of the Northern Pacific Railroad. It then flows southwest through the project area, exiting at the midpoint of the western boundary. Colgan Creek flows under US 101 at the eastern boundary of the project area and continues southwesterly through the project area. Species that may occur in the channels include California freshwater shrimp (*Syncaris pacifica*), western pond turtle (*Emys marmorata*), and western toad.

Urban

The project area is primarily residential development with some commercial and industrial uses. Urban development is typically dominated by ornamental landscaping, which can provide habitat for a variety of wildlife species that are adapted to human habitation, such as raccoons and Virginia opossums. Other species include mourning dove, European starling (*Sturnus vulgaris*), and American robin (*Turdus migratorius*). Some bat species, including *Myotis* spp., pallid bat, and Townsend's big-eared bat (*Corynorhinus townsendii*), could roost in larger trees and buildings.

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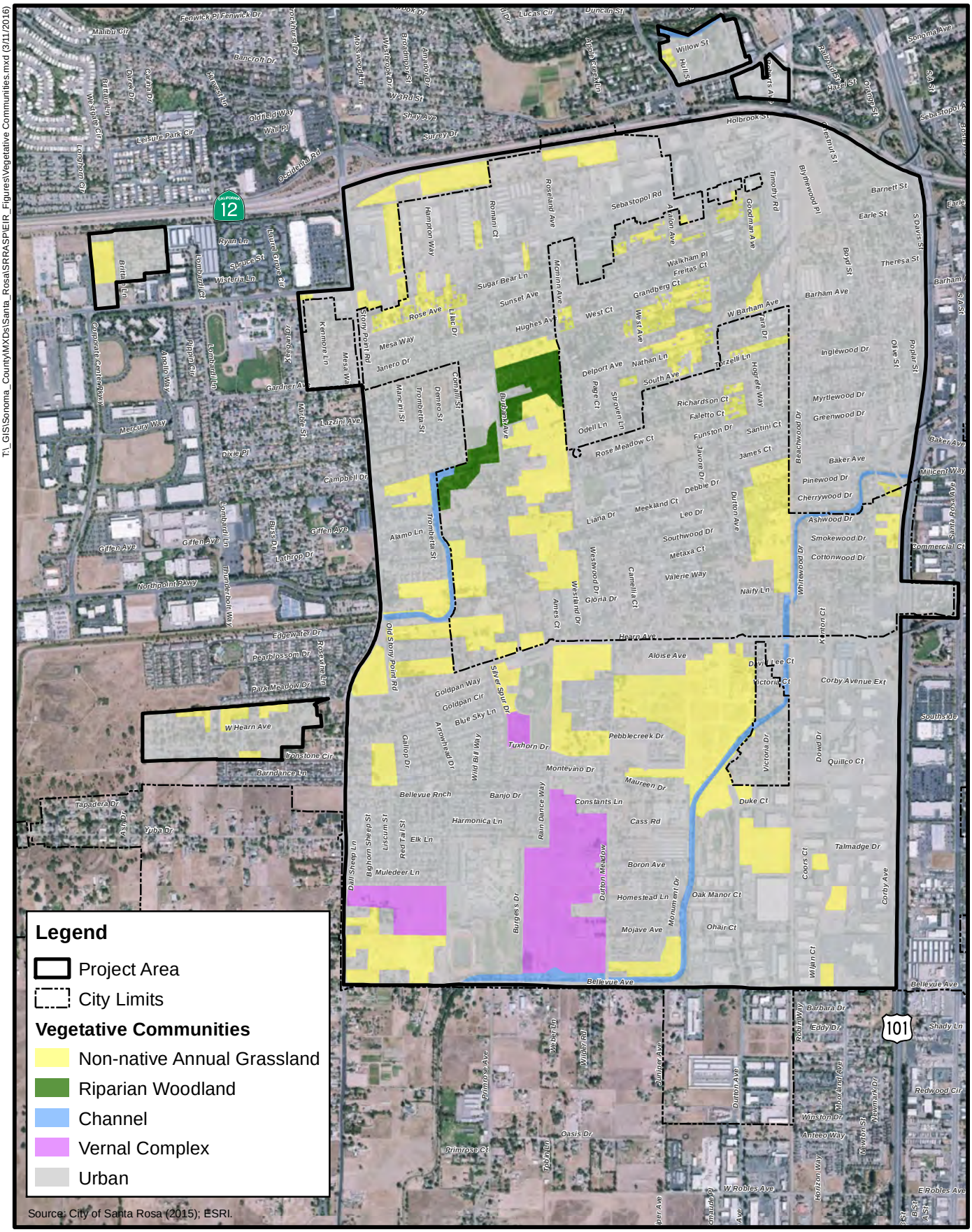

FIGURE 3.4-1
Vegetative Communities

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Special-Status Species

The following discussion describes the plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are described as:

- Listed or proposed for listing under the state or federal Endangered Species Acts
- Protected under other regulations (e.g., Migratory Bird Treaty Act [MBTA])
- California Department of Fish and Wildlife (CDFW) Species of Special Concern
- Listed 1 or 2 (rare or endangered) by the California Native Plant Society (CNPS) or the US Fish and Wildlife Service (USFWS)
- Receive consideration during environmental review under CEQA

Special-status species were considered for this analysis based on known habitat in the project area, a review of the California Natural Diversity Database (CNDDB) (CDFW 2016a), a review of the USFWS lists for special-status species occurring in the region (USFWS 2016), and CNPS literature (CNPS 2016) (**Appendix 3.4**). All CNDDB occurrences for wildlife are shown in **Figures 3.4-2,** and special-status plant species are shown in **Figure 3.4-3.** Table 3.4-1 identifies the species shown in Figures 3.4-2 and 3.4-3. **Appendix 3.4** identifies the special-status species and indicates the potential for the species to occur in the project area. Species listed as having no potential for occurrence are species either not expected to occur based on the known range of the species or not expected to occur based on the lack of suitable habitat in the project area.

Plants

A variety of special-status plants have the potential to occur in the vernal pool complexes and grasslands in the project area. Focused special-status plant surveys conducted during the blooming period would be needed to determine the presence or absence of these species. These plants include the species discussed below.

Baker's Navarretia

Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*) is a species listed as 1B.1 by the CNPS. This species is generally found in vernal pools and swales; it blooms between April and July (CNPS 2016). The vernal pool complexes provide suitable habitat for this species, and there are multiple occurrences for this species west of the project area (CDFW 2016a).

Burke's Goldfield

Burke's goldfield (*Lasthenia burkei*) is a federal and state endangered species and is listed as 1B.1 by the CNPS. This species grows in vernal pool and swales; it blooms between April and June (CNPS 2016). The vernal pool complexes provide suitable habitat for this species, and there are multiple occurrences for this species within 5 miles of the project area (CDFW 2016a).

Congested-Headed Hayfield-Tarplant

Congested-headed hayfield-tarplant (*Hemizonia congesta*) is a species listed as 1B.2 by the CNPS. This species is found in valley and foothill grasslands and on roadsides (CNPS 2016). The grasslands provide suitable habitat for this species, and there are multiple occurrences within 5 miles of the project area (CDFW 2016a).

Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is a species listed as 2.2 by the CNPS. This species is found in mesic grasslands and vernal pools; it blooms between March and May (CNPS 2016). The vernal pool complexes in the project area provide suitable habitat for this species, and there are multiple occurrences for this species within 5 miles of the project area (CDFW 2016a).

Legenere

Legenere (*Legenere limosa*) is a species listed as 1B.1 by the CNPS. This species is found in vernal pools; it blooms between April and June (CNPS 2016). The vernal pool complexes in the project area provide suitable habitat for this species, and there is an occurrence within 1 mile of the project area (CDFW 2016a).

Many-Flowered Navarretia

Many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*) is a state and federally listed species. This species is found in vernal pools; it blooms between May and June (CNPS 2016). The vernal pool complexes in the project area provide suitable habitat for this species; there are no occurrences within 5 miles of the project area (CDFW 2016a).

Saline Clover

Saline clover (*Trifolium hydrophilum*) is a species listed as 1B.2 by the CNPS. This species is found in valley and foothill grasslands and vernal pools; it blooms between April and June (CNPS 2016). The vernal pool complexes provide suitable habitat for this species, and there is one occurrence for this species in the project area (CDFW 2016a).

Sebastopol Meadowfoam

Sebastopol meadowfoam (*Limnanthes vinculans)* is a federal and state endangered species and is listed as 1B.1 by the CNPS. This species is found in vernal pools; it blooms between April and May (CNPS 2016). The vernal pool complexes provide suitable habitat for this species, and there are multiple CNDDB occurrences for this species within 5 miles of the project area (CDFW 2016a).

Showy Indian Clover

Showy Indian clover (*Trifolium amoenum*) is a federally endangered species and is listed as 1B.1 by the CNPS. This species is found in valley and foothill grasslands; it blooms from April through June (CNPS 2016). The grasslands in the project area provide suitable habitat, and there are multiple occurrences in the vicinity of the project area (CDFW 2016a).

Sonoma Sunshine

Sonoma sunshine (*Blennosperma bakeri)* is a federal and state endangered species and it is listed as 1B.1 by the CNPS. This species is found in valley grasslands and vernal pools; it blooms between March and May (CNPS 2016). The vernal pool complexes provide suitable habitat for this species, and there are multiple CNDDB occurrences for this species southeast of the project area (CDFW 2016a).

Two-Forked Clover

Two-forked clover (*Trifolium amoenum)* is a federally endangered species and is listed as 1B.1 by the CNPS. This species is found in valley and foothill grasslands; it blooms from April through June (CNPS 2016). The grasslands in the project area provide suitable habitat, and there are multiple occurrences in the vicinity of the project area (CDFW 2016a).

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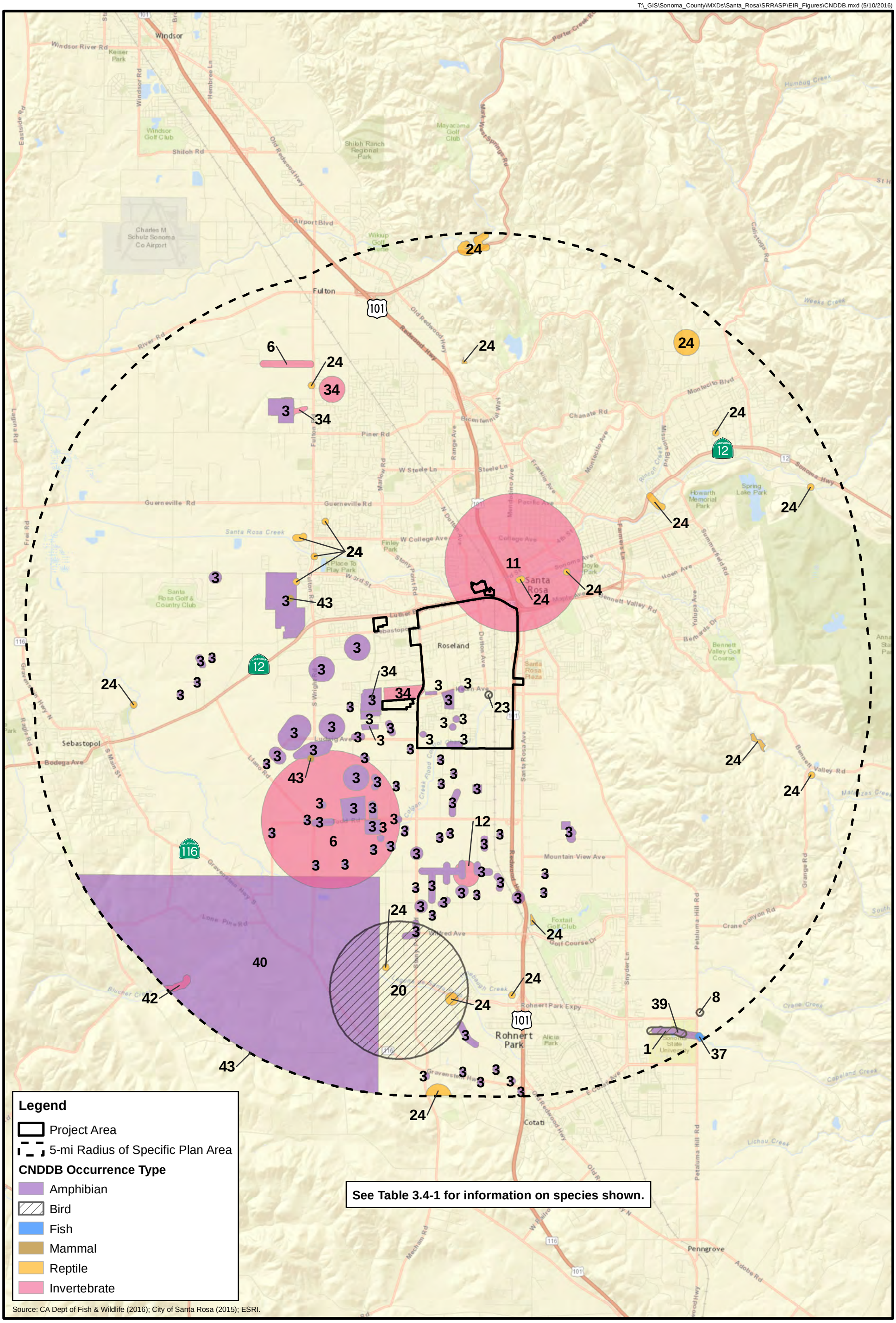

FIGURE 3.4-2
CNDDB Occurrences of Special-Status Species
Within 5 Miles of Project Area

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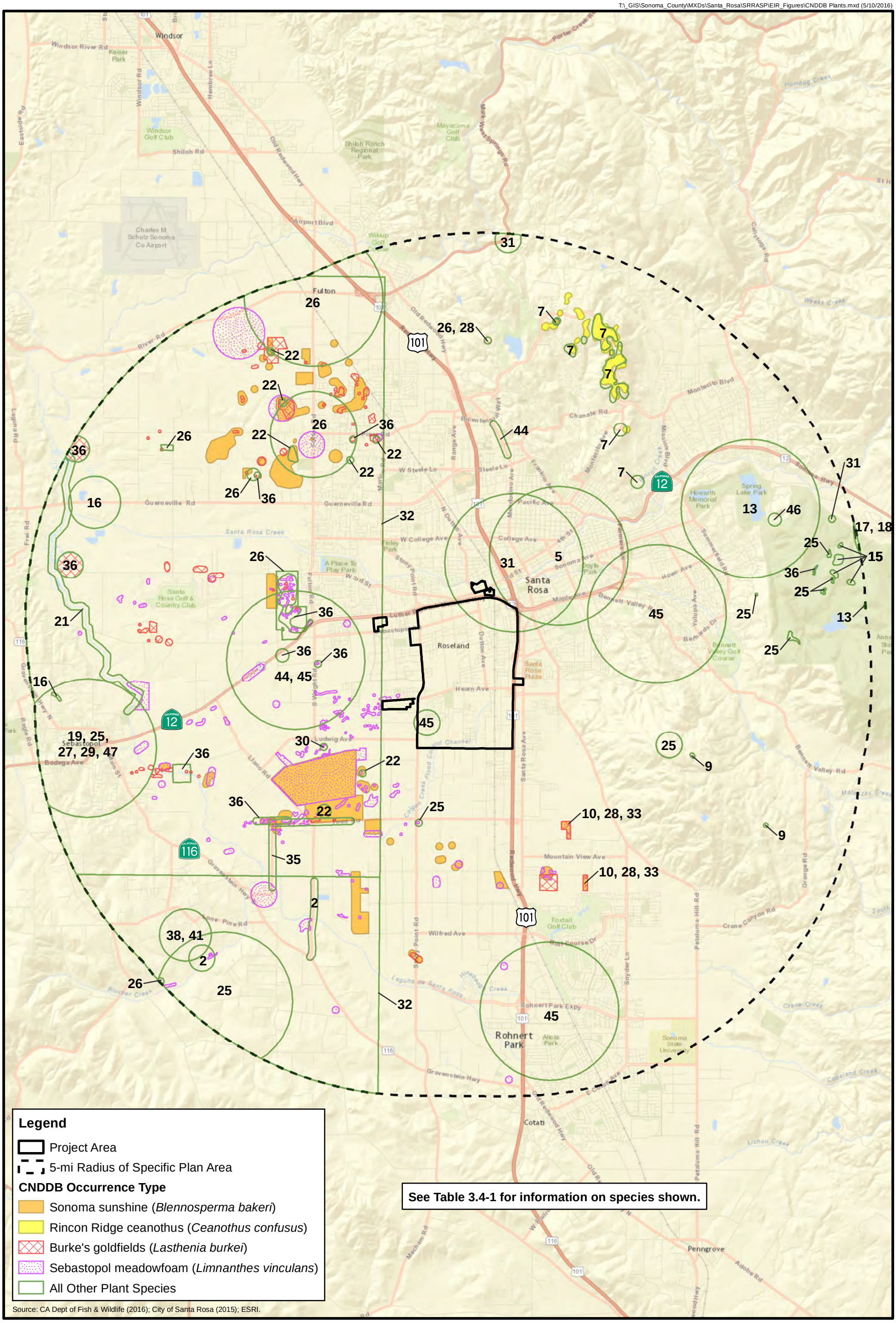

FIGURE 3.4-3
CNDDB Occurrences of Special-Status Species
Within 5 Miles of Project Area

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TABLE 3.4-1: KEY TO CNDDB SPECIAL-STATUS WILDLIFE AND PLANT OCCURRENCES SHOWN IN FIGURES 3.4-2 AND 3.4-3

Map ID	Scientific Name	Common Name	Federal Listing	State Listing	Rare Plant Rank
1	*Agelaius tricolor*	tricolored blackbird	None	None	
2	*Alopecurus aequalis var. sonomensis*	Sonoma alopecurus	Endangered	None	1B.1
3	*Ambystoma californiense*	California tiger salamander	Threatened	Threatened	
4	*Amorpha californica var. napensis*	Napa false indigo	None	None	1B.2
5	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	1B.2
6	*Andrena blennospermatis*	Blennosperma vernal pool andrenid bee	None	None	
7	*Arctostaphylos stanfordiana ssp. decumbens*	Rincon Ridge manzanita	None	None	1B.1
8	*Athene cunicularia*	burrowing owl	None	None	
9	*Balsamorhiza macrolepis*	big-scale balsamroot	None	None	1B.2
10	*Blennosperma bakeri*	Sonoma sunshine	Endangered	Endangered	1B.1
11	*Bombus caliginosus*	obscure bumble bee	None	None	
12	*Bombus occidentalis*	western bumble bee	None	None	
13	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	1B.2
14	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	1B.1
15	*Ceanothus divergens*	Calistoga ceanothus	None	None	1B.2
16	*Ceanothus foliosus var. vineatus*	Vine Hill ceanothus	None	None	1B.1
17	*Ceanothus purpureus*	holly-leaved ceanothus	None	None	1B.2
18	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	1B.2
19	*Chorizanthe valida*	Sonoma spineflower	Endangered	Endangered	1B.1
20	*Coccyzus americanus occidentalis*	western yellow-billed cuckoo	Threatened	Endangered	
21	*Cuscuta obtusiflora var. glandulosa*	Peruvian dodder	None	None	2B.2
22	*Downingia pusilla*	dwarf downingia	None	None	2B.2
23	*Elanus leucurus*	white-tailed kite	None	None	

Map ID	Scientific Name	Common Name	Federal Listing	State Listing	Rare Plant Rank
24	*Emys marmorata*	western pond turtle	None	None	
25	*Fritillaria liliacea*	fragrant fritillary	None	None	1B.2
26	*Hemizonia congesta ssp. congesta*	congested-headed hayfield tarplant	None	None	1B.2
27	*Horkelia tenuiloba*	thin-lobed horkelia	None	None	1B.2
28	*Lasthenia burkei*	Burke's goldfields	Endangered	Endangered	1B.1
29	*Lasthenia californica ssp. bakeri*	Baker's goldfields	None	None	1B.2
30	*Legenere limosa*	legenere	None	None	1B.1
31	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	1B.2
32	*Lilium pardalinum ssp. pitkinense*	Pitkin Marsh lily	Endangered	Endangered	
33	*Limnanthes vinculans*	Sebastopol meadowfoam	Endangered	Endangered	1B.1
34	*Linderiella occidentalis*	California linderiella	None	None	
35	*Microseris paludosa*	marsh microseris	None	None	1B.2
36	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	1B.1
37	*Oncorhynchus mykiss irideus*	steelhead - central California coast DPS	Threatened	None	
38	*Potentilla uliginosa*	Cunningham Marsh cinquefoil	None	None	1A
39	*Rana boylii*	foothill yellow-legged frog	None	None	
40	*Rana draytonii*	California red-legged frog	Threatened	None	
41	*Rhynchospora californica*	California beaked-rush	None	None	1B.1
42	*Syncaris pacifica*	California freshwater shrimp	Endangered	Endangered	
43	*Taxidea taxus*	American badger	None	None	
44	*Trifolium amoenum*	two-fork clover	Endangered	None	1B.1
45	*Trifolium hydrophilum*	saline clover	None	None	1B.2
46	*Triquetrella californica*	coastal triquetrella	None	None	1B.2
47	*Viburnum ellipticum*	oval-leaved viburnum	None	None	2B.3

Source: CDFW California Natural Diversity Database 2016.

White Sedge

White sedge (*Carex curta*) is a federal and state endangered species; it is not listed by the CNPS. This species is found in wetlands and vernal pools; it blooms between May and July (USFWS 2009). Although there are no CNDDB occurrences within 5 miles of the project area (CDFW 2016a), vernal pools in the project area provide suitable habitat for this species.

Animals

Western Pond Turtle

Western pond turtle is a state species of concern. This species prefers permanent still to slow-moving water bodies with basking sites such as logs, rocks, floating vegetation, or open mud banks (CDFW 2016b). Roseland Creek and Colgan Creek provide suitable habitat for this species. There are multiple occurrences of western pond turtle in the vicinity of the project area (CDFW 2016a).

California Tiger Salamander

The California tiger salamander (CTS) is listed as federally endangered and a state threatened species. This species is generally found in annual grasslands, occasionally in the understory of valley-foothill hardwood habitats. Adults spend most of their lives underground. This species frequently uses burrows of California ground squirrels and other rodents. Adult CTS breed in vernal pools and other seasonal ponds (CDFW 2016b). There are recent records of this species in the project area, and protection measures for this species are described in the Santa Rosa Plain Conservation Strategy (Bolster 2010). There are multiple occurrences for CTS in the project area and vicinity (CDFW 2016a).

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is a state endangered species. This species inhabits freshwater marsh habitats with stands of cattails, tules, and blackberry thickets for nesting. It generally forages in open habitats, such as farm fields, pastures, lawns, and cattle pens (CDFW 2016b). Suitable habitat is present in the non-native annual grassland and areas with blackberry thickets in the project area. This species is known to occur within 5 miles of the project area (CDFW 2016a).

Long-Eared Owl

The long-eared owl *(Asio otus)* is a state species of concern. This species is an uncommon yearlong resident throughout California with the exception of the Central Valley and Southern California desert. This species utilizes riparian habitat, live oak thickets, and other dense stands of small densely canopied trees for roosting and nesting (CDFW 2016b). The riparian woodland and other large trees in the project area provide suitable habitat for this species.

Burrowing Owl

Burrowing owl (*Athene cunicularis*) is a state species of concern. Burrowing owls are found in grassland habitats, which support suitable burrowing sites. Burrowing owls are unable to construct their own burrows so they rely on burrows of other species such as California ground squirrels. Burrowing owls forage mostly on insects and small rodents (CDFW 2016b). The non-native annual grasslands in the project area provide suitable habitat for this species. This species is known to occur within 5 miles of the project area (CDFW 2016a).

Yellow-Billed Cuckoo

Yellow-billed cuckoo (*Coccyzus americanus*) is a federally threatened and state endangered species. They are found in woodlands, thickets, and streamside groves. Nests are found in dense habitat, deciduous trees, and shrubs. The species forages by clambering through shrubs and trees, gleaning insects from leaves and branches. It feeds mostly on caterpillars and other insects, and occasionally on frogs, lizards, and eggs (CDFW 2016b). The riparian woodland around Roseland Creek provides suitable habitat for this species. This species is known to occur within 5 miles of the project area (CDFW 2016a).

Yellow-Breasted Chat

The yellow-breasted chat (*Icteria virens*) is a state species of concern. This species is a neotropical migrant that occurs in riparian or marsh habitats throughout California. Yellow-breasted chats are found in valley foothill riparian habitat with thickets of dense willow and brushy tangles near watercourses. Forage patterns usually involve gleaning insects, spiders, and berries from the foliage of shrubs and low trees. Nests are often low to the ground in dense shrubs along streams. They occur as summer breeding residents in the Sacramento River Valley and its tributaries (CDFW 2016b). The riparian woodland around Roseland Creek provides suitable habitat for this species.

Cooper's Hawk, White-Tailed Kite, Loggerhead Shrike, and Other Raptors

Cooper's hawk is on the state watch list, loggerhead shrike is a state species of concern, and white tailed kite is a fully protected species. Some raptor and migratory bird species, such as red-tailed hawk, American kestrel, and oak titmouse, are not considered special-status species because they are not rare or protected under the federal Endangered Species Act or the California Endangered Species Act; however, the nests of all raptor species are protected under the MBTA and Section 3503.5 of the California Fish and Game Code (FGC), which makes it illegal to destroy any active migratory bird nest. Raptors nest in large trees and forage in open habitats, specifically annual grasslands and row crops (CDFW 2016a). The riparian woodland and other large trees in the project area provide suitable nesting habitat for raptors. The non-native annual grasslands provide suitable foraging habitat. These species are known to occur within 5 miles of the project area (CDFW 2016a).

Bats

Bats, including a variety of *Myotis* sp., pallid bat, and Townsend's big-eared bat, all state species of concern, are known to occur in the vicinity of the project area. These species are of concern to the CDFW due to recent population declines. Habitat for bat species consists of foraging habitat, night roosting cover, maternity roost sites, and winter hibernacula. Potential habitat for maternity roosts occurs in abandoned outbuildings and in trees throughout the project area. Foraging habitat is present in the non-native annual grasslands and the channels in the project area.

3.4.2 REGULATORY FRAMEWORK

FEDERAL

Endangered Species Act

The Endangered Species Act of 1973 (ESA), as amended, provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code (USC) Sections 1531–1544). The ESA defines "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, Part 222, of the Code of Federal Regulations (50 CFR Section 222) further defines "harm" to include "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering."

ESA Section 7(a)(1) requires federal agencies to use their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with the USFWS or the National Marine Fisheries Service (NMFS) if a federal agency undertakes, funds, permits, or authorizes (termed the federal nexus) any action that may affect endangered or threatened species, or designated critical habitat. For projects that may result in the incidental take of threatened or endangered species, or critical habitat, and that lack a federal nexus, a Section 10(a)(1)(b) incidental take permit can be obtained from the USFWS and/or the NMFS.

Clean Water Act

The basis of the Clean Water Act (CWA) was established in 1948 and was originally referred to as the Federal Water Pollution Control Act. The act was reorganized and expanded in 1972 (33 USC Section 1251), and at this time the Clean Water Act became the act's commonly used name. The basis of the CWA is the regulation of pollutant discharges into waters of the United States, as well as the establishment of surface water quality standards.

Section 404

CWA Section 404 (33 USC Section 1344) established the program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Under this regulation, certain activities proposed within waters of the United States require the obtainment of a permit prior to initiation. These activities include, but are not limited to, placement of fill for the purposes of development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and bridges), and mining operations.

The program's primary objective is to ensure that the discharge of dredged or fill material will not occur if a practicable alternative to the proposed activities exists that results in less impact on waters of the United States or if the proposed activity would result in significant adverse impacts on these waters. To comply with these objectives, a permittee must document the measures taken to avoid and minimize impacts on waters of the United States and provide compensatory mitigation for any remaining unavoidable impacts.

The US Environmental Protection Agency (EPA) and the USFWS are assigned roles and responsibilities in the administration of this program; however, the US Army Corps of Engineers (USACE) is the lead agency in the administration of day-to-day activities, including issuance of permits. The agencies will typically assert jurisdiction over the following waters: (1) traditional

navigable waters (TNW); (2) wetlands adjacent to TNWs; (3) relatively permanent waters (RPW) that are non-navigable tributaries to TNWs and have relatively permanent flow or seasonally continuous flow (typically three months); and (4) wetlands that directly abut RPWs. Case-by-case investigations are usually conducted by the agencies to ascertain their jurisdiction over waters that are non-navigable tributaries and do not contain relatively permanent or seasonal flow, wetlands adjacent to the aforementioned features, and wetlands adjacent to but not directly abutting RPWs (USACE 2007). Jurisdiction is not generally asserted over swales or erosional features (e.g., gullies or small washes characterized by low-volume/short-duration flow events) or ditches constructed wholly within and draining only uplands that do not have relatively permanent flows.

The extent of jurisdiction within waters of the United States, which lack adjacent wetlands, is determined by the ordinary high water mark, which is defined in 33 CFR Section 328.3(e) as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." Wetlands are further defined under 33 CFR Section 328.3 and 40 CFR Section 230.3 as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions"; and typically include "swamps, marshes, bogs, and similar areas." The 1987 Corps of Engineers Wetland Delineation Manual (1987 Manual) sets forth a standardized methodology for delineating the extent of wetlands under federal jurisdiction (USACE 1987).

The 1987 Manual outlines three parameters that all wetlands, under normal circumstances, must contain positive indicators for to be considered jurisdictional. These parameters include (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils (USACE 1987). In 2006, the USACE issued a series of Regional Supplements to address regional differences that are important to the functioning and identification of wetlands. The supplements present "wetland indicators, delineation guidance, and other information" that is specific to the region. The USACE requires that wetland delineations submitted after June 5, 2007, be conducted in accordance with both the 1987 Manual and the applicable supplement.

Section 401

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit and/or license for any activity that may result in discharges to waters of the United States, unless a state or a tribe where the discharge originates either grants or waives CWA Section 401 certification. CWA Section 401 provides states or tribes with the ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit/license to be issued and remain consistent with any conditions set forth in the CWA Section 401 certification. Denial of the certification prohibits the issuance of the federal license or permit, and waiver allows the permit/license to be issued without state or tribal comment. Decisions made by states or tribes are based on the proposed project's compliance with EPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board is the primary regulatory authority for CWA Section 401 requirements (additional details below).

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Section 21). The majority of birds found in the project vicinity would be protected under the MBTA.

Bald and Golden Eagle Protection Act

The bald eagle and golden eagle are federally protected under the Bald and Golden Eagle Protection Act (16 USC Sections 668–668c). Under the act, it is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export, or import at any time or in any manner a bald or golden eagle, alive or dead; or any part, nest or egg of these eagles unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

Executive Order 13112 – Invasive Species

This executive order directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. The USFWS and the USACE are responsible for ensuring projects requiring a federal permit comply with Executive Order 13112 so that the activities do not contribute to the spread of invasive species.

Fish and Wildlife Coordination Act of 1958 (16 USC 661 et seq.)

The Fish and Wildlife Coordination Act requires that whenever any body of water is proposed or authorized to be impounded, diverted, or otherwise controlled or modified, the lead federal agency must consult with the USFWS, the state agency responsible for fish and wildlife management, and the National Marine Fisheries Service. Section 662(b) of the act requires the lead federal agency to consider the recommendations of the USFWS and other agencies. The recommendations may include proposed measures to mitigate or compensate for potential damages to wildlife and fisheries associated with a modification of a waterway.

Executive Order 11990 Protection of Wetlands (42 FR 26961, May 25, 1977)

Executive Order 11990 requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support for new construction located in wetlands unless (1) no practicable alternative exists and (2) all practical measures have been taken to minimize harm to wetlands.

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC Section 2070). The CDFW also maintains a list of "candidate species," which are species formally noticed as being under review

for potential addition to the list of endangered or threatened species, and a list of "species of special concern," which serve as a species "watch lists."

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts on species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. Take of protected species incidental to otherwise lawful management activities, however, may be authorized under FGC Sections 2080.1 and 2081. Authorization from the CDFW would be in the form of an incidental take permit.

California Fish and Game Code

Streambed Alteration Agreement (FGC Sections 1600–1607)

State and local public agencies are subject to FGC Section 1602, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake whether the river, stream or lake is episodic or perennial. Under FGC Section 1602, a discretionary Streambed Alteration Agreement must be obtained by the project proponent prior to the initiation of construction activities on lands under CDFW jurisdiction. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

Native Plant Protection Act

The Native Plant Protection Act (FGC Sections 1900–1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by the CDFW). An exception in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give that state agency at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (FGC Section 1913).

Birds of Prey

Under FGC Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the Fish and Game code or any regulation adopted pursuant thereto.

"Fully Protected" Species

California statutes also afford "fully protected" status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit.

California Wetlands Conservation Policy

California wetlands policy is more restrictive than federal wetlands policy. The goal of the California Wetlands Conservation Policy (1993) is to ensure no net loss of wetlands in the state. This policy, incorporated in an executive order by then-Governor Pete Wilson, also encourages a long-term net gain in the state's quantity, quality, and permanence of wetlands acreage and values. Interpretation of this order indicates that any developer wishing to fill wetlands for construction of new development must perform mitigation in the form of constructed wetlands elsewhere at ratios ranging from 2:1 to 10:1. In addition to the USACE, state regulatory agencies claiming jurisdiction over wetlands include the CDFW and the State Water Resources Control Board.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation addressing water quality. The requirements of the act are implemented by the State Water Resources Control Board at the state level and by the Regional Water Quality Control Board (RWQCB) at the local level. The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The act establishes waste discharge requirements and a permitting system for discharges to land or water. Certification is required by the RWQCB for activities that can affect water quality.

State Definition of Covered Waters

Under California state law, waters of the State means "any surface water or groundwater, including saline waters, within the boundaries of the state." As such, water quality laws apply to both surface water and groundwater. After the US Supreme Court decision in *Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers* (53 US 159), the Office of Chief Counsel of the State Water Resources Control Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act (Porter-Cologne), discharges to wetlands and other waters of the State are subject to state regulation, and this includes isolated wetlands. In general, the SWRCB regulates discharges to isolated waters in much the same way as it does for waters of the United States, using Porter-Cologne rather than Clean Water Act authority.

NONGOVERNMENTAL AGENCY

California Native Plant Society

The CNPS is a nongovernmental agency that classifies native plant species according to current population distribution and threat level in regard to extinction. The data is utilized by the CNPS to create and maintain a list of native California plants that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California (CNPS 2014). Potential impacts on populations of CNPS-listed plants receive consideration under CEQA review.

The following identifies the definitions of the CNPS listings:

List 1A: Plants believed to be extinct

List 1B: Plants that are rare, threatened, or endangered in California and elsewhere

List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

All of the plant species on List 1 and 2 meet the requirements of the Native Plant Protection Act Section 1901, Chapter 10, or FGC Section 2062 and Section 2067 and are eligible for State listing. Plants appearing on List 1 or 2 are considered to meet the criteria of CEQA Section 15380 (definition of endangered, rare and threatened species), and effects on these species are considered "significant." Classifications for plants on List 3 (plants about which we need more information and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions or impact analysis was performed on species with these classifications.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following are the applicable General Plan goals and policies most pertinent to the project with regard to protection and preservation of the natural resources in the area.

Goal OSC-A: Maximize the benefits of open space.

Policy OSC-A-2: Collaborate with other agencies and private development to link non-access open spaces, where such linking would benefit the protection of special environments and life systems such as wetlands, plant communities, and wildlife habitats and corridors.

Goal OSC-B: Conserve the city's open spaces and significant natural features.

Policy OSC-B-3: Require that new subdivisions, multifamily, and non-residential development abutting creek corridors are appropriately designed and oriented with respect to the creek. Development may orient toward the creek as an amenity, but adequate setbacks shall be used to ensure riparian habitat is protected.

Goal OSC-D: Conserve wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways.

Policy OSC-D-1: Utilize existing regulations and procedures, including Subdivision Guidelines, Zoning, Design Review, and environmental law, to conserve wetlands and rare plants. Comply with the federal policy of no net loss of wetlands using mitigation measures such as:

- Avoidance of sensitive habitat,
- Clustered development.
- Transfer of development rights, and/or
- Compensatory mitigation, such as restoration or creation

Policy OSC-D-2: Protect high quality wetlands and vernal pools from development or other activities as determined by the Vernal Pool Preservation Plan.

Policy OSC-D-3: Preserve and restore elements of wildlife habitats and corridors throughout the Planning Area.

Policy OSC-D-4: Continue to consult with the CDFW to identify significant environmental concerns, and develop an overall strategy for the maintenance of areas that will preserve the populations of plant and animals currently in the Urban Growth Boundary.

Policy OSC-D-5: Consult with North Coast Regional Water Quality Control Board staff as part of the CEQA process for proposed developments to help them identify wetland and vernal pool habitat that has candidacy for restoration/protection based on actual and potential beneficial use, and determine appropriate locations for mitigation banking.

Policy OSC-D-6: Preserve waterways by informing residents of the environmental effects of dumping yard waste into creeks, or other wastes, such as motor oil, into storm drains that empty into creeks.

Policy OSC-D-7: Rehabilitate existing channelized waterways, as feasible, to remove concrete linings and allow for a connection with the stream channel and the natural water table. Avoid creating additional channelized waterways, unless no other alternative is available to protect human health, safety, and welfare.

Policy OSC-D-8: Restore channelized waterways to a more natural condition which allows for more natural hydraulic functioning, including development of meanders, pools, riffles, and other stream features. Restoration should also allow for growth of riparian vegetation which effectively stabilizes banks, screens pollutants from runoff entering the channel, enhances fisheries, and provides other opportunities for natural habitat restoration.

Policy OSC-D-9: Ensure that construction adjacent to creek channels is sensitive to the natural environment. Ensure that natural topography and vegetation is preserved along the creek, and that construction activities do not disrupt or pollute the waterway.

Policy OSC-D-11: New development along channelized waterways should allow for an ecological buffer zone between the waterway and development. This buffer zone should also provide opportunities for multi-use trails and recreation.

Policy OSC-D-12: New development should maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, and allow for stream corridor restoration. Setbacks identified in the Zoning Code should serve as minimum setbacks. Larger setbacks are encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.

Goal OSD-E: Ensure local creeks and riparian corridors are preserved, enhanced, and restored as habitat for fish, birds, mammals and other wildlife.

Policy OSC-E-1: Preserve trees and other vegetation, including wildflowers, both as individual specimens and as parts of larger plant communities.

Policy OSC-E-2: Preserve and regenerate native oak trees.

Citywide Creek Master Plan

The Santa Rosa Citywide Creek Master Plan (Santa Rosa 2013), adopted by the City Council in August 2013, implements General Plan Policy OSC-D-13 and provides guidelines for the care, management, restoration, and enhancement of nearly 90 miles of creeks in Santa Rosa. The master plan is intended for use by city and county staff when planning creek enhancement and restoration activities, coordination and expansion of creekside trail systems, making broader land-use planning decisions concerning creeks, and in the development approval process for projects proposed adjacent to a waterway. Conceptual restoration plans for Roseland Creek and Colgan Creek are included in the Citywide Creek Master Plan. The following Master Plan policies would also minimize potential degradation of creek, riparian, and other sensitive communities:

Policy HA-1-1: Avoid channelization of additional creeks to preserve remaining wildlife habitat.

Policy-HA-1-2: Meet or exceed the required creek setback to provide ecological buffers, recognize the 100 year floodplain, and allow for stream corridor restoration. Development shall locate outside the creek setback, as identified with the Santa Rosa Zoning Code.

Policy HA-5-1: Protect habitat for endangered species, through preservation, enhancement, and restoration of riparian corridors and preservation of stormwater pollution.

Policy HA-5-2: Reestablish populations of special status species as ecologically appropriate.

Policy HA-6-1: Coordinate, as appropriate, with regulatory agencies on Master Plan projects.

Policy HA-6-2: Consistent with federal, state and local regulations, impacts to existing habitat will be avoided if possible. Minimization and mitigation of any unavoidable impacts will be required

Policy HA-7-1: Consult with knowledgeable experts as appropriate, including natural resources agency staff and other jurisdictions or organizations that have successfully completed similar project.

Santa Rosa Plain Conservation Strategy

The Santa Rosa Plain Conservation Strategy (USFWS 2005) was developed to help conserve CTS and four species of plants: Burke's goldfield, Sonoma sunshine, Sebastopol meadowfoam, and many-flowered navarretia. It establishes critical habitat areas for the species and provides for protection of the covered species through establishment of preserves in Sonoma County that will help maintain genetic diversity of listed plants and provide suitable habitat for CTS. The Conservation Strategy addresses the mitigation requirements for CTS, the listed plant species and seasonal wetlands, including vernal pools. The USFWS uses the guidelines in the document when it reviews projects and issues permits.

Neither the City nor Sonoma County have formally adopted the Conservation Strategy as a means to mitigate project impacts on CTS and the plants covered by the document. However, General Plan 2035 EIR Mitigation Measure 4.F-5 requires that the avoidance and mitigation measures described in the Santa Rosa Plain Conservation Strategy and the USFWS Programmatic Biological Opinion be incorporated as conditions of approval for development in the city. The measure also provides that projects in the Southwest Santa Rosa Preserve System shall be

evaluated individually, in accordance with the USFWS Programmatic Biological Opinion. The mitigation approach in the Conservation Strategy may provide a basis for a project's mitigation, but the project may not rely on the Conservation Strategy exclusively to mitigate impacts, and site-specific evaluation and mitigation, as required, must still be implemented.

City of Santa Rosa City Code

Tree Ordinance

In 1990, the Santa Rosa City Council passed Ordinance 2858, which enacted the following regulations to protect certain trees that are essential to the city's natural heritage, called "heritage trees." City Code Sections 17-24.030 through 17-24.050 provide information about permits required for removal, relocation or alteration of heritage or protected trees. In addition, tree protection measures are included for development projects.

Creekside Development

City Code Section 20-30.040 provides creek setback criteria for any new development. Limited exceptions are permitted for any defined channel that is owned by the Sonoma County Water Agency, for developments in compliance with setback requirements prior to September 3, 2004, for new developments that are surrounded by existing structures that were developed in compliance with setback requirements prior to September 3, 2004, and for bridges and utilities.

3.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. An impact on biological resources is considered significant if the project would:

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

2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

6) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

METHODOLOGY

The impact assessment was based on information available from various existing planning documents and database searches, as well as the standards of significance described above. The assessment discusses potential impacts that could occur upon implementation of the project.

Although it is likely that some level of natural resources would be retained within future projects developed under the proposed project, the location and extent of these resources cannot be determined at this time. A conservative impact approach was taken to ensure impacts are not underestimated, and the assumption is that all natural resources within the project area identified for development under land use designations will be removed or otherwise adversely modified by activities of future development projects in the project area.

PROJECT IMPACTS AND MITIGATION MEASURES

Special-Status Species (Standard of Significance 1)

Impact 3.4.1 Implementation of the proposed project could result in adverse effects, either directly or indirectly, on species listed as endangered, threatened, rare, proposed, and candidate plant and wildlife species as well as plant species identified by the CNPS with a rating of List 1A or 1B. This impact would be **potentially significant**.

Suitable habitat for plant and wildlife species listed as endangered, threatened, rare, proposed, candidate, or List 1A or 1B (collectively referred to in this EIR as "listed species" is present within the project area. As shown in **Appendix 3.4,** the project area supports suitable habitat for a variety of listed species. Although the project area is highly developed, there are several natural communities that provide suitable habitat for special status species. Land use and development consistent with the proposed land use designations thus could result in adverse impacts on special status species and/or essential habitat for special status species. Most direct impacts could occur from development of large areas of non-native annual grassland and vernal pool complexes. Based on the maximum area that could be affected by project-related development, the project could potentially impact approximately 265 acres of non-native annual grassland, 65 acres of vernal pool complexes, and 18 acres of riparian woodland. Where there are direct impacts on special-status species, indirect impacts could occur as well. Indirect impacts may include habitat modification, increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows and general hydrology due to development of previously undeveloped areas.

The General Plan includes goals and polices that would minimize direct and indirect impacts on endangered, threatened, rare, proposed, and candidate species, as well as plant species with a CNPS List 1A or 1B. Policies OSC-A-2, OSC-D-3, and OSC-D-4 protect special status species through collaboration with other agencies in order to maintain connectivity between open spaces and fragmented habitat, restoring wildlife corridors and protecting areas with significant environmental concern. Implementation of Policy OSC-D-1 would ensure no net loss of wetlands. Policies OSC-D-2, and OSC-D-5 ensure further protection of wetlands from development and require consultation with the Regional Water Quality Control Board in order to restore and protect wetlands that provide beneficial use. Policy OSC-D-2 also protects high quality wetlands and vernal pools.

Future development in the project area will be required to comply with the General Plan EIR Mitigation Measure 4.F-5, which requires the implementation of the Conservation Strategy and the

USFWS Programmatic Biological Opinion. Implementation of the Conservation Strategy and the USFWS Programmatic Biological Opinion will minimize potential adverse effects on CTS and listed plants through establishment of preserves to maintain genetic diversity of listed plants and provide suitable habitat for CTS; securing and expanding CTS breeding sites; requiring minimum mitigation ratios for impacted resources; and effectively managing the preserves. The Conservation Strategy and the Biological Opinion assures that the preservation of CTS and the listed plants will occur in proportion with the habitat lost through proposed future development.

The potential for direct or indirect adverse effects on species listed as endangered, threatened, rare, proposed, and candidate plant and wildlife species is considered **potentially significant**.

Mitigation Measures

MM 3.4.1a Implement General Plan Mitigation Measure4.F-5: The City of Santa Rosa shall incorporate the avoidance and mitigation measures described in the Santa Rosa Plain Conservation Strategy and the USFWS Programmatic Biological Opinion, as conditions of approval for development in or near areas with suitable habitat for California tiger salamander, Burke's goldfields, Sonoma sunshine, Sebastopol meadowfoam, and manyflowered navarretia. However, in accordance with the USFWS Programmatic Biological Opinion, projects within the Southwest Santa Rosa Preserve System will be evaluated individually and mitigation may not necessarily adhere to the ratios described in the Conservation Strategy.

MM 3.4.1b If there is the potential for destruction of a nest or substantial disturbance to nesting birds or bats due to construction activities, a plan to monitor nesting birds or bats during construction shall be prepared and submitted to the USFWS and CDFG for review and approval. The City shall comply with all USFWS or CDFG guidance for protection of nesting birds.

If vegetation, buildings, or bridges that potentially provide nesting sites must be removed, a qualified wildlife biologist shall conduct pre-construction surveys. If an active bird nest is found, the bird shall be identified as to species and the approximate distance from the closest work site to the nest estimated. No additional measures need be implemented if active nests are more than the following distances from the nearest work site: (a) 300 feet for raptors; or (b) 75 feet for other non-special-status bird species. Disturbance of active nests shall be avoided to the extent possible until it is determined that nesting is complete and the young have fledged. Bats shall be absent or flushed from roost locations prior to demolition of buildings. If flushing of bats from buildings is necessary, it shall be done by a qualified biologist during the non-breeding season from October 1 to March 31. When flushing bats, structures shall be moved carefully to avoid harming individuals, and torpid bats given time to completely arouse and fly away. During the maternity season from April 1 to September 30, prior to building demolition or construction, a qualified biologist shall determine if a bat nursery is present at any sites identified as potentially housing bats. If an active nursery is present, disturbance of bats shall be avoided until the biologist determines that breeding is complete and young are reared.

Timing/Implementation: *Prior to construction of any subsequent project that could result in disturbance to bird or bat nests*

Enforcement/Monitoring: *City of Santa Rosa Planning and Economic Development Department, Planning Division*

Implementation of the General Plan policies identified above and Mitigation Measures MM 3.4.1a and MM 3.4.1b would ensure no net loss of habitat or species, which would reduce impacts to a **less than significant** level.

Species of Concern and Other Non-Listed Special-Status Species (Standard of Significance 1)

Impact 3.4.2 Implementation of the proposed project could result in direct and indirect loss of habitat and individuals of animal and plant species of concern and other non-listed special-status species. This impact would be **potentially significant**.

Suitable habitat exists in the project area for unlisted but otherwise special-status species. These species are designated as a species of concern by the USFWS or the CDFW, listed as "fully protected" in the Fish and Game Code of California (Section 3511, 4700, 5050, 5515, and/or listed in CNPS as List 2. Direct and indirect impacts on these species could occur for the same reasons and in the same manner as impacts on listed species and identified above. Implementation of the project would also allow for redevelopment of some parcels containing structures such as buildings and bridges, which may provide habitat for bat and bird species, some of which may be special-status species or, in the case of raptors and birds, protected by the MBTA. This is a **potentially significant impact**.

Mitigation Measures

MM3.4.2 Implement Mitigation Measures MM 3.4.1a. and MM 3.4.1b.

Implementation of the General Plan policies identified above and Mitigation Measures MM 3.4.1a, and MM 3.4.1b would ensure no net loss of habitat or species, which would reduce impacts to a **less than significant** level.

Sensitive Vegetation Communities including Riparian Habitat (Standard of Significance 2)

Impacts 3.4.3 Implementation of the proposed project could result in disturbance and degradation of riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or by the CDFW or the USFWS. The impact would be **less than significant.**

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Section 1600 of the Fish and Game Code, and Section 404 of the Clean Water Act. Project activities may result in the loss of riparian habitat and other sensitive vegetation communities.

The project area has only one isolated area of riparian woodland, which is located around Roseland Creek. Future development in the project area could result in disturbance, degradation, and removal of riparian habitat.. Development affecting riparian habitat is regulated under the jurisdiction of the CDFW under the California Fish and Game Code Section 1602. CDFW regulates work that will substantially affect resources associated with rivers, streams, and lakes in California,

pursuant to Fish and Game Code Sections 1600–1607. Any action from a project that substantially diverts or obstructs the natural flow or changes the bed, channel, or bank of any river or stream, or uses material from a streambed will require prior authorization from CDFW in a Streambed Alteration Agreement under Section 1602 of the Fish and Game Code.

In 2007, the City of Santa Rosa developed the Santa Rosa Citywide Creek Master Plan (updated in August 2013) in order to provide for the protection, care, management, restoration and enhancement of riparian habitat and waterways. Implementation of policies HA-1-1 and HA-1-2 of the Santa Rosa Citywide Creek Master Plan would minimize potential degradation of creek, riparian and sensitive communities. Policy HA-1-1 would avoid channelization of creeks and Policy HA-1-2 requires projects to meet or exceed the required creek setbacks in order to preserve wildlife corridors, ecological buffers and allow for corridor restoration.

Implementation of General Plan goals and policies would minimize degradation of creek, riparian habitat, and other sensitive communities. Policy OSC-A-2 requires collaboration with agencies and private development to link open spaces in order to benefit protection of wetlands and other protected communities. Policies OSC-D-1, OSC-D-2, and OSC-D-5 ensure no net loss of wetlands and vernal pools through avoidance, protection, and compensatory mitigation. Implementation of OSC-D-4 requires coordination with CDFW to identify and protect areas of environmental concern and develop a strategy that would preserve plant and animal populations in the project area.

Implementation of Policies OSC-B-3, OSC-D-3, OSC-D-6, and OSC-D-9 would preserve, protect and rehabilitate creeks and channelized waterways. Policy OSC-D-6 would educate residents about the environmental impacts of dumping into storm drains. Policies OSC-D-7 and OSC-D-8 would provide for restoring channels to natural conditions and remove concrete linings in order to provide opportunity for natural habitat restoration. Creek setbacks and corridor restoration will be ensured through implementation of OSC-D-11 and OSC-D-12. Implementation of Policies OSC-E-1 and OSC-E-2 preserve trees and other native vegetation.

Implementation of the goals and policies under the General Plan and the Citywide Creek Master Plan reduce potential degradation of sensitive communities and therefore impacts would be **less than significant**.

Mitigation Measures

None required.

Jurisdictional Wetlands (Standard of Significance 3)

Impact 3.4.4 Implementation of the project could result in the loss or degradation of protected wetlands or vernal pools. This loss would be **less than significant**.

Vernal pool complexes are present throughout the project area. Potential impacts of construction of future projects could include the destruction of vernal pools themselves, as well as alteration or destruction of the surrounding habitat. Special-status plant and animal species associated with vernal pools include the CTS, Sonoma sunshine, Sebastapol meadowfoam, many-flowered navarretia, and Burke's goldfields. This is a **potentially significant impact**.

Any future projects within the project area that could impact jurisdictional features would require a 404 permit from USACE and a 401 Water Quality certification from the Regional Water Quality Control Board. USACE and CDFW have a "no net loss" policy for jurisdictional features.

Implementation of policies OSC-D-2, OSC-D-4, and OSC-D-5 from the General Plan would minimize potential loss of vernal pool habitat. These policies protect wetlands and vernal pools, develop a strategy to restore and protect wetlands and preserve plants in the project area. Policy OSC-D-1 will ensure no net loss of wetlands by avoiding sensitive habitat, clustered development, transferring development rights, and requiring compensatory mitigation.

General Plan EIR mitigation measure 4.F-5 requires implementation of the Conservation Strategy and the USFWS Programmatic Biological Opinion. The goal of the Conservation Strategy and Biological Opinion is to preserve and protect vernal pools and wetlands in order to minimize potential take of CTS and listed plants.

Mitigation Measures

MM 3.4.2a Implement Mitigation Measure 3.4.1a

MM 3.4.2b A formal wetland delineation shall be conducted for areas that will be permanently or temporarily impacted by the project. If jurisdictional waters cannot be avoided, the City shall apply for a CWA Section 404 permit from the USACE and a Section 401 permit from the RWQCB. These permits shall be obtained prior to issuance of grading permits and implementation of the proposed project.

The City shall ensure that the project will result in no net loss of waters of the U.S. by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined in the CWA Section 404/401 permits.

Compensatory mitigation may consist of (a) obtaining credits from a mitigation bank; (b) making a payment to an in-lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities (these programs are generally administered by government agencies or nonprofit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants); and/or (c) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This last type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project proponent/permit applicant retains responsibility for the implementation and success of the mitigation project.

Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for the proposed project.

Timing/Implementation:	*Prior to any vegetation removal or ground disturbing activities*
Enforcement/Monitoring:	*City of Santa Rosa Planning and Economic Development Department, Planning Division*

Implementation of the General Plan policies and Mitigation Measures **MM 3.4.2a** and **MM 3.4.2b** would ensure no net loss of wetland and vernal pool habitats. This would reduce impacts to**less than significant.**

Movement of Native Resident or Migratory Fish or Wildlife Species or Within Established Migratory Corridor (Standard of Significance 4)

Impacts 3.4.5 Implementation of the project could interfere with movement of native resident or migratory fish or wildlife species or established migratory corridor. This impact would be **less than significant**.

Wildlife movement is affected when physical constraints impede the ability of wildlife to search for food, water, shelter, and mates. When urban development fragments open space or creates obstacles, it compromises the quality of wildlife corridors and further hinders wildlife movements. The open space areas within the project area are discontinuous, which provide little, if any, value as migration corridors. The riparian woodland along Roseland Creek provides a migration corridor for species such as black tailed deer, striped skunk, and bobcat. The non-native grasslands and vernal pools contain suitable breeding habitat for CTS and connect breeding habitat with upland habitat. Unlike Roseland Creek, there is no riparian woodland along Colgan Creek, and this creek is unlikely to support wildlife migration corridors.

Implementation of General Plan policies would minimize impacts on wildlife corridors in the project area. Implementation of Policy OSC-A-2 and OSC-D-3 would preserve and restore wildlife corridors through coordination with other agencies and private development. Citywide Creek Master Plan Policy HA-5-1protects habitat through preservation and restoration of riparian corridors.

Implementation of the goals and policies of the General Plan and the Citywide Creek Master Plan will reduce potential impacts and enhance wildlife corridors in the project area and resulting impacts would be **less than significant**.

Mitigation Measures

None required.

Local Policies or Ordinances Protecting Biological Resources, such as a Tree Preservation Policy or Ordinance (Standard of Significance 5)

Impacts 3.4.6 Implementation of the project will not result in a conflict with a local policy or ordinance protecting biological resources. There would be **no impact.**

The City of Santa Rosa has adopted the General Plan, Citywide Creek Master Plan, and the Santa Rosa City Code, which includes a Tree Ordinance (City Code Chapter 17-24) and Creekside Development Ordinance (City Code Section 20-30.040). All future projects developed within the Specific Plan and Annexation Area would be required to comply with these local policies. Therefore, there will be **no impact**.

Mitigation Measures

None required.

Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan (Standard of Significance 6).

Impact 3.4.7 Development in the project area would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved Conservation Plan. There would be **no impact**.

Santa Rosa has not adopted a conservation plan nor does is it signatory to a plan. However, as described above, the City has adopted a General Plan 2035 EIR mitigation measure (4.F-5) that requires development projects to be conditioned to incorporate avoidance and mitigation measures in the Santa Rosa Plain Conservation Strategy and USFWS Programmatic Biological Opinion for covered species. Mitigation Measure **MM 3.4.1a** identified in Impact 3.4.1 requires implementation of Mitigation Measure 4.F-5 of the General Plan EIR. Therefore, there will be **no impact.**

Mitigation Measures

None required.

3.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative context for biological resources is the development assumed to occur in the project area, Santa Rosa, and the surrounding region. As discussed in Section 3.12, Population and Housing, there has been substantial growth in the region and considerable future growth is projected.

Habitat within the region is highly developed with few areas of natural habitat. The dominant land use communities consist of a mix of industrial, residential, and agricultural uses (Santa Rosa 2009a). The developed areas have encroached onto some natural habitat including non-native annual grasslands, vernal pool, and creeks in the vicinity. The natural communities in the vicinity provide habitat for special status species including, but not limited to, a variety of plants, CTS, California freshwater shrimp, nesting raptors, bats, and migratory birds. There is a higher level of protection for special status species because urban encroachments and development has had a significant direct and indirect impacts on the species and their habitat. Because there is so little natural habitat available in the region for these species, the habitat that is available is particularly important.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 3.4.8 Development in the project area, when considered together with other past, existing, and planned future projects, could result in a significant cumulative impact on biological resources in the region. The project's contribution to the significant cumulative impact on biological resources impacts would be **less than cumulatively considerable**.

As development in Santa Rosa and the region in general continues, habitat for plant and wildlife species will be lost through conversion to urban development. Although more mobile species may be able to survive these changes in their environment by moving to new areas, less mobile species would simply be extirpated. With continued conversion of natural habitat in the region to human use, the availability and accessibility of remaining natural habitats in this ecosystem will be substantially reduced. Remaining natural areas would likely not be able to support additional plant or animal populations above their current carrying capacities, and conversion of plant and wildlife habitat on a regional level would result in a cumulatively significant impact on biological resources. The General Plan EIR concluded that implementation of the Santa Rosa General Plan 2035 would not result in a considerable incremental contribution to cumulative impacts, because Santa Rosa is largely built out, the city has strong policies that encourage infill development, remaining potential development would not constitute substantial conversion of natural habitat conditions, and potentially developed parcels in sensitive habitats would be protected by the proposed General Plan policies and regulations set forth by state and federal agencies. Additionally, implementation of General Plan EIR Mitigation Measure 4.F-5 (as required under **MM 3.4.1a**) would further serve to reduce potential impacts on sensitive biological resources occurring in the Santa Rosa Plain.

The project area contains non-native grasslands, riparian woodland, vernal pool complexes, and creek habitat with the potential to support a number of special-status plant and animal species. As discussed in Impacts 3.4-1 through 3.4-7, implementation of the proposed project could result in the loss and/or degradation of riparian habitat, wetlands, and vernal pools, and loss or degradation of special-status species associated with reductions in their habitat and limit the availability and accessibility of remaining natural habitats to regional wildlife. The proposed project's contribution would be reduced through implementation of Mitigation Measures **MM 3.4.1a**, **MM 3.4.1b**, and **MM 3.4.2b**. As discussed in Chapter 2.0, Project Description, the project site was considered for development in the General Plan 2035. Consequently, the proposed project would not change the impacts disclosed in the General Plan EIR, and the project's contribution to the cumulative impact **be less than cumulatively considerable**.

Mitigation Measures

None required.

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3.5 Cultural Resources

This section evaluates the potential impacts of the proposed project on cultural resources, which are defined as prehistoric and historic properties, structures, and districts or any other physical evidence associated with human activity considered important to a culture, subculture, or community for scientific, traditional, or religious reasons. A cultural resources assessment was prepared for the proposed project (Peak & Associates 2016 [**Appendix 3.5**]), and the results of the study have been incorporated into the analysis.

3.5.1 EXISTING SETTING

PREHISTORIC AND HISTORIC OVERVIEW

Ethnographic literature indicates that at the time of historic contact, the Santa Rosa planning area was in the territory of the Southern Pomo people. The closest reported ethnographic village to the project area was Hukabetawi, located in the vicinity of southwestern Santa Rosa or Roseland. In 1920, the Bureau of Indian Affairs purchased a 15.45-acre tract of land in Graton for the Marshall, Bodega, Tomales, and Sebastopol Indians. This land was put into a federal trust, and these neighboring peoples that included both Coast Miwok and Southern Pomo were consolidated into one recognized group called the Graton Rancheria. The Lytton Band of Pomo Indians was first established in 1937. The Lytton Band of Pomo Indians also has federal recognition and currently has approximately 200 members (Santa Rosa 2009a).

William Elliott settled in the Santa Rosa area in 1845. The original town plat laid out the long rectangular blocks formed northwest from Santa Rosa Creek. An early map of the region from 1867 shows all of the project area on large tracts of land, presumably in use for agriculture. Luther Burbank purchased 4 acres at the edge of the town in 1878 and began his experimentation with hybridization and development of improvements in many plants. In 1885, he needed more space and purchased 18 acres just outside the city limits of Sebastopol, establishing the Burbank Experimental Farm By 1900, some of the lands of the project area closest to the developed city area had been annexed to the city for residential development. Farther away from the city, the lands began to be subdivided into smaller parcels, likely for small fruit farms. This area was identified on early maps as Roseland (Peak & Associates 2016).

CULTURAL RESOURCES IN THE PROJECT AREA

Records Search

A total of 162 cultural resources were identified in the project area, according to files maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). These cultural resources span both the prehistoric and historic periods and range from Native American sites to historic period farms, ranches, and homes. A total of 141 of the 162 resources are public and privately owned buildings in the project area as identified on the Sonoma County Historic Property Data File Directory. A complete list of these cultural resources is provided in Table 1 of **Appendix 3.5**.

Prehistoric-Era Archaeological Resources

Santa Rosa is located in the Santa Rosa Basin with six major drainages, including Santa Rosa, Matanzas, Piner, Rincon, Austin, and Brush creeks. These creeks are significant with respect to prehistoric resources because Native American archaeological sites tend to be located near waterways, as well as along ridgetops, midslope terraces, alluvial flats, the base of hills, and near vegetation ecotones. Remnants of Native American civilizations have been discovered along

Santa Rosa Creek and its tributaries, in the adjacent alluvial valleys and surrounding plains, in the hills, in the Annadel State Park area, in Laguna de Santa Rosa, and in the Windsor area. Given the archaeologically rich nature of the Santa Rosa area and the large amount of unsurveyed land (at least 50 percent of the city has not been surveyed for archaeological resources), there is a high potential for finding additional Native American sites in the city (Santa Rosa 2009a). In the project area, undeveloped areas near natural features such as Roseland and Colgan creeks are likely to contain recorded or still undiscovered prehistoric resources.

Historic-Era Archaeological Resources

The City of Santa Rosa recognizes eight historic districts, none of which are located in the project area. There are 22 designated landmarks in the city, one of which, the Dutton Avenue Queen Anne at 855 Dutton Avenue, is located in the project area.

Additional historic period cultural resources have been identified in the project area that are not listed on the Historic Properties Directory for Santa Rosa (see Table 1 of **Appendix 3.5**) or by the Northwest Information Center of the California Historical Resources Information System. A 1989 study by Anne Bloomfield surveyed resources in a small portion of the current project area north of State Route 12. In this study, Bloomfield identified the West Third Street District, which is partially located in the project area. Some of these resources in the proposed West Third Street District annexation area are listed in the Historic Properties Data File, but several of the properties are omitted (see Table 2 of **Appendix 3.5**). The City of Santa Rosa Cultural Heritage Board may consider listing the proposed West Third Street District once the area is formally annexed (Peak & Associates 2016).

Another survey was conducted by Harris and Clark in 1991 to supplement Bloomfield's study by examining the southwest portion of the city. Harris and Clark's study included nearly all the project area as well as areas to the west and south. This study identified four districts and nine potential districts, eight of which are located within the project area (see Figure 3 of **Appendix 3.5**). This study also identified 10 resources in the project area which the authors felt were eligible properties for inclusion in the National Register of Historic Places and 24 resources in the project area that the authors believed were Local Landmark–eligible properties. The authors also noted 414 resources with "notable architectural properties" in the project area that are not listed on the Historic Properties Directory (Peak & Associates 2016). These properties are summarized in Table 3 of **Appendix 3.5**.

NATIVE AMERICAN CONSULTATION

The City of Santa Rosa contacted the Lytton Rancheria of California and the Federated Indians of Graton Rancheria regarding consultation with local Native American tribes pursuant to Assembly Bill (AB) 52. Lytton Rancheria did not request consultation in their response but did request that cultural resources be addressed in the EIR and that the Lytton Rancheria receive a copy of the cultural resources report for review. On March 23, 2016, Graton Rancheria submitted a formal request for consultation, which provided the City 30 days to begin the consultation process. The City responded to the request for consultation on April 4, 2016, and a meeting was held between the City and representatives of Graton Rancheria on May 6, 2016.

The City of Santa Rosa also contacted the Native American Heritage Commission (NAHC), the Lytton Rancheria of California, the Federated Indians of Graton Rancheria, the Cloverdale Rancheria of Pomo Indians, the Dry Creek Rancheria of Pomo Indians, the Middletown Rancheria of Pomo Indians, and the Stewarts Point Rancheria regarding consultation with local Native American tribes pursuant to Senate Bill (SB) 18. Responses were received from the NAHC and

Stewarts Point Rancheria (see **Appendix 3.5**). The NAHC provided a list of local tribes to contact (the aforementioned tribes), and Stewarts Point stated that the projects are outside of their aboriginal territory and therefore did not have any comments or concerns.

Letters were also sent on January 12, 2016, to the Western Sonoma County Historical Society, the Sonoma Valley Historical Society, the Sonoma League for Historic Preservation, and the Historical Society of Santa Rosa requesting any comments or specific input concerning the project area. As of writing of the Draft EIR, no replies have been received.

3.5.2 REGULATORY FRAMEWORK

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966 (54 United States Code [USC] 300101 et seq.) established guidelines to "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." One of the provisions of NHPA was the development of the National Register of Historic Places (NRHP; National Register), which is administered by the National Park Service. The National Register Bulletin also provides guidance in the evaluation of archaeological site significance.

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act (42 USC 1996) recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects are to be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990 (25 USC 3001-3013).

STATE

California Native American Historical, Cultural and Sacred Sites Act

The California Native American Historical, Cultural and Sacred Sites Act (applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity cease and that the county coroner be notified. If the remains are of a Native American, the coroner must notify the Native American Heritage Commission (NAHC). The NAHC then notifies those persons most likely to be descended from the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

California Register of Historical Resources

California Code of Regulations Title 14, Section 4852 addresses the types of historical resources and criteria for listing in the California Register of Historical Resources (CRHR; California Register). The criteria for listing historical resources in the CRHR are consistent with those developed by the National Park Service for listing historical resources in the NRHP, but have been modified for state use to include a range of historical resources which better reflect the history of California. Only resources that meet the state criteria may be listed in or formally determined eligible for listing in the CRHR.

California Environmental Quality Act

Under the California Environmental Quality Act (CEQA), public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to Public Resources Code (PRC) Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

Historical resource is a term with a defined statutory meaning (PRC Section 21084.1; determining significant impacts to historical and archaeological resources is described in CEQA Guidelines Section 15064.5[a], [b]). Under CEQA Guidelines Section 15064.5(a), historical resources include the following:

1) *A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC Section 5024.1).*

2) *A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.*

3) *Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will 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), including the following:*

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

    b) *Is associated with the lives of persons important in our past;*

    c) *Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or*

    d) *Has yielded, or may be likely to yield, information important in prehistory or history.*

4) *The fact that a resource is not listed in, 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 in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Section 5020.1(j) or 5024.1.*

Historic resources are usually 45 years old or older and must meet at least one of the criteria for listing in the CRHR, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC Section 5024.1 and California Code of Regulations (CCR), Title 14, Section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

For historic structures, CEQA Guidelines Section 15064.5, subdivision (b)(3), indicates that a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995) will generally be considered as having mitigated impacts to a less than significant level.

As noted above, CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. Public Resources Code Section 21083.2, subdivision (g), states:

> *"unique archaeological resource" means an 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 that there is a demonstrable public interest in that information.*
> - *Has 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.*

Treatment options under Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource).

California Health and Safety Code Sections 7050.5

California Health and Safety Code Section 7050.5(b) specifies protocol when human remains are discovered, as follows:

> *In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the*

Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

CEQA Guidelines Section 15064.5, subdivision (e), requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

The CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5, subdivision (f), these provisions should include "an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

California Public Resources Code Section 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. PRC Section 5097.5 states the following:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Assembly Bill 52 (Chapter 532, Statutes of 2014)

Assembly Bill 52 (AB 52) establishes a formal consultation process for California tribes as part of CEQA and equates significant impacts on "tribal cultural resources" with significant environmental impacts (PRC Section 21084.2). AB 52 defines a "California Native American tribe" as a Native American tribe located in California that is on the contact list maintained by the NAHC. AB 52 requires formal consultation with California Native American tribes prior to determining the level of environmental document if a tribe has requested to be informed of proposed projects by the lead agency. AB 52 also requires that consultation address project alternatives and mitigation measures for significant effects, if requested by the California Native American tribe, and that consultation be considered concluded when either of the parties agree to measures to mitigate or avoid a significant effect, or the agency concludes that mutual agreement cannot be reached. Under AB 52, such mitigation or avoidance measures, must be recommended for

inclusion in the environmental document and adopted mitigation monitoring program if determined to avoid or lessen a significant impact on a tribal cultural resource. As noted above, the City initiated consultation with the Lytton Rancheria and the Graton Rancheria. Lytton Rancheria did not request consultation, however, Graton Rancheria did.

Senate Bill 18 (Chapter 905, Statutes of 2004)

Senate Bill 18 (SB 18) requires cities and counties to consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Places. This allows Native American tribes the opportunity to provide input with respect to the possible preservation of, or the mitigation of impacts on, specified Native American places, features, and objects located within that jurisdiction. This consultation is required prior to amending or adopting any general plan or specific plan, or designating land as open space. As noted above, the City contacted the NAHC and local tribes in accordance with SB 18 requirements.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies that are relevant to the proposed project in regard to cultural resources.

Historic Preservation Element

Goal HP-A: Protect Native American heritage.

Policy HP-A-1: Review proposed developments and work in conjunction with the California Historical Resources Information System, Northwest Information Center at Sonoma State University, to determine whether project areas contain known archaeological resources, either prehistoric and/or historic-era, or have the potential for such resources.

Policy HP-A-2: Require that project areas found to contain significant archaeological resources be examined by a qualified consulting archaeologist for recommendations concerning protection and preservation.

Policy HP-A-3: If cultural resources are encountered during development, work should be halted to avoid altering the materials and their context until a qualified consulting archaeologist and Native American representative (if appropriate) have evaluated the situation, and recorded identified cultural resources and determined suitable mitigation measures.

Policy HP-A-4: Consult with local Native American tribes to identify, evaluate, and appropriately address cultural resources and tribal sacred sites through the development review process.

Policy HP-A-5: Ensure that Native American human remains are treated with sensitivity and dignity and assure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.

Goal HP-B: **Preserve Santa Rosa's historic structures and neighborhoods.**

Policy HP-B-1: Ensure that alterations to historic buildings and their surrounding settings are compatible with the character of the structure and the neighborhood. Ensure that specific rehabilitation projects follow the Secretary of Interior's Standards for Rehabilitation to a reasonable extent, taking into consideration economic and technical feasibility.

Policy HP-B-2: Preserve significant historic structures. Consider the life cycle costs when evaluating the alternatives to demolition of these structures, including the adaptive reuse of historic buildings for contemporary uses.

Policy HP-B-8: Preserve sites that are eligible for the National Register of Historic Places, and pursue listing eligible sites in the Register.

Goal HP-C: **Increase public participation in the historic preservation process.**

Policy HP-C-1: Prepare and distribute educational guides and walking tour brochures of places of historical, architectural or cultural interest in Santa Rosa, to increase public awareness of these resources.

Policy HP-C-2: Hold neighborhood meetings to achieve the following:

- Increase public awareness of preservation issues and opportunities;
- Provide information on the historic designation process;
- Publicize low-impact/low-cost/high benefit options for energy efficiency upgrades in context of green building program requirements; and
- Alert neighborhoods, when necessary, to the pending loss of significant buildings or other features.

City of Santa Rosa Cultural Heritage Board

Adopted in 1988, the Historic and Cultural Preservation Ordinance (City Code Chapter 17-22) created the Cultural Heritage Board. The board recommends to the City Council designation of landmarks and preservation districts, reviews permits for alterations to landmarks and buildings in preservation districts, and promotes public awareness of historic resources.

City of Santa Rosa City Code

Under City Code Sections 17-22.030 and 17-22.050, Landmarks, any site, including trees or other significant landscaping, place, building, structure, street, sign, work of art, natural feature, or other object of special historical, cultural, archaeological, or architectural value, may be designated as a historical landmark by the City Council, with the recommendation of the Cultural Heritage Board.

Additionally, any area having historical significance or representing an architectural period or style typical to the history of the city may be designated as a preservation district (City Code Sections 17-22.060 through 17-22.080). Before a landmark or structure in a preservation district is restored, developed, demolished, or otherwise altered, a landmark alteration permit must be granted by the Zoning Administrator or the Cultural Heritage Board (City Code Sections 17-22.090 through 17-22.102).

3.5.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. A cultural resources impact is considered significant if the project would:

1) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

3) Disturb any human remains, including those interred outside of formal cemeteries.

4) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074.

METHODOLOGY

The following impact analysis is based on the cultural resources report prepared for the proposed project by Peak & Associates in 2016 (see **Appendix 3.5**) and review of the General Plan EIR.

PROJECT IMPACTS AND MITIGATION MEASURES

Historical Resources (Standard of Significance 1)

Impact 3.5.1 Redevelopment within the project area could affect historic properties through modification of historic character and though construction activities. This impact would be **less than significant**.

The project area includes several properties that are listed on the Historic Properties Directory and several additional properties that could be eligible for such listing. The properties listed in the Historic Properties Inventory (with the exception of the Dutton Queen Anne, which is a designated landmark) are listed mainly because of their age. Additionally, five neighborhoods in southwest Santa Rosa have been identified as the Northeast Roseland Historic Neighborhoods for which special design considerations must be given (Northeast Roseland Planned Community Policy Statement, October 1, 1996, Ordinance 3283). Seven neighborhoods in the southwest area have also been determined to contain properties that may make them potentially eligible historic neighborhoods (Santa Rosa 2009a).

Compliance with General Plan policies and existing state and local regulations and standards prior to approval of future projects that could be developed under the proposed project would reduce potential impacts on historic resources. General Plan Policy HP-A-1 requires the City to review proposed development projects to determine whether the proposed site contains or has the potential to contain historic-era resources. Additionally, Santa Rosa Zoning Code Chapter 20-58, Historic and Cultural Preservation, and General Plan Policies HP-B-2 to HP-B-9 are intended to preserve and enhance the city's significant historic structures, properties, and neighborhoods and pursue listing of eligible sites in the National Register. Adherence to the standards from the Secretary of the Interior guidelines is required by General Plan Policy HP-B-1. The Secretary of the Interior's Standards for Identification (Standards I and II) require survey activities to be conducted

to document the information necessary to achieve defined preservation goals. General Plan Policy HP-B-8 requires sites to be preserved that are eligible for the NRHP and that the City pursue listing eligible sites in the NRHP.

The only structure that would be subject to review by the Santa Rosa Cultural Heritage Board would be the Dutton Avenue Queen Anne, which was designated as a local landmark by the City Council on March 4, 2008. There are no preservation districts in the project area, and the Cultural Heritage Board does not have authority over older homes on the list that are not in a preservation district and not designated by the City Council as a local landmark. The proposed Specific Plan does not propose to change the land uses that would affect the Dutton Avenue Queen Anne.

The properties listed in the Historic Properties inventory are not in any of the city's preservation districts, nor are they designated as local landmarks, and thus are not subject to the Landmark Alteration section of the Zoning Code and are not under the jurisdiction of the Cultural Heritage Board. For any new construction activities on or in the vicinity of a property in the City's inventory that could impact or alter the historic structure and/or the character or setting of the area, the City will require compliance with applicable policies, regulations, and standards. This would ensure impacts on historic resources would be **less than significant**.

Mitigation Measures

None required.

Known and Undiscovered Archaeological Resources (Standards of Significance 2 and 4)

Impact 3.5.2 If future projects constructed in the project area involve ground disturbance, implementation of the proposed project could result in the disturbance of known and undiscovered archaeological resources or cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074. This impact would be **potentially significant**.

As described previously, there are numerous recorded cultural resources within the project area (see Table 1 of **Appendix 3.5**). General Plan Policy HP-A-1 requires review of proposed developments and that the City work in conjunction with the California Historical Resources Information System, Northwest Information Center at Sonoma State University, to determine whether project areas contain known archaeological resources. Policy HP-A-2 requires that project areas found to contain significant archaeological resources be examined by a qualified consulting archaeologist for recommendations concerning protection and preservation. Adherence to these policies would reduce potential impacts to previously recorded archaeological resources in the project area. Policy HP-A-3 requires that if cultural resources are encountered during development, work should be halted to avoid altering the materials and their context until a qualified consulting archaeologist and Native American representative (if appropriate) have evaluated the situation, and recorded identified cultural resources and determined suitable mitigation measures.

City-initiated consultation with the Lytton Rancheria and the Graton Rancheria did not yield any specific information regarding tribal cultural resources in the project area, although there was indication that there likely are resources in the area and further studies would be needed with any future developments in the area, particularly those near Roseland and Colgan creeks.

Given the archaeologically rich nature of the Santa Rosa area, the large amount of unsurveyed land in the city, and the presence of natural features such as Roseland and Colgan creeks, it is likely that unrecorded, undiscovered archaeological resources are present within the project area. Tribal cultural resources could be discovered during ground-disturbing project-related activities. Any such discoveries have the potential to adversely affect unique archaeological resources, which is considered a **potentially significant impact**.

Mitigation Measures

MM 3.5.2a Phase 1 Archaeological Resource Study. When specific projects are proposed within the project area that involve ground-disturbing activity, a site-specific Phase I archaeological resource study shall be performed by a qualified archaeologist or equivalent cultural resources professional that will include an updated records search, pedestrian survey of the project area, development of a historic context, sensitivity assessment for buried prehistoric deposits, and preparation of a technical report that meets federal and state requirements. If significant or unique resources are identified and cannot be avoided, treatment plans will be developed in consultation with the City and appropriate Native American representatives to mitigate potential impacts to a less than significant level based on the provisions of Public Resources Code Section 21083.2.

MM 3.5.2b Should any archaeological artifacts be discovered during construction of any subsequent project, all construction activities shall be halted immediately within 50 feet of the discovery, the City shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Standards and Guidelines for Professional Qualifications in archaeology and/or history shall be retained to determine the significance of the discovery. The professional archaeologist shall prepare a plan to identify, record, report, evaluate, and recover the resources as necessary, which shall be implemented by the developer. Construction within the area of the discovery shall not recommence until impacts on the archaeological resource are mitigated as described in Mitigation Measure MM 3.5.2a. Additionally, Public Resources Code Section 5097.993 stipulates that a project sponsor must inform project personnel that collection of any Native American artifacts is prohibited by law.

Under mitigation measure MM 3.5.2a, upon City approval of a specific development site that would involve ground disturbance, the area would be investigated in advance to determine if cultural resources are present. Compliance with regulations from the Public Resources Code, specifically Section 21083.2, would diminish the potential impacts from any project involving the demolition or adverse change of an archaeological site that is listed on the NRHP or CRHR or is eligible for listing. Additionally, the California Native American Historical, Cultural and Sacred Sites Act and General Plan Policies HP-A-2 and HP-A-3 require proper notification of experts upon discovery of human remains, significant artifacts, or cultural resources for proper assessment and to determine the necessity for mitigation measures. If significant resources are present, they would be managed in accordance with state regulations and standards.

If archaeological resources are inadvertently discovered during construction activities, mitigation measure MM 3.5.2b provides all work within 50 feet of the discovery be stopped and an archaeological survey by a qualified professional be completed whenever there is evidence of an archaeological site in a proposed project area. If resources are present, the development project would be subject to state requirements (e.g., Health and Safety Code Section 7050.5) for the protection of cultural resources, as required under General Plan 2035 Policies HP-A-4 and

HP-A-5. These requirements, as well as those of AB 52, specify that representatives of the Native American community must be consulted when necessary to ensure the respectful treatment of Native American sacred places. Any significant historical or archaeological impacts identified on a project site must be mitigated in accordance with Health and Safety Code Section 7050.5.

With implementation of mitigation measures MM. 3.5.2a and MM 3.5.2b, impacts on archaeological resources would be reduced to a **less than significant level**.

Human Remains (Standard of Significance 3)

Impact 3.5.3 If future projects constructed in the project area involve ground disturbance, implementation of the proposed project could result in the disturbance of human remains. This impact would be **potentially significant**.

Given the high potential for Native American resources in the project area, it is possible that Native American or other human remains may be present at a site or could inadvertently be encountered during project construction activities involving ground disturbance. This is a **potentially significant impact**.

Mitigation Measures

MM 3.5.3a Implement Mitigation Measure MM 3.5.2a (Phase 1 Archaeological Resource Study).

MM 3.5.3b Should human remains be discovered during construction of any project in the project area, all construction activities shall be halted immediately within 50 feet of the discovery, the City shall be notified, and the Sonoma County Coroner shall be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

Mitigation measure MM 3.5.3a requires that a development site where ground disturbance could occur be evaluated for the potential to have Native American remains. The development project would be subject to the provisions of California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.94 et seq., regarding the discovery and disturbance of human remains. These provisions include contacting the Sonoma County Coroner if discovered remains appear to be human and contacting the Native American Heritage Commission if remains appear to be of Native American origin. The California Native American Historical, Cultural and Sacred Sites Act and General Plan Policies HP-A-2 and HP-A-3 require the proper notification of experts upon discovery of human remains and that construction or excavation activity cease. Implementation of mitigation measures MM 3.5.3a and MM 3.5.3b would reduce impacts related to human remains to **less than significant**.

3.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Cultural resources contribute to an understanding of past human activities, including Native American history, local and regional European, African, and Asian settlement in North America, urban development, historic engineering activities, cross-cultural influences, and human adaptations to the environment. Cultural resources, like many natural resources, are nonrenewable. Once these resources have been destroyed, by whatever means, a fragment of history permanently disappears.

The cumulative setting associated with the proposed project includes existing, proposed, planned, and reasonably foreseeable projects and growth in Santa Rosa and the region. Continued growth in the region would contribute to potential loss of cultural resources. These resources include archaeological resources associated with Native American activities and historic resources associated with settlement, farming, and economic development.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Cultural Resources Impacts

Impact 3.5.4 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could contribute to cumulative impacts to cultural resources. This cumulative impact is considered **less than cumulatively considerable**.

The General Plan 2035 EIR concluded that the impacts related to the potential for development under the General Plan would be reduced to less than cumulatively significant levels with the policies included in the General Plan. The entire project area is subject to these General Plan policies, which require monitoring of construction sites in proximity to known resources, immediate cessation of construction activity upon discovery of unidentified human remains, and the protection of cultural resources. In addition, as required by mitigation measures MM 3.5.2a, MM 3.5.2b, MM 3.5.3a, and MM 3.5.3b, individual development sites where ground disturbance would occur would be evaluated for the potential to contain buried cultural resources, including Native American artifacts and remains. Because the proposed project is subject to these General Plan policies and mitigation measures, it would result in a **less than cumulatively considerable** impacts on cultural resources.

Mitigation Measures

None required.

REFERENCES

Peak & Associates. 2016. *Cultural Resource Report for the Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation Projects.*

Santa Rosa, City of. 2009a. *Santa Rosa General Plan 2035*.

———. 2009b. *Santa Rosa General Plan 2035 Draft Environmental Impact Report*.

3.6 Geology and Soils

This section describes the geologic and soil conditions in Santa Rosa and the project area, identifies applicable laws and regulations that have been adopted to minimize safety risks associated with geologic and soils hazards, and analyzes impacts such as potential exposure of people and property to seismic and soils hazards.

3.6.1 EXISTING SETTING

GEOLOGY

The project area is in the Coast Ranges geomorphic province of California. Much of the Coast Ranges province is composed of marine sedimentary deposits and volcanic rocks that form northwest-trending mountain ridges and valleys, running subparallel to the San Andreas fault zone. The Northern Coast Ranges largely comprise the Franciscan Complex or Assemblage, which consists primarily of graywacke, shale, greenstone (altered sedimentary and volcanic rocks), basalt, chert (ancient silica-rich ocean deposits), and sandstone that originated as ancient sea floor sediments. Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma, and Clear Lake volcanic fields (Santa Rosa 2009b).

Santa Rosa is underlain by the Sonoma Volcanics, sedimentary rocks comprising the Petaluma Formation, and alluvial deposits. The Sonoma Volcanics formed during volcanic activity in the region approximately 3 to 6 million years ago and are generally found in the hilly upland areas. The Petaluma Formation is similar in age and consists of claystones, siltstones, and mudstones formed from the deposition of eroded materials in the upland areas. The alluvial deposits have been divided into the younger Huichica Formation and the Glen Ellen Formation, which consist of gravels, silt, sands, and clays found predominantly in the lower valley areas. Recent alluvial sediments deposited are divided into younger and older deposits, which fill the valleys and originated from continued erosion of the upland areas (Santa Rosa 2009b).

Based on California Geological Survey (CGS) mapping, the project area is underlain by sedimentary rocks consisting of Quaternary alluvium and the Huichica and Glen Ellen formations (CGS 2012).

TOPOGRAPHY AND PHYSIOGRAPHY

Specific Plan Area

The Specific Plan area is generally flat and slopes gently west. Elevations range from approximately 150 feet above mean sea level (amsl) in the West Third annexation area to approximately 120 to 130 feet near Hearn Avenue. The lowest points in the Specific Plan area are in the western annexation areas, where the elevation is approximately 100 feet. The area is not highly susceptible to slope failure or landslides.

Roseland Creek and Colgan Creek flow through the Specific Plan area. The upper portion of Roseland Creek (Reaches 1 and 2, US Highway 101 to Burbank Avenue) is generally characterized by a natural, meandering channel. Reach 3 (Burbank Avenue to Stony Point Road) is primarily a grass-lined flood control channel. Colgan Creek flows under US 101 at the approximate midpoint of the plan area's eastern boundary southwesterly to Bellevue Avenue and then flows westerly along the roadway and the plan area's southern boundary. Colgan Creek consists largely of a Sonoma County Water Agency flood control channel that is grass-lined.

Annexation Areas

The Annexation areas are generally flat. Elevations in the West Third Street Annexation area range from approximately 145 to 155 feet amsl sloping to the northwest. The Brittain Lane Annexation area is essentially flat with an elevation of approximately 110 feet amsl. Elevations in the West Hearn Annexation area range from approximately 102 to 108 feet amsl sloping generally west. The annexation areas are not highly susceptible to slope failure or landslides.

Santa Rosa Creek flows through the West Third Street Annexation area. This portion of the creek (Reach 5 from Pierson Street to Stony Point Road) is characterized as a modified-natural channel featuring maturing trees providing some shade and old riprap, tree roots, and some bank areas providing shelter for fish.

SOILS

The US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) has characterized the majority of native, undisturbed soils in Santa Rosa as clayey alluvial soils and riverwash, as well as some silty and gravelly soils and loams. The native soils in the project area are predominantly Wright loam, Yolo clay loam, and Zamora silty clay loam. These soils are formed on weathered alluvial deposits and sedimentary alluvium (NRCS 2014).

The soils in the project area have low to moderate potential for water or wind erosion and have moderate to high expansion potential (NRCS 2014). In areas that are already developed, there is a substantial volume of fill material (Santa Rosa 2009b). Areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or loose unconsolidated alluvial sediments.

According to the Santa Rosa General Plan 2035, no significant mineral resources are identified in the project area (Santa Rosa 2009a).

SEISMIC HAZARDS

Faults and Seismicity

The San Francisco Bay Area is a region of high seismic activity. The San Andreas and Hayward-Rodgers Creek fault zones are the principal fault systems in the Bay Area. Major active faults in the San Andreas fault zone include the San Andreas, Hayward, Rodgers Creek, Calaveras, San Gregorio- Seal Cove, Maacama, West Napa, Green Valley, Concord, Greenville, and Calaveras faults.

The closest fault to the project area is the Rodgers Creek fault, located about 0.5 mile to the east of downtown Santa Rosa. The Rodgers Creek fault is considered an extension of the Hayward fault and experienced historic seismic events in 1898 and 1969. The city is approximately 8 miles southeast of the Maacama fault zone and 20 miles northeast of the San Andreas fault zone. The Maacama fault zone experienced movement within the last 11,000 years and is capable of producing a maximum moment magnitude (M) 7.1 earthquake. Other principal faults capable of producing ground shaking in Santa Rosa include the East Bay's Hayward fault, the San Gregorio-Hosgri fault zone along the San Mateo Coast, the Calaveras fault, and the Concord-Green Valley fault. Many of the other active faults in the region are capable of causing significant ground shaking in Santa Rosa (Santa Rosa 2009b).

The US Geological Survey Working Group on California Earthquake Probabilities study completed in 2014 estimates there is a 72 percent probability between 2014 and 2044 that a M6.7 or greater magnitude earthquake will occur in the San Francisco Bay region. In this study, scientists also assigned a numerical "readiness" factor, which refers to whether the likelihood is elevated (more than 1.0) or lowered (less than 1.0) and is a function of the length of time since the most recent large earthquake. For the Hayward-Rodgers Creek fault, the readiness was determined to be 1.6, indicating an elevated likelihood of an earthquake (USGS 2015).

Surface Fault Rupture

Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. Ground rupture is typically confined to relatively narrow zones (a few feet to tens of feet wide) and considered more likely along active faults. The CGS has delineated an Alquist-Priolo Fault Rupture Hazard Zone for the Rodgers Creek fault through downtown Santa Rosa, but the fault does not pass through the project area (DOC 1983).

Ground Shaking

Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. The Modified Mercalli intensity scale is commonly used to measure earthquake effects due to ground shaking. The Modified Mercalli values for intensity range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X could cause moderate to significant structural damage. As a comparison, ground shaking during the 1989 Loma Prieta earthquake (7.1 surface-wave magnitude) resulted in light (Modified Mercalli V) ground shaking, whereas the 1906 earthquake produced moderate (VI) to very strong (VIII) ground shaking in the city (Santa Rosa 2009b).

According to a map prepared by the Association of Bay Area Governments (ABAG) in 2015, a major seismic event on the Hayward-Rodgers Creek fault could cause very strong (Modified Mercalli VIII) ground shaking in the project area. A small portion of the West Third Annexation area could experience violent (Modified Mercalli IX) ground shaking. Strong ground shaking from an earthquake could result in considerable damage, with buildings shifted off their foundations and underground pipes broken.

Liquefaction

Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion, resulting in temporary fluid-like behavior of the soil. Soil liquefaction causes ground failure that can damage roads, pipelines, underground cables, and buildings with shallow foundations. The CGS has not investigated the Santa Rosa area for potential designation as a Seismic Hazard Zone for liquefaction. However, according to maps compiled by ABAG, there is low to moderate liquefaction potential in the project area (ABAG2016).

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid rearrangement, compaction, and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments). Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Areas are susceptible to differential settlement if underlain

by compressible sediments, such as poorly engineered artificial fill or loose alluvial sediments (Santa Rosa 2009b).

PALEONTOLOGICAL RESOURCES

Paleontological resources are defined as fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. Rock formations that yield significant vertebrate or invertebrate fossil remains are considered to have paleontological sensitivity. The Santa Rosa General Plan 2035 EIR does not identify paleontological resources in the city (Santa Rosa 2009b), and the sedimentary rocks of the Glen Ellen and Huichica formations have not been identified as important paleontological resources formations (CPUC 2013).

3.6.2 REGULATORY FRAMEWORK

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The law's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The act requires the State Geologist to establish regulatory zones known as earthquake fault zones around the surface traces of active faults and to issue appropriate maps. As noted above, there is an Alquist-Priolo earthquake fault zone in Santa Rosa, but it does not extend into the project area.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (California Public Resources Code, Division 2, Chapter 7.8A) addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. The act resulted in a mapping program identifying areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. Mapping undertaken by the CGS in the San Francisco Bay region has not been completed in Santa Rosa, and no zones of special investigation apply to the city.

California Building Code

The State of California provides minimum standards for building design through the California Building Code (CBC) (California Code of Regulations [CCR], Part 2 of Title 24). The CBC is based on the federal Uniform Building Code (UBC), which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for conditions in California. State regulations and engineering standards related to geology, soils, and seismic activity in the UBC are reflected in the CBC requirements. Through the CBC, the State of California provides a minimum standard for building design and construction. The State adopted the current CBC in 2013.

The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control (Chapter 18, Appendix J). The City of Santa Rosa has adopted the 2013 CBC (Ordinance 4015).

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program, authorized by Section 402(p) of the federal Clean Water Act, controls water pollution by regulating point sources, such as construction sites and industrial operations that discharge pollutants into waters of the United States. A stormwater pollution prevention plan (SWPPP) is required to control discharges from a project site, including soil erosion, to protect waterways. A SWPPP describes the measures or practices to control discharges during both the construction and operational phases of the proposed project. A SWPPP identifies project design features and structural and non-structural best management practices (BMPs) that will be used to control, prevent, remove, or reduce stormwater pollution from the site, including sediment from erosion.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan policies most pertinent to the proposed project with respect to geology and soils.

Noise and Safety Element

Goal NS-C: **Prohibit development in high-risk geologic and seismic hazard areas to avoid exposure to seismic and geologic hazards.**

Policy NS-C-1: Prior to development approval, require appropriate geologic studies to identify fault trace locations within active fault zones as designated by the provisions of the Alquist-Priolo Earthquake Fault Zoning Act. California registered geologists or engineers must conduct these studies and investigation methodologies must comply with guidelines set forth by the Alquist-Priolo Earthquake Fault Zoning Act. Compliance with the Act would insure proper setback or appropriate design to minimize the potential hazards resulting from fault movement and surface displacement.

Policy NS-C-2: Require comprehensive geotechnical investigations prior to development approval, where applicable. Investigations shall include evaluation of landslide risk, liquefaction potential, settlement, seismically induced landsliding, or weak and expansive soils. Evaluation and mitigation of seismic hazards, including ground shaking, liquefaction, and seismically induced landslides, shall comply with guidelines set forth in the most recent version of the California Division of Mines and Geology (CDMG) Special Publication 117. The level of investigation would depend on physical site location, local or regional geologic or seismic hazards, and recommendations by a consulting engineer.

Policy NS-C-3: Restrict development from areas where people might be adversely affected by known natural or manmade geologic hazards. Hazards might include unstable slopes, liquefiable soils, expansive soils or weak poorly engineered fills, as determined by a California registered geologist or engineer.

Policy NS-C-4: Restrict development of critical facilities—such as hospitals, fire stations, emergency management headquarters, and utility lifelines, including broadcast services, sewage treatment plants, and other places of large congregations—in areas determined as high-risk geologic hazard zones (e.g. Rodgers Creek Fault zone, liquefiable soils, areas of slope instability).

Policy NS-C-6: Require appropriate and feasible seismic retrofit, as determined by a registered structural engineer, or commercial, industrial, and public buildings that are not currently retrofitted and are located within areas determined to experience strong ground shaking during an earthquake.

Policy NS-C-7: Require inspection for structural integrity of water storage facilities, water conveyance facilities, electricity transmission lines, roadways, water detention facilities, levees, and other utilities after a major seismic event, especially on the San Andreas or Rodgers Creek faults.

Policy NS-C-8: Adopt mandatory, minimum erosion control measures for current properties and those under construction that exhibit high erosion potential, are in areas of steep slopes, or have experienced past erosion problems. Control measures shall reduce soil erosion from primary erosional agents, including wind, construction operations, and storm water runoff.

City of Santa Rosa City Code

Building and Construction

Title 18, Buildings and Construction, of the Santa Rosa City Code addresses general building and construction practices and lists requirements. Buildings and construction are required to be in accordance with the California Building Code, which the City has incorporated by reference (City Code Section 18-04.015). As noted above, the CBC establishes applicable standards pertaining to seismic and soils hazards as well as grading and erosion controls. Chapter 18-16.J104.5 Appendix J of the City Code sets forth requirements for grading permits. Review and abatement of existing buildings considered seismic hazards is included in Chapter 18-48 of the City Code.

Grading, Soils, and Erosion Control Ordinances

City Code Title 19 establishes grading and soils requirements for structural foundations. Provisions include completion of a preliminary soils report prepared by a licensed civil engineer based on adequate test borings or excavations for subdivisions. This requirement may be waived if the City's Chief Building Official determines that critically expansive soil or other soils problems that could lead to structural defects do not exist. If the soils report indicates the presence of critically expansive soil or other soil problems which, if not corrected, would lead to structural damage, the City requires a complete soils investigation, prepared by a licensed civil engineer, for each lot in a subdivision. This report is required to include recommended corrective actions to prevent structural damage to proposed structures. The report and investigation are conditions of approval for subsequent plan-level and building permits.

Title 19 also establishes erosion control requirements for subdivisions including properly timing grading and construction activities to minimize soil exposure during the rainy season, retain natural vegetation and revegetate denuded areas, divert runoff away from steep slopes, trap sediment in basins to allow for particles to settle out prior to discharge, and inspect erosion control measures regularly.

City of Santa Rosa Local Hazards Mitigation Plan

The City's Local Hazards Mitigation Plan is a multijurisdictional document that addresses natural disasters, including earthquakes. The plan's goal is to maintain and enhance a disaster-resilient region by reducing the potential loss of life, property damage, and environmental degradation from natural disasters while accelerating economic recovery from those disasters (Santa Rosa 2011).

3.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G standards. A geology, soils, paleontological resources, or mineral resources impact is considered significant if the project would:

1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

    a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.

    b. Strong seismic ground shaking.

    c. Seismic-related ground failure, including liquefaction.

    d. Landslides.

2) Result in substantial soil erosion or the loss of topsoil.

3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

4) Be located on expansive soil, as defined in Section 1803.5.3 of the 2013 California Building Code, creating substantial risks to life or property.

5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

7) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or a locally important mineral resource recovery site delineated on a local land use plan.

METHODOLOGY

Evaluation of potential geologic and soil impacts of the proposed project was based on review of available documentation, including the City of Santa Rosa General Plan, General Plan EIR, and ABAG, CGS, and USGS data and publications.

Impacts Not Evaluated in Detail

An Alquist-Priolo earthquake fault zone has been delineated in Santa Rosa, but it does not extend into the project area. There would be no impact relative to Standard of Significance 1a, and this issue is not further evaluated.

The project area is flat and is not located near hilly or mountainous terrain that could pose a landslide risk. There would be no impact relative to Standard of Significance 1d, and this issue is not further evaluated.

Soils in the project area are not designated for protection as a source of topsoil. There would be no impact relative to Standard of Significance 2 regarding topsoil, and the issue of loss of topsoil is not further evaluated. However, erosion impacts, which are a component of Standard of Significance 2, are evaluated in Impact 3.6.2.

All subsequent projects generating wastewater would be connected to the City's sewer system. There would be no impact relative to Standard of Significance 5, and this issue is not further evaluated.

The geologic formations that underlie the project area have not been identified as important paleontological resource formations, or unique geological features, and no significant paleontological resources have been identified in the city. Thus, there would be no impact relative to Standard of Significance 6, and this issue is not further evaluated.

According to the Santa Rosa General Plan 2035, no significant mineral resources are identified within the project area (Santa Rosa 2009a). There would be no impact relative to Standard of Significance 7, and this impact is not further evaluated.

PROJECT IMPACTS AND MITIGATION MEASURES

Seismic Hazards (Standards of Significance 1b and 1c)

Impact 3.6.1 Subsequent projects developed as a result of implementation of the proposed project could be at risk from seismic hazards. This impact is **less than significant.**

The project area could experience strong to violent ground shaking as a result of an earthquake on the Hayward-Rodgers Creek fault, as well as ground shaking associated with seismic activity on other regional faults. The intensity of ground shaking would vary with the distance and magnitude of the earthquake causing the ground shaking. The project area is in CBC Seismic Zone 4, as is Santa Rosa and much of the rest of the Bay Area. Development would be required to meet the most stringent CBC standards for Seismic Zone 4 in effect at the time of project design as well as the M_w7.1 "design earthquake" on the Hayward-Rodgers Creek fault.

Structures built to meet the CBC seismic safety standards or resistance to lateral movement would not likely be destroyed, but could have at least minor damage, such as cracked façades and damaged utility pipes. Frame structures could shift off their foundations if not bolted. Ground shaking could completely destroy or badly damage unreinforced masonry or poorly built structures not meeting the current seismic code.

The project area, like the rest of the city, is likely to have a moderate liquefaction potential, but there are some isolated areas where the potential could be greater. Soil liquefaction could cause ground failure that could damage roads, pipelines, underground cables, and buildings with shallow foundations. A geotechnical investigation or geologic assessment for future projects would be required to assess the site-specific liquefaction potential for each development site.

The project area is not mapped by the CGS as being located within an earthquake-induced landslide zone. However, slopes adjacent to the creeks that flow through and adjacent to the project area may be subject to some type of slope failure as a result of violent ground shaking. Lurch cracking is another feature characteristic of slope instability that could result from an earthquake. Fissures or cracks on slopes overlain by weak soils can result from swaying, rolling, or spreading of the ground during a strong earthquake. This hazard is generally considered minimal due to lack of slopes throughout the area, but could occur along tops of banks next to the creeks, which may be susceptible to some sort of slope failure. General Plan Policy NS-C-3 requires development restrictions in unstable areas, including any unstable slopes along creeks. In the city, if a project meets the Zoning Code–required creek setback standards, no further stability analysis is required. If there is evidence of a stability problem or if a structure would encroach into the creek setback, the Building Division would require soils analysis. In addition, soils reports are required by the Building Division for new structures and additions larger than 500 square feet. A soils engineer would identify whether there are streambank issues.

General Plan Policy NS-C-2 requires a comprehensive geotechnical investigation prior to development approval, where applicable. Such investigation must include evaluation of all seismic hazards, including seismic ground shaking, liquefaction, and other potentially unstable soil conditions. Policy NS-C-4 also restricts development of critical facilities in high-risk geologic hazard zones. Policy NS-C-7 requires inspection of major utilities following earthquakes. The California Building Code and Title 18 and Title 19 of the Santa Rosa City Code require proper foundation engineering and construction in accordance with recommendations of a licensed civil engineer. Incorporation of seismic design and construction standards required under the CBC, with which compliance would be confirmed by City staff during its review of building permit submittals, may not completely eliminate the hazard of seismically induced ground shaking and related secondary hazards, such as liquefaction and unstable soils, but they would reduce the potential for significant catastrophic effects of ground shaking, such as complete structural failure. Compliance with adopted building codes that address seismic hazards would result in **less than significant** impacts.

Mitigation Measures

None required.

Soil Erosion (Standard of Significance 2)

Impact 3.6.2 Construction of subsequent projects developed as a result of implementation of the proposed project could result in temporary erosion impacts. This is a **less than significant** impact.

Soil erosion is a process whereby soil materials are worn away and transported to another area, either by wind or water. Rates of erosion can vary depending on the soil material and structure, placement, and human activity. Soil containing high amounts of silt can be easily eroded, while sandy soils are less susceptible.

Development of vacant sites within the project area could involve the removal of vegetation that currently helps to stabilize site soils. The exposure of the soils during land clearing and grading activities could lead to increased surface runoff and erosion, with possible impacts to Roseland Creek, Santa Rosa Creek, or Colgan Creek. Because the project area does not contain steep slopes or grades, the potential for soil erosion is slight and soil loss can be easily controlled.

To reduce erosion, as established in City Code Title 18, the City requires projects to comply with Appendix J-110 of the CBC, and Santa Rosa City Code Chapter 19-64, Grading and Erosion Control, requires implementation of erosion control measures for all subdivisions. General Plan Policy NS-C-8 requires erosion control measures to be implemented to reduce soil erosion from runoff, construction operations, wind, and other causes. These requirements overlap those of the City's Storm Water Management Plan, which will require the preparation and implementation of a SWPPP for individual development projects proposed in the project area. Implementation of an approved SWPPP would minimize erosion potential by identifying project design features and best management practices that will be used during and following construction to control, prevent, remove, or reduce stormwater pollution from the site, including sediment from erosion. Soil erosion potential would also be reduced once the soil is graded and covered with concrete, structures, or asphalt. Therefore, project impacts related to soil erosion would be **less than significant**.

Mitigation Measures

None required.

Soils Hazards (Standards of Significance 3 and 4)

Impact 3.6.3 Subsequent projects developed as a result of implementation of the proposed project could be constructed on soils that are expansive or have other physical characteristics that could result in unstable conditions. This is a **less than significant** impact.

Expansive soils possess a "shrink-swell" characteristic, which is a cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. During these cycles, the volume of the soil changes markedly. Soils with moderate to high expansion potential are a common cause of foundation deterioration, especially cracking of concrete slabs, and roadway damage. Native, undisturbed soils in the project area have moderate to high expansion potential (NRCS 2014).

Settlement is the depression of the bearing soil when a load, such as that of a building or new fill material, is placed on it. Soils tend to settle at different rates and by varying amounts depending on the load weight, which is referred to as differential settlement. Differential settlement or subsidence could occur if buildings or other improvements were built on low-strength foundation

materials (including imported fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and fill). Although differential settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause significant building damage over time. Any portions of the project area that contain loose or non-engineered fill where development occurs may be susceptible to differential settlement.

Testing would be required under General Plan Policy NS-C-2 and the City's Building Code prior to issuance of grading and/or building permits for new development. In general, soils can be engineered in accordance with the California Building Code and other geotechnical requirements to provide sufficient foundation for structures to account for underlying soil characteristics. This may include removal of any non-suitable soils and replacement with compacted and moisture-conditioned engineered fill in accordance with accepted geotechnical standards. Adherence to existing regulations and policies would ensure that impacts related to soil hazards are **less than significant.**

Mitigation Measures

None required.

3.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Impacts associated with geology and soils are generally site-specific (determined by a particular site's soil characteristics, topography, and proposed land uses) rather than cumulative in nature. Nonetheless, the cumulative setting for the proposed project related to geology and soils would be Santa Rosa and the city's Urban Growth Boundary as well as development anticipated to result from buildout of the General Plan 2035. Individual development projects in the region would be subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent in the region.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Geology and Soils Impacts

Impact 3.6.4 Subsequent projects developed as a result of implementation of the proposed project, in addition to other proposed and approved projects in the vicinity, would not cumulatively create any new or exacerbate any identified geological or soils impacts. Cumulative geology and soils impacts would be **less than cumulatively considerable.**

Development within the Santa Rosa Urban Growth Boundary has the potential to result in a cumulative impact related to geology and seismicity. The General Plan 2035 EIR concluded that with the policies included in the General Plan, the General Plan would result in a less than cumulatively considerable impact related to geologic and seismic impacts.

Implementation of the proposed project could result in the construction and occupancy of new residential and nonresidential development. All new development would be required to comply with the CBC, as required under City Code Title 18, which requires stringent earthquake-resistant design. Soils hazards would be mitigated through compliance with the City's requirements for soils

testing and appropriate engineering. Any development involving clearing, grading, or excavation that causes soil disturbance of 1 or more acres, or any project involving less than 1 acre that is part of a larger development plan and includes clearing, grading, or excavation, would be subject to the City's Storm Water Management Plan requirements. These requirements reduce the potential for erosion by requiring an approved SWPPP and implementation and maintenance of erosion control measures. Compliance with existing regulatory requirements, General Plan policies, and City codes would ensure that subsequent development under the proposed project, in addition to other proposed and approved projects in the vicinity, would not cumulatively create any new or exacerbate any identified geological or soils impacts. Cumulative impacts would be **less than cumulatively considerable.**

Mitigation Measures

None required.

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3.7 Greenhouse Gas Emissions

This section provides a discussion of the proposed project's effect on greenhouse gas (GHG) emissions and the associated effects of climate change. The reader is referred to Section 3.3, Air Quality, for a discussion of project impacts associated with air quality.

3.7.1 EXISTING SETTING

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (IPCC 2014, pp. 3 and 5).

Table 3.7-1 provides descriptions of the primary GHGs attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential (GWP). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013, p. 467).

TABLE 3.7-1
GREENHOUSE GASES

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
Methane (CH_4)	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[2]
Nitrous Oxide (N_2O)	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. Nitrous oxide is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1] EPA 2011a, [2] EPA 2011b, [3] EPA 2010

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of the California Environmental Quality Act (CEQA), greenhouse gas impacts to global climate change are inherently cumulative.

GREENHOUSE GAS EMISSION SOURCES

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural emissions sectors (CARB 2014). California is a significant emitter of CO_2e in the world and produced 459 million gross metric tons of CO_2e in 2012 (CARB 2014). In the state, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CARB 2014). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing carbon dioxide from the atmosphere.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to provide the world with a scientific view on climate change and its potential effects. According to the IPCC, global average temperature is expected to increase relative to the 1986–2005 period by 0.3 to 4.8 degrees Celsius (°C) (0.5–8.6 degrees Fahrenheit [°F]) by the end of the twenty-first century (2081–2100), depending on future GHG emission scenarios (IPCC 2014). According to the California Natural Resources Agency (2012, p. 2), temperatures in California are projected to increase 2.7°F above 2000 averages by 2050 and, depending on emission levels, 4.1–8.6°F by 2100.

Physical conditions beyond average temperatures could be indirectly affected by the accumulation of GHG emissions. For example, changes in weather patterns resulting from increases in global average temperature are expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Based on historical data and modeling, the California Department of Water Resources projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050 (DWR 2008, p. 4). An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events (CNRA 2012, p. 5). This scenario would place more pressure on California's levee/flood control system.

Another outcome of global climate change is sea level rise. The sea level rose approximately 7 inches during the last century and, assuming that sea level changes along the California coast continue to track global trends, the sea level along the state's coastline in 2050 could be 10–18 inches higher than in 2000 and 31–55 inches higher by the end of this century (CNRA 2012, p. 9).

As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available (CNRA 2012, pp. 11 and 12).

Changes in precipitation patterns and increased temperatures are expected to alter the distribution and character of natural vegetation and the associated moisture content of plants and soils. An increase in the frequency of extreme heat events and drought is also expected. These changes are expected to lead to increased frequency and intensity of large wildfires (CNRA 2012, p. 11).

Cal-Adapt is a climate change scenario planning tool developed by the California Energy Commission (CEC) that downscales global climate model data to local and regional resolution under two emissions scenarios: the A-2 scenario represents a business-as-usual future emissions scenario, and the B-1 scenario represents a lower GHG emissions future. According to Cal-Adapt, annual average temperatures in the project area are projected to rise by 3.0–5.3°F by 2100, with the range based on low and high emissions scenarios (Cal-Adapt 2016).

3.7.2 REGULATORY FRAMEWORK

California has adopted various administrative initiatives and pieces of legislation relating to climate change, much of which set aggressive goals for GHG emissions reductions in the state. Although lead agencies must evaluate climate change and greenhouse gas emissions of projects subject to the California Environmental Quality Act, the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or specific thresholds of significance and do not specify GHG reduction mitigation measures. Instead, the guidelines allow lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. No state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating significant effects in CEQA documents. Thus, lead agencies exercise their discretion in determining how to analyze greenhouse gases.

CALIFORNIA GLOBAL WARMING SOLUTIONS ACT (ASSEMBLY BILL 32)

The primary acts that have driven GHG regulation and analysis in California include the California Global Warming Solutions Act of 2006 (AB 32) (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599), which instructs the California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The act directed CARB to set a greenhouse gas emissions limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020.

AB 32 Scoping Plan

CARB adopted the Scoping Plan to achieve the goals of Assembly Bill (AB) 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business as usual"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and the state's Climate Action Team[1] early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the adopted role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations occurred through the end of year 2013. Key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent by 2020.

[1] The Climate Action Team, led by the Secretary of the California Environmental Protection Agency (CalEPA) is a group of state agency secretaries and heads of agency, boards, and departments. The CAT members work to coordinate statewide efforts to implement global warming emissions reduction programs and the state's Climate Adaptation Strategy.

- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions.

- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.

- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, heavy-duty truck measures, and the Low Carbon Fuel Standard.

- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation. (CARB 2008)

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relies on emissions projections updated in light of current economic forecasts that account for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This reduced the projected 2020 emissions from 596 million metric tons (MMT) CO_2e to 545 $MMTCO_2e$. The reduction in projected 2020 emissions means that the revised business-as-usual (BAU) reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from BAU needed to achieve the goals of AB 32 is approximately 16 percent.

AB 32 requires CARB to update the Scoping Plan at least once every five years. CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG reduction necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. The Scoping Plan update also looks beyond 2020 toward the 2050 goal established in Executive Order S-3-05, though not yet adopted as state law, and observes that "a mid-term statewide emission limit will ensure that the State stays on course to meet our long-term goal." The Scoping Plan update does not establish or propose any specific post-2020 goals, but identifies such goals adopted by other governments or recommended by various scientific and policy organizations. Executive Order B-30-15 (signed April 29, 2015) endorses the effort to set interim GHG reduction targets for year 2030 (40 percent below 1990 levels).

Table 3.7-2 provides a brief overview of the other California legislation relating to climate change that may affect emissions associated with the proposed project.

TABLE 3.7-2
CALIFORNIA STATE CLIMATE CHANGE LEGISLATION

Legislation	Description
Assembly Bill 1493 and Advanced Clean Cars Program	Assembly Bill 1493 ("the Pavley Standard") (Health and Safety Code Sections 42823 and 43018.5) aims to reduce GHG emissions from noncommercial passenger vehicles and light-duty trucks of model years 2009–2016. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.
Low Carbon Fuel Standard (LCFS)	Executive Order S-01-07 (2007) requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California. The regulation took effect in 2010 and is codified at Title 17, California Code of Regulations, Sections 95480–95490. The LCFS will reduce greenhouse gas emissions by reducing the carbon intensity of transportation fuels used in California by at least 10 percent by 2020.
Renewables Portfolio Standard (Senate Bill X1-2 & Senate Bill 350)	California's Renewables Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. The 33 percent standard is consistent with the RPS goal established in the Scoping Plan. The passage of Senate Bill 350 in 2015 updates the RPS to require the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. The bill will make other revisions to the RPS program and to certain other requirements on public utilities and publicly owned electric utilities.
Senate Bill 375*	Senate Bill (SB) 375 (codified in the Government Code and the Public Resources Code) took effect in 2008 and provides a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires metropolitan planning organizations (MPOs) to incorporate a Sustainable Communities Strategy in their Regional Transportation Plans that will achieve GHG emissions reduction targets by reducing vehicle miles traveled from light-duty vehicles through the development of more compact, complete, and efficient communities.
California Building Energy Efficiency Standards	In general, the California Building Energy Efficiency Standards require the design of building shells and building components to conserve energy. The California Energy Commission adopted changes to the 2013 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1. The amended standards took effect in the summer of 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Energy-efficient buildings require less electricity, and increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.
California Green Building Standards	The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect July 1, 2014.

** Senate Bill 375 is codified at Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01, as well as at Public Resources Code Sections 21061.3 and 21159.28 and Chapter 4.2.*

California Executive Orders

In addition to the legislation identified in **Table 3.7-2**, two Executive Orders—California Executive Order 5-03-05 (2005) and California Executive Order B-30-15 (2015)—highlight GHG emissions reduction targets, though such targets have not been adopted by the State and remain only a goal of the Executive Orders. Specifically, Executive Order 5-03-05 seeks to achieve a reduction of GHG emissions of 80 percent below 1990 levels by 2050 and Executive Order B-30-15 seeks to achieve a reduction of GHG emissions of 40 percent below 1990 levels by 2030. Technically, a governor's Executive Order does not have the effect of new law but can only reinforce existing laws. For instance, as a result of the AB 32 legislation, the State's 2020 reduction target is backed by the adopted AB 32 Scoping Plan, which provides a specific regulatory framework of requirements for achieving the 2020 reduction target. The State-led GHG reduction measures identified in **Table 3.7-2**, such as the Low Carbon Fuel Standard and the Renewables Portfolio Standard, are largely driven by the AB 32 Scoping Plan. Executive Orders S-03-05 and B-30-15 do not have any such framework and provide no specific emissions reduction mechanisms.

REGIONAL

Bay Area Air Quality Management District

The Bay Area Air Quality Management District's (BAAQMD) (2011) CEQA Air Quality Guidelines were developed to assist lead agencies in evaluating air quality impacts for projects and plans in the San Francisco Bay Area Air Basin. The guidelines were updated in 2010 to include guidance on assessing GHG and climate change impacts as required under CEQA Section 15183.5(b) and to establish thresholds of significance for impacts related to GHG emissions. These thresholds can be used to assess plan-level and project-level impacts.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the Specific Plan in regard to greenhouse gas emissions.

Land Use and Livability Element

Goal LUL-A: **Foster a compact rather than a scattered development pattern in order to reduce travel, energy, land, and materials consumption while promoting greenhouse gas emissions reductions citywide.**

Policy LUL-A-1: As part of plan implementation—including development review, capital improvements programming, and preparation of detailed area plans—foster close land use/transportation relationships to promote use of alternative transportation modes and discourage travel by automobile.

Goal LUL-I: **Maintain vibrant, convenient, and attractive commercial centers.**

Policy LUL-I-8: Encourage commercial properties to be retrofitted for energy efficiency and water conservation.

Urban Design Element

Goal UD-D: **Avoid strip patterns of commercial development. Improve the appearance and functioning of existing commercial strip corridors, such as Santa Rosa Avenue and Sebastopol Road.**

Policy UD-D-4: Provide continuous sidewalks and bicycle lanes on both sides of major regional/arterial streets.

Goal UD-E: **Create a framework of public spaces at the neighborhood, city, and regional scale.**

Policy UD-E-4: Enhance pedestrian activity and safety by designing streets, buildings, pathways, and trails to provide a visual connection with public spaces such as parks and Santa Rosa Creek. Review and revise the Zoning Code and Subdivision Guidelines to support this policy.

Goal UD-G: **Design residential neighborhoods to be safe, human-scaled, and livable by addressing compact development, multi-modal connectivity and reducing energy use.**

Policy UD-G-2: Locate higher density residential uses adjacent to transit facilities, shopping, and employment centers, and link these areas with bicycle and pedestrian paths.

Policy UD-G-3: Design new residential streets to be in scale with the adjacent structures and uses, and appropriate to their intended purpose. Neighborhood streets should be scaled for slow moving traffic, pedestrian and bicycle access, and children's play.

Policy UD-G-4: Provide through-connections for pedestrians and bicyclists in new developments. Avoid cul-de-sac streets, unless public pedestrian/bikeways interconnect them.

Transportation Element

Goal T-B: **Provide a safe, efficient, free-flowing circulation system.**

Policy T-B-1: Require site design to focus through-traffic on regional/arterial streets. Employ the following design techniques to increase driver safety and traffic efficiency:

- Reduce the number of driveways and intersections;
- Combine driveways to serve numerous small parcels;
- Avoid residential access;
- Install and facilitate timing of traffic signals; and
- Ensure continuous sidewalks.

Policy T-B-4: Promote the use of roundabouts in lieu of stop/signal controlled intersections to improve safety, reduce delay and idling time, and lower vehicle emissions at new/existing intersections.

Goal T-H: **Expand the existing transit network to reduce greenhouse gas emissions and to provide convenient and efficient public transportation to workplaces, shopping, SMART stations, and other destinations.**

Policy T-H-3: Require new development to provide transit improvements, where a rough proportionality to demand from the project is established. Transit improvements may include:

- Direct and paved pedestrian access to transit stops;
- Bus turnouts and shelters; and
- Lane width to accommodate buses.

Goal T-K: **Develop a safe, convenient, and continuous network of pedestrian sidewalks and pathways that link neighborhoods with schools, parks, shopping areas, and employment centers.**

Policy T-K-4: Require construction of attractive pedestrian walkways and areas in new residential, commercial, office, and industrial developments. Provide landscaping or other appropriate buffers between sidewalks and heavily traveled vehicular traffic lanes, as well as through and to parking lots. Include pedestrian amenities to encourage and facilitate walking.

Goal T-L: **Develop a citywide system of designated bikeways that serves both experienced and casual bicyclists, and which maximized bicycle use for commuting, recreation, and local transport.**

Policy T-L-8: Require new development to dedicate land and/or construct/install bicycle facilities, and provide bicycle parking as specified in the Zoning Code, where a rough proportionality to demand from the project is established. Facilities such as showers and bicycle storage shall also be considered.

Open Space and Conservation Element

Goal OSC-I: **Conserve water and maintain water quality.**

Policy OSC-I-4: Consider water conservation measures in the review of new residential development projects.

Policy OSC-I-5: Expand the infrastructure network as possible to allow use of reclaimed water for use at residences, businesses, and city parks and facilities.

Goal OSC-J: **Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards.**

Policy OSC-J-3: Reduce particulate matter emissions from wood burning appliances through implementation of the City's Wood Burning Appliance code.

Goal OSC-K: **Reduce energy use in existing and new commercial, industrial, and public structures.**

Policy OSC-K-1: Promote the use of site planning, solar orientation, cool roofs, and landscaping to decrease summer cooling and winter heating needs. Encourage the use of recycled content construction materials.

Policy OSC-K-2: Identify opportunities for decreasing energy use through installation of energy efficient lighting, reduced thermostat settings, and elimination of unnecessary lighting in public facilities.

Policy OSC-K-3: Identify and implement energy conservation measures that are appropriate for public buildings. Implement measures that are at least as effective as those in the retrofit ordinances for commercial and office buildings.

Policy OSC-K-5: Implement measures of the Climate Action Plan which increase energy efficiency, including retrofitting existing buildings and facilitating energy upgrades.

Public Services and Facilities Element

Goal PSF-H: **Meet the city's solid waste disposal needs, while maximizing opportunities for waste reduction and recycling.**

Policy PSF-H-4: Require provision of attractive, convenient recycling bins and trash enclosures in residential and non-residential development.

Noise and Safety Element

Goal NS-H: **Prepare for climate change.**

Policy NS-H-1: Participate in regional efforts for the impacts of climate change.

Policy NS-H-2: Engage the community in preparing for climate change through the promotion of Climate Action Plan measures, distribution of information, and through local schools.

City of Santa Rosa City Code

City Code Chapter 17-35 makes it unlawful to install a wood-burning appliance that is not a pellet-fueled heater; an EPA-Certified Phase II wood heater or newer; a solid fuel burning appliance certified for use by the Northern Sonoma County Air Pollution Control District; a gas log fireplace; or a fireplace certified by the US Environmental Protection Agency (EPA) should the EPA develop a fireplace certification program.

City of Santa Rosa Climate Action Plan

The City's (2012a) Climate Action Plan (CAP) was prepared consistent with the BAAQMD's expectations for a Qualified GHG Reduction Strategy. The framework of the CAP consists of (1) an inventory of GHG emissions that identifies and quantifies existing emissions and projected future emissions; (2) reduction targets to reduce GHG emissions incrementally by 2015, 2020, and 2035; and (3) the goals, objectives, and strategies that have been devised to reduce existing emissions to meet state, regional, and local GHG emissions reduction targets. The framework of the CAP has been designed to result in community-wide GHG emission reductions by 2035 to levels on a trajectory toward the Executive Order S-3-05 target for 2050 (i.e., 80 percent below 1990 levels by

2050). As described in the City CAP, the City will need to reduce community-wide emissions by 51 percent by 2035 to be on a trajectory toward the Executive Order S-3-05 target for 2050. The City's CAP and its reduction targets are consistent with AB 32, post-2020 statewide GHG reduction goals, and CARB recommendations to ensure that California emissions are reduced.

City of Santa Rosa City Code Chapter 14-30 (Water-Efficient Landscape Ordinance)

The City adopted a Water-Efficient Landscape Ordinance (Ordinance No. 3925) in 2010. It applies to all of the following new and rehabilitated landscape projects that require a building or grading permit, plan check, design review or utilities certificate: commercial, industrial and institutional landscaping, park and greenbelt landscaping, multi-family residential, and single-family residential landscaping. The City amended the ordinance, effective December 1, 2015, to comply with the state's updated water efficiency requirements.

3.7.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. An impact related to greenhouse gas emissions is considered significant if the project would:

1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The California Natural Resources Agency has noted that impacts of GHG emissions should focus on the cumulative impact on climate change. Thus, CEQA amendments continue to make clear that the significance of GHG emissions is most appropriately considered on a cumulative level.

Addressing GHG generation impacts requires an agency to make a determination as to what constitutes a significant impact. The CEQA Guidelines give authority to lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a significant impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions (14 California Code of Regulations Section 15064.4(a)).

A number of expert agencies throughout the state, including the BAAQMD, have drafted or adopted varying threshold approaches and guidelines for analyzing 2020 operational greenhouse gas emissions in CEQA documents. The different thresholds include (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright-line" thresholds, and (4) efficiency-based thresholds.

The California Supreme Court decision in the *Center for Biological Diversity et al. v. California Department of Fish and Wildlife, the Newhall Land and Farming Company* (November 30, 2015, Case No. S217763) (hereafter Newhall Ranch) confirmed that when an "agency chooses to rely completely on a single quantitative method to justify a no-significance finding, CEQA demands the agency research and document the quantitative parameters essential to that method."

The BAAQMD CEQA Guidelines include guidance on assessing greenhouse gases and climate change impacts as required under CEQA Section 15183.5(b) and establish thresholds of significance for impacts related to GHG emissions. The City of Santa Rosa has determined that these guidelines are based on substantial evidence to "attribute an appropriate share of greenhouse gas emission reductions necessary to reach AB 32 goals to new land use development projects in the BAAQMD's jurisdiction that are evaluated pursuant to CEQA" (BAAQMD 2011). The City has elected to apply the BAAQMD CEQA Guidelines to determine the level of impact from the proposed project's contribution of GHG emissions.

The BAAQMD threshold of significance for GHG emissions is the project generation of 1,100 metric tons of CO_2e per year during operations; or the generation of 4.6 metric tons of CO_2e per service population (residents + employees) per year during operations; or compliance with a Qualified GHG Reduction Strategy. For the purposes of this assessment, the project is evaluated for compliance with the City of Santa Rosa Climate Action Plan.

CEQA authorizes reliance on previously approved GHG reduction plans (i.e., a climate action plan) prepared as a "Plan for the Reduction of Greenhouse Gas Emissions" per State CEQA Guidelines Section 15183.5. This section of the State CEQA Guidelines provides that quantified plans "may be used in the cumulative impacts analysis of later projects." More specifically, "later project-specific environmental documents may tier from and/or incorporate by reference" the "programmatic review" conducted for the GHG reduction plan. "An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts 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" (State CEQA Guidelines Section 15183.5).

Tiering from an approved program-level GHG reduction document is recommended by the BAAQMD as a preferred method to address GHG emissions in project-level CEQA documents. The Newhall Ranch decision affirmed that the AB 32 Scoping Plan encourages the use of adopted local GHG reduction plans, and consistency with a geographically specific GHG reduction plan, or CAP, can relieve some of the burden taken on by local governments in analyzing the cumulative contribution of project-level GHG emissions. Consequently, if a project is consistent with a local climate action plan and that plan is consistent with AB 32 and future GHG targets, then the project would be considered consistent with statewide GHG reduction goals for 2020 and the trajectory of statewide GHG planning in the post-2020 period. As described in Section 2.0, Project Description, project buildout is assumed for the year 2040. After buildout of the Specific Plan in 2040, the next milestone year under the state's GHG emission reduction strategy is the year 2050. As previously stated, the CAP has been designed to achieve community-wide GHG emission reductions by 2035 to levels on a trajectory toward the Executive Order S-3-05 target for 2050 (i.e., 80 percent below 1990 levels by 2050). As described in the City CAP, community-wide emissions reductions of up to 51 percent by 2035 are necessary in order for the City to be on a trajectory toward the Executive Order S-3-05 GHG reduction target for 2050.

METHODOLOGY

Greenhouse gas-related impacts were assessed in accordance with methodologies recommended by the BAAQMD in conjunction with guidance from the Association of Environmental Professionals White Paper (AEP 2016). Where quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

PROJECT IMPACTS AND MITIGATION MEASURES

Compliance with Santa Rosa Climate Action Plan, a Qualified Greenhouse Gas Emissions Reduction Plan (Standards of Significance 1 and 2)

Impact 3.7.1 The project would not conflict with an applicable plan adopted for the purpose of reducing GHG emissions. This is a **less than cumulatively considerable** impact.

The Santa Rosa CAP is a strategic planning document that identifies sources of GHG emissions within the city's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents reduction strategies, measures, and action items to reduce emissions from the energy, transportation, land use, water use, and waste sectors. The CAP has been designed to instigate community-wide GHG emission reductions by the year 2035 to levels on a trajectory toward the Executive Order S-3-05 target for the year 2050. The emissions reduction program developed by the City follows the BAAQMD's CEQA Air Quality Guidelines (2011) and the corresponding criteria for a Qualified Greenhouse Gas Emissions Reduction Program as defined by the BAAQMD, which in turn were developed to comply with the requirements of AB 32 and achieve the goals of the AB 32 Scoping Plan. A Qualified Greenhouse Gas Emissions Reduction Program adopted by a local jurisdiction should include the elements below, as described in CEQA Guidelines Section 15183.5.

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards, which substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.
- Be adopted in a public process following environmental review.

The City's Climate Action Plan meets BAAQMD guidelines as follows (City of Santa Rosa 2012a):

- The CAP quantifies citywide GHG emissions, both existing and projected over the specified time period, resulting from activities within the city as defined by the City's General Plan.
- The CAP establishes a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.

- CAP policy provisions reduce emissions by more than 15 percent below 2007 levels by 2020. According to the General Plan Amendment and Climate Action Plan Draft Supplemental Program EIR (SCH No. 2011092010; Santa Rosa 2012b), CAP policy provisions would reduce emissions by approximately 35.8 percent below 2007 levels by 2020.

- CAP policy provisions reduce emissions to approximately 70 percent below 2007 levels by 2035.

- CAP policy provisions provide a foundation for the City to reach the goal of reducing emissions to 80 percent below 1990 levels by 2050 (i.e., a 51 percent reduction in emissions by the year 2035).

- The CAP identifies and analyzes the emissions resulting from specific actions or categories of actions anticipated within the city.

- The CAP specifies measures or a group of measures, including performance standards.

- The CAP establishes a mechanism to monitor its progress toward achieving the level and to require amendment if the plan is not achieving specific levels.

The reduction measures proposed in the CAP build on inventory results and key opportunities prioritized by City staff, the City Council, and members of the public. The strategies in the CAP consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The City of Santa Rosa will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the CAP respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The proposed project is consistent with the GHG inventory contained in the City's Climate Action Plan. Both the existing and projected GHG inventory contained in the City's CAP were based on the land use designations and associated densities defined for the Santa Rosa Urban Growth Boundary in the City's General Plan. The Urban Growth Boundary encompasses approximately 45 square miles and includes the incorporated portions of the city as well as unincorporated lands adjacent to the city, including the project area.

As described in Section 2.0, Project Description, the proposed land plan is substantially the same as the current Santa Rosa General Plan Land Use Diagram. While there are some changes to the General Plan Land Use Diagram described in Section 2.0, the population increases and land use intensities possible as a result of the proposed project would not exceed the City's projected 2035 population identified in the General Plan. As shown in **Table 2.0-6** in Section 2.0, significant growth in the project area was assumed in the City's General Plan 2035. Compared to the growth potential for the city as a whole, the proposed project would result in a relatively small increase in residential units and a net reduction in nonresidential square footage.

The additional residential units would provide housing for a population that represents an increase of 0.2 percent over the city's current population of 173,071 and an increase of 0.1 percent over the city's projected 2035 population of 237,000. The net reduction of nonresidential uses associated with the proposed project would contribute to a reduction of vehicle miles traveled (VMT) compared with General Plan projections. As described in Section 3.14, Traffic and Transportation, project implementation would reduce citywide annual VMT by 16,041,919, or approximately 5.1 percent, in 2035 compared with not implementing the proposed project. This is because the proposed project would include modifications to the circulation network as well as

some changes to allowed land uses in the area. For example, the proposed project has been developed to support and expand upon current policies regarding alternative transportation. The project meets the goals of the Sonoma County Transportation Authority's Comprehensive Transportation Plan through policies designed to increase transit use through intensification of development around transit hubs, improve accessibility for pedestrians around activity centers, and support completion of the planned facilities outlined in the Countywide Bicycle and Pedestrian Master Plan. In addition, the proposed project would result in a beneficial impact to pedestrian and bicycle circulation. The proposed project includes new street and pathway connections that improve east–west circulation, enhanced connectivity to and within neighborhoods, and integration with the future multi-use paths along Roseland and Colgan creeks as well as the SMART corridor (see Figure 2.0-8 and Figure 2.0-10 in Section 2.0, Project Description). The proposed mix of land uses, combined with current uses, also creates a diverse environment with a concentration of housing, jobs, and shopping all within walking and bicycling distance of one another. As demonstrated in Section 3.14, Traffic and Transportation, with implementation of the project, multimodal levels of service for pedestrian and bicycle modes improve on at least a portion of every corridor analyzed and in many cases along the entire corridor. For these reasons, the proposed project is consistent with assumptions contained in the City's General Plan and thus with the GHG inventory contained in the CAP.

A specific project proposal is considered consistent with the Santa Rosa Climate Action Plan if it complies with the "required" GHG reduction measures contained in the adopted CAP (as evident from reading the CAP GHG reduction measures, only some provide for required actions germane to new development. Several CAP GHG reduction measures are voluntary and several more are not applicable to new development). The required GHG reduction measures applicable to future development instigated by the proposed project include the following:

- Action 1.1.1: Require new development to comply with the current provisions, as amended, of CALGreen, Part 11 of the California Green Building Standards Code.
- Action 1.1.2: Continue to require Tier 1 standards for new development and consider adding major remodels during the next building code update.
- Action 1.1.3: Require all new construction to be built with net zero electricity use, beginning in 2020.
- Action 1.3.1: Require new construction and major remodels to install real-time energy monitors that allow building users to track their current energy use.
- Action 1.4.3: Require new development to supply an adequate number of street trees and private trees.
- Action 3.6.1: Install traffic calming design features such as bulb-outs, median barriers, and striped crosswalks to improve pedestrian convenience and encourage pedestrian and bicycle travel.
- Action 5.2.1: Require new refueling stations to provide biodiesel fuel, compressed natural gas, liquefied natural gas, electric vehicle charging stations, or other alternative fuels.
- Action 6.1.3: Increase the City's construction and demolition ordinance to require 75% diversion by 2020 and 85% diversion by 2035.

- Action 7.1.1: Require new development to reduce potable water use in accordance with the Tier 1 standards of CALGreen.

- Action 7.3.2: Require new development in zones anticipated to receive future recycled water to meet on-site meter separation requirements to allow for the use of recycled water.

- Action 9.2.1: Minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes or less (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Provide clear signage at all access points to remind employees of idling restrictions.

- Action 9.2.2: Construction equipment shall be maintained in accordance with manufacturer's specifications.

The proposed project would not make any changes to current City standards. All development in the City's Urban Growth Boundary, including the project, is required to adhere to all City-adopted policy provisions, including those contained in the adopted CAP. Therefore, all subsequent development under the proposed project would be required to comply with the CAP.

CAP policies are intended to achieve transit-oriented and mixed-use land use development. As described in Section 3.14, Traffic and Transportation, the proposed project has been developed to support and expand upon current policies regarding alternative transportation. The project meets the goals of the Sonoma County Transportation Authority's Comprehensive Transportation Plan through policies designed to increase transit use through intensification of development around transit hubs, improve accessibility for pedestrians around activity centers, and support completion of the planned facilities outlined in the Countywide Bicycle and Pedestrian Master Plan.

The project also supports and/or strengthens the alternative transportation policies set forth in the City's General Plan and incorporates new alternative transportation facilities designated in the Bicycle and Pedestrian Master Plan. In addition, the proposed project would result in benefits to pedestrian and bicycle circulation. The project includes new street and pathway connections that improve east–west circulation, enhanced connectivity to and within neighborhoods, and integration with the future multi-use paths along Roseland and Colgan creeks as well as the SMART corridor. The proposed mix of land uses, combined with current uses, also creates a diverse environment with a concentration of housing, jobs, and shopping, all within walking and bicycling distance of one another. As demonstrated in Section 3.14, Traffic and Transportation, multimodal levels of service for pedestrian and bicycle modes improve on at least a portion of every corridor analyzed with implementation of the project, and in many cases along the entire corridor.

The proposed project contains environmental sustainability related components in the categories of land use and mixed-use development, open space, and efficient and alternative transportation. The project's diversity of land use allows flexibility in response to varying market conditions over time as well as allowing access to a range of job and housing opportunities. Additionally, a diversity of transportation options reduces dependence on a single mode of transportation and provides feasible long-term alternatives in response to fuel shortages, climate change, and other unforeseen challenges. The project would improve connections, particularly for bicycling and walking, to the Southside Bus Transfer Center, to the downtown SMART station, and to Sebastopol Road, the main commercial area within the project area and beyond. By its nature, the project has been developed with the objective of environmental sustainability.

As demonstrated, the project is consistent with the City's CAP, which is a Qualified Greenhouse Gas Emissions Reduction Program as defined by the BAAQMD and was developed to comply with the requirements of AB 32 and achieve the goals of the AB 32 Scoping Plan as well as post-2020 GHG reduction targets. Therefore, the impact is **less than cumulatively considerable.**

In its Final Statement of Reasons for Regulatory Action accompanying the CEQA Amendments (FSOR), the California Natural Resources Agency (2009) explains that quantification of GHG emissions "is reasonably necessary to ensure an adequate analysis of GHG emissions using available data and tools" and that "quantification will, in many cases, assist in the determination of significance." As explained in the FSOR, the revised Section 15064.4(b) assigns lead agencies the discretion to determine the methodology to quantify GHG emissions. Nonetheless, for informational purposes, **Table 3.7-3** is presented in order to show estimated GHG emissions resulting from operation of the new land uses allowed in the project area beyond existing conditions.

TABLE 3.7-3
GREENHOUSE GAS EMISSIONS – PROJECT DEVELOPMENT POTENTIAL (METRIC TONS PER YEAR)[1]

Emissions Source	CO_2e
Area Source (landscaping, hearth)	555
Energy[2]	9,978
Mobile	34,446
Waste	2,063
Water	775
Total	**47,817**

*Source: CalEEMod 2013.2.2 (see **Appendix 3.7**)*

Notes:

1. *Emission projections account for 2,449 new single-family residential units, 1,253 new multi-family residential units, 3,097 square feet of new office space, 569,703 square feet of new retail space, 20,000 square feet of new institutional space, and 321,014 square feet of new industrial square footage.*
2. *Emission projections account for 2015 CALGreen standards and the Renewables Portfolio Standard year 2030 target.*

Mitigation Measures

None required.

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3.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes the potential presence of hazardous materials and conditions in the project area and in the vicinity and analyzes the risks associated with introducing the proposed development to the area. The reader is referred to Section 3.6, Geology and Soils, for information regarding impacts associated with geologic and seismic hazards and to Section 3.3, Air Quality, regarding toxic air contaminant hazards.

3.8.1 EXISTING SETTING

HAZARDOUS MATERIALS DEFINED

Under Title 22 of the California Code of Regulations (CCR), the term hazardous substance refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity (CCR Title 22, Chapter 11, Article 3). A hazardous material is defined as a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness, or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (CCR Title 22, Chapter 11, Article 2, Section 66261.10). While hazardous substances are regulated by multiple agencies, as described below in subsection 3.8.2, Regulatory Framework, cleanup requirements are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

Public health is potentially at risk whenever hazardous materials are or will be used. It is necessary to differentiate between the "hazard" of these materials and the acceptability of the "risk" they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, in addition to the inherent toxicity of a material.

Factors that can influence the health effects when human beings are exposed to hazardous materials include the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

PROJECT SETTING

Hazardous Materials and Wastes Sites

The California Department of Toxic Substances Control (DTSC) EnviroStor and the State Water Resources Control Board (SWRCB) GeoTracker databases were searched to determine the potential for the presence of hazardous materials and hazardous waste sites in the project area pursuant to Government Code Section 65962.5. In addition, information presented in a fact sheet developed by the North Coast Regional Water Quality Control Board (North Coast RWQCB) for the Sebastopol Road/McMinn Avenue area was also reviewed (North Coast RWQCB 2015). Sites included on the Envirostor, GeoTracker, and Sebastopol Road/McMinn Avenue area fact sheet are listed in **Appendix 3.8.** The sites listed in **Appendix 3.8** represent conditions as of the date of preparation of this Draft EIR. As such, it is possible that a new site or sites could be added to this list, while other sites that may be open cases at this time may be removed from the list by a regulatory agency at some point in the future. Sites indicated as open or active are in the process of being investigated and/or remediated. Sites indicated as closed, inactive, or no further action are sites where contamination may have been previously investigated and/or remediated, but

are not necessarily free of contaminants because state laws and regulations provide various legal mechanisms to allow for such conditions. For example, the state allows for deed restrictions that specify prohibitions or limitations on a site where contaminants may still be present. Most of the open/active sites are along Sebastopol Road, but there are also numerous closed/inactive sites. There are several closed sites along Corby Avenue between Hearn Avenue and Bellevue. For any site included in the list in Appendix 3.8, regardless of its status, or sites that may be added in the future, the Santa Rosa Fire Department (SRFD) will require up-to-date information from a project applicant regarding the status of the site. The SRFD's process for determining whether a site may pose a risk as result of environmental contamination is summarized in Section 3.8.2, Regulatory Framework, under the "Local Hazardous Materials Oversight" subheading.

In addition, past land uses may have resulted in contamination in off-site locations, but those sites have not been investigated because no changes to those sites have been proposed that would have triggered the need for investigation. Off-site locations may also have a potential to impact a site in the project area; this is typically associated with migration of contaminated groundwater.

Transportation of Hazardous Materials

The transportation of hazardous materials in California is subject to various federal, state, and local regulations. It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery, or the loading of such materials (California Vehicle Code Sections 31602(b) and 32104(a)). The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials. Transportation of hazardous materials is restricted to these routes except in cases where additional travel is required from that route to deliver or receive hazardous materials to and from users. Hazardous materials are routinely transported on US Highway 101 and State Route 12 through Santa Rosa. Local deliveries within the project area are also allowed, and transporters are required to comply with all applicable regulations.

Underground Pipelines and Transmission Lines

According to the National Pipeline Mapping System (NPMS) Public Map Viewer (2015), an active natural gas transmission pipeline operated by the Pacific Gas and Electric Company (PG&E) is located within Stony Point Road along the entire length of the Specific Plan area's western boundary. Additional gathering and distribution pipelines, such as those that deliver gas to individual homes, are located throughout the project area.

3.8.2 REGULATORY FRAMEWORK

FEDERAL

Comprehensive Environmental Response, Compensation, and Liability Act (42 USC Section 9601 et seq.)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) provides a federal "superfund" to clean uncontrolled or abandoned hazardous waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the US Environmental Protection Agency (EPA) identifies parties responsible for any release and ensures their participation in the cleanup. The EPA is authorized to implement CERCLA in all 50 states and in US territories, though Superfund site identification, monitoring, and response activities are coordinated through the state environmental protection or waste management agencies. The Superfund Amendments and Reauthorization Act of 1986

reauthorized CERCLA to continue cleanup activities around the country and included several site-specific amendments, definition clarifications, and technical requirements (EPA 2011).

Resource Conservation and Recovery Act (42 USC Section 6901 et seq.)

The Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste from "cradle to grave," including the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes.

The federal Hazardous and Solid Waste Amendments are the 1984 amendments to the RCRA that focus on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program (EPA 2011).

Occupational and Safety Health Act (29 USC Section 651 et seq.)

The Occupational and Safety Health Act is intended to ensure worker and workplace safety by requiring that employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. The Occupational Safety and Health Administration (OSHA) is a division of the US Department of Labor that oversees the administration of the act and enforces standards in all 50 states.

Toxic Substances Control Act (15 USC Section 2601 et seq.)

The Toxic Substances Control Act (TSCA) provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls, asbestos, radon, and lead-based paint (EPA 2011).

Various sections of the TSCA provide EPA authority to:

- Require, under Section 5, pre-manufacture notification for "new chemical substances" before manufacture.
- Require, under Section 4, testing of chemicals by manufacturers, importers, and processors where risks or exposures of concern are found.
- Issue Significant New Use Rules, under Section 5, when it identifies a "significant new use" that could result in exposures to, or releases of, a substance of concern.
- Maintain the TSCA Inventory, under Section 8, which contains more than 83,000 chemicals. As new chemicals are commercially manufactured or imported, they are placed on the list.
- Require those importing or exporting chemicals, under Sections 12(b) and 13, to comply with certification reporting and/or other requirements.
- Require, under Section 8, reporting and recordkeeping by persons who manufacture, import, process, and/or distribute chemical substances in commerce.

- Require, under Section 8(e), that any person who manufactures (including imports), processes, or distributes in commerce a chemical substance or mixture and who obtains information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment to immediately inform EPA, except where EPA has been adequately informed of such information.

Federal Hazardous Materials Transportation Law and Hazardous Materials Regulations (49 USC Section 5101 et seq.)

The federal hazardous materials (hazmat) transportation law is the basic statute regulating hazardous materials transportation in the United States. Section 5101 of the federal hazmat law states that the purpose of the law is to protect against the risks to life, property, and the environment that are inherent in the transportation of hazardous material in intrastate, interstate, and foreign commerce.

The Hazardous Materials Regulations are administered by the Pipeline and Hazardous Material Safety Administration (PHMSA) and implement the federal hazmat law. The regulations govern the transportation of hazardous materials via highway, rail, vessel, and air by addressing hazardous materials classification, packaging, hazard communication, emergency response information, and training. They also issue procedural regulations, including provisions on registration and public sector training and planning grants (49 CFR Parts 105, 106, 107, and 110). The PHMSA issues the Hazardous Materials Regulations (PHMSA 2011).

STATE

Unified Program

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs (CalEPA 2011):

- The Hazardous Waste Generator program and Hazardous Waste Onsite Treatment activities
- The Aboveground Storage Tank program Spill Prevention Control and Countermeasure Plan requirements
- The Underground Storage Tank program
- The Hazardous Materials Release Response Plans and Inventory program
- California Accidental Release Prevention program
- The Hazardous Materials Management Plans and the Hazardous Materials Inventory Statement requirements

The state agencies responsible for these programs set the standards, while local governments implement the standards. The California Environmental Protection Agency (CalEPA) oversees implementation of the Unified Program as a whole, and the local Certified Unified Program Agency (CUPA) is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six

program elements. Most CUPAs have been established as a function of a local environmental health or fire department. The SRFD is the CUPA for the City.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The General Plan identifies several goals and policies regarding hazards and hazardous materials that are applicable to the proposed project, as listed below.

Noise and Safety Element

Goal NS-A: Prepare for disasters.

Policy NS-A-1: Maintain the Emergency Operations Plan as the City's disaster-response plan. Work with Sonoma County to update joint emergency response and disaster response plans, as needed.

Policy NS-A-2: Continue to promote the Citizens Organized to Prepare for Emergencies (COPE) public awareness program on the nature and extent of natural hazards in the Planning Area, and ways of minimizing the effects of disasters.

Policy NS-A-3: Establish community programs which train volunteers to assist police, fire and civil defense personnel during and after disasters.

Goal NS-F: Minimize dangers from hazardous materials.

Policy NS-F-1: Require remediation and cleanup, and evaluate risk prior to reuse, in identified areas where hazardous materials and petroleum products have impacted soil or groundwater.

Policy NS-F-2: Require that hazardous materials used in business and industry are transported, handled and stored in accordance with applicable local regulations.

Policy NS-F-3: Restrict siting of businesses, including hazardous waste repositories, incinerators or other hazardous waste disposal facilities, that use, store, process, or dispose large quantities of hazardous materials or wastes in areas subject to seismic fault rupture or very violent ground shaking.

Policy NS-F-4: Where applicable, identify and regulate appropriate regional and local routes for transportation of hazardous materials and hazardous waste. Require that fire and emergency personnel can easily access these routes for response to spill incidences.

Policy NS-F-6: Generate and support public awareness and participation in household waste management, control and recycling through county programs including the Sonoma County Household Hazardous Waste Management Plan.

Policy NS-G-4: Continue monitoring water fire-flow capabilities throughout the City and improving water availability at any locations having flows considered inadequate for fire protection.

Policy NS-G-6: Minimize single-access residential neighborhoods in development areas near open space and provide adequate access for fire and other emergency response personnel.

Santa Rose City Code

Chapter 18.44 of the Santa Rosa City Code establishes the requirements for projects to comply with the California Fire Code. It also identifies the City's amendments to the Fire Code to reflect local conditions. Regulations specific to the storage of hazardous materials are included in Chapter 18.44, along with permit requirements. Section 18.44-5308 directs that the Fire Code Official shall publish standards providing requirements for facilities that use, handle, or store materials that are or may become toxic gases.

City of Santa Rosa Emergency Operations Plan

The Draft Emergency Operations Plan (EOP) identifies the City's emergency planning, organization, and response policies and procedures. The plan also addresses the integration and coordination with other governmental levels and special districts as required.

This plan is based on the principles and functions of the California-required Standardized Emergency Management System (SEMS), which is based on the FIRESCOPE Incident Command System, and identifies how the City of Santa Rosa fits in the overall state SEMS structure. In addition, the plan incorporates the additional required elements of the National Incident Management System (NIMS) as directed by Homeland Security Presidential Directive 5, issued February 28, 2003.

Local Hazardous Materials Oversight

Hazardous materials and contaminants are locally regulated through the SRFD, which operates as a CUPA. CUPA programs include the Hazardous Materials Business Plan Program, Hazardous Waste Program, Underground Storage Tank Program, Accidental Release Program, Above-Ground Storage Tank Program, and enforcement of the portions of the Uniform Fire Code that address hazardous materials.

General program requirements include inspections of businesses and review of permit conditions and procedures for the handling, storage, use, and disposal of hazardous materials. The Hazardous Materials Business Plan required of each business is used to keep track of businesses' use of hazardous materials in accordance with both state and federal laws. The Hazardous Waste Generator Program is based on the Hazardous Waste Control Law found in California Health and Safety Code Division 20, Chapter 6.5, and regulations found in the California Code of Regulations, Title 22, Division 4.5.

The SRFD also administers the local oversight program, which oversees the investigation and cleanup of fuel releases from underground storage tanks. Sites are entered into the local oversight program when a release from an underground tank is reported. A similar program provides for the permitting, monitoring, and surveillance of septic tanks, chemical toilets, and vaults, as well as abandonment and disposal of septic waste in Sonoma County.

The SRFD requires a Phase I environmental site assessment (Phase I ESA) for subdivisions, multi-family residential, and commercial developments. The SRFD also requires a Phase I ESA for properties that have a prior CUPA history, a soil or groundwater monitoring plan from the North Coast RWQCB, or any case history with the DTSC. The purpose of the Phase I ESA is to identify "recognized environmental conditions" (RECs) that indicate the presence or likely presence of any hazardous substances or petroleum products that indicate an existing release, a past release, or a material threat of a release.

The Santa Rosa Industrial Waste Program enforces regulations issued to businesses that discharge wastewater into the Santa Rosa Subregional Water Reclamation System. The program consists of inspections, monitoring, and permitting of businesses to ensure their compliance.

First responders to hazardous material emergencies could be the SRFD or members of the SRFD's Hazardous Materials Response Team. State law requires that first responders to a release of hazardous materials have a minimum 40 hours of training in accordance with the OSHA Hazardous Waste Operations and Emergency Response standard.

Hazardous Materials Regulatory Enforcement

Enforcement of environmental regulations depends on the nature of the violation. Both the Santa Rosa Police Department and the SRFD provide enforcement. Both departments have specific training in environmental crimes and work closely with other regulatory agencies and departments such as the Utilities Department's Industrial Waste Section, Planning and Economic Development building inspectors, and the Public Works Department's Storm Water Management Program to ensure environmental regulations are followed.

The Sonoma County Environmental Health Division is charged with administering the State of California's Medical Waste Program. Regulation of potentially hazardous pesticide and herbicides is under the jurisdiction of the Sonoma County Agricultural Commissioner.

The City's Water Department administers the Storm Water Management Program that is designed to reduce urban runoff from polluting local waterways through use of best management practices, low impact design, monitoring, and other techniques.

3.8.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G standards of significance. An impact related to hazards and hazardous materials is considered significant if the project would:

1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

5) For a project located within 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, result in a safety hazard for people residing or working in the project area.

6) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

7) Implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

8) Expose people or structures to a significant risk of loss, injury, or death involving fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

METHODOLOGY

The following impact analysis is based primarily on a review of available records regarding hazardous materials use in the vicinity of the project area as well as relevant planning documents pertaining to emergency response.

Impacts Not Evaluated in Detail

The closest airport is Charles M. Schulz-Sonoma County Airport, approximately 5.25 miles to the northwest of the project area (Sonoma County 2001). No private airstrips are located within 2 miles. There would be no impact relative to Standards of Significance 5 and 6, and these issues are not further evaluated.

The project area is generally developed with urban uses and is not adjacent to areas where there is a wildland urban interface fire hazard. There would be no impact relative to Standard of Significance 8, and this issue is not further evaluated.

PROJECT IMPACTS AND MITIGATION MEASURES

Use, Storage, and Transport of Hazardous Materials (Standard of Significance 1)

Impact 3.8.1 Implementation of the proposed project would result in the use, storage, and transport of hazardous materials. Accidental release of these materials could constitute a hazard to the public or the environment. This impact is considered **less than significant.**

The transportation of hazardous materials on area roadways is regulated by the CHP, the US Department of Transportation (Hazardous Materials Transportation Act), and the California Department of Transportation (Caltrans). Use of these materials is regulated by the DTSC (22 California Code of Regulations Sections 66001, et seq.). The use, storage, and transport of hazardous materials by developers, contractors, business owners, and others are required to be in compliance with local, state, and federal regulations during project construction and operation.

Facilities that use hazardous materials are required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. All development that could occur as a result of the proposed project would be required to comply with federal, state, and local regulations regarding the handling, transport, disposal, and cleanup of hazardous materials.

Considering the level of protection afforded by the various requirements, restrictions, and policies enforced by agencies with jurisdiction over the use, storage, or disposal of hazardous materials within the project area, the release of hazardous materials is unlikely. The impact would be **less than significant.**

Mitigation Measures

None required.

Accidental Release of Hazardous Materials (Standard of Significance 2)

Impact 3.8.2 New development in the project area would lead to an associated increase in use of hazardous materials. The proposed project therefore has potential to result in an increased risk of accidental release of hazardous materials. This impact would be **less than significant**.

The proposed project would encourage mixed-use development in the Specific Plan area such as residential, office, retail, public, and institutional uses, which could include dry cleaners, hospitals, and utilities. Such uses could require the routine use of hazardous materials.

For example, retail development could be occupied by uses that sell paints, oils, and solvents, such as a home improvement store, hardware store, gas station, or auto parts store. The institutional and office land uses could be developed with a hospital or medical offices that could use, store, or dispose of materials such as pressurized oxygen tanks, medical waste, biohazardous materials, and/or radioactive materials.

Existing local, state, and federal regulations regarding the appropriate, legal use, storage, and disposal of hazardous materials associated with household and commercial uses (e.g., dry cleaners' disposal of solvents) provide extensive regulatory oversight for the use and handling of hazardous materials and would ensure that the potential for accidental release of hazardous materials into the environment is less than significant. Therefore, the potential for the accidental release of hazardous materials into the environment is considered less than significant.

With future development in the project area, there would be an increase in population and an associated greater usage of common and potentially hazardous household cleaners, as well as use of pesticides and herbicides to maintain landscaping and control pests. With the increase in population would come development of potentially hazardous infrastructure such as natural gas pipelines, storage of hazardous chemicals in a commercial or retail setting, additional use of landscaping and cleaning chemicals, and increased requirements for basic garbage or litter disposal, as well as special disposal of used motor oil, antifreeze, paint, batteries, etc.

General Plan Policies NS-F-1 through NS-F-6 are aimed at reducing the risk from accidental release of chemicals, waste, or other hazardous materials. Policy NS-F-4 specifically addresses the accidental release of hazardous materials. Adherence to these policies would be critical in reducing the risk from a hazardous materials spill.

Through the City's Storm Water Low Impact Development Technical Design Manual, projects requiring grading or other ground disturbance are required to prepare and implement a post-development stormwater pollution prevention plan (SWPPP) for any development or redevelopment that creates or replaces a combined total of 10,000 square-feet or more of impervious surfaces. Compliance with the SWPPP would prevent runoff from discharging into site waterways from dumpsters, maintenance areas, and other areas where potentially hazardous or hazardous materials are stored or used. Furthermore, any business that would use high quantities of hazardous materials would require registration and compliance with the Hazardous Materials Business Plan Program, Hazardous Waste Generator Program, and Accidental Release Program. Compliance with the requirements of these programs would ensure that hazardous materials are properly transported, stored, inventoried, and disposed and would ensure that business have adequate plans and training for employees in order to respond to an accidental release. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

Hazardous Emissions near Schools (Standard of Significance 3)

Impact 3.8.3 Several schools are located within and in the vicinity of the project area. Hazardous materials or substances may be handled in the vicinity of these schools. This impact is considered **less than significant**.

Several schools are located within and in the vicinity of the project area. Construction activities associated with future development under the proposed project could result in hazardous emissions (i.e., heavy equipment diesel exhaust) or handling of hazardous materials, substances, or waste (i.e., construction materials) within one-quarter mile of these schools. However, the proposed project would not increase the acreage or density of industrial or commercial land uses in the project area.

The Annexation areas are primarily developed with residential uses, and the remaining vacant parcels in these areas are not designated for industrial or commercial use. Therefore, the proposed project would not result in significant new or increased hazardous materials. General Plan policies and other existing restrictions are considered adequate mitigation. The impact would be **less than significant**. The reader is also referred to Section 3.3, Air Quality, for further discussion of hazardous air emissions.

Mitigation Measures

None required.

Contaminated Sites (Standard of Significance 4)

Impact 3.8.4 Review of environmental hazards databases conducted in association with the proposed project identified hazardous materials sites in the project area, including sites on the Cortese List. Impacts related to future development of these sites are **potentially significant**.

According to the SWRCB (2015) GeoTracker database and the DTSC (2015) EnviroStor databases and a fact sheet prepared by the North Coast RWQCB (2015), over 30 known open case hazardous materials sites are located in the project area, including sites included on the Cortese

List, as well as cases determined by North Coast RWQCB and/or DTSC to be closed, inactive, or no further action (see **Appendix 3.8**). Sites indicated as closed, inactive, or no further action are sites where contamination may have been previously investigated and/or remediated but are not necessarily free of contaminants because state laws and regulations provide various legal mechanisms to allow for contaminants to remain. In addition, there are numerous open cases in the immediate vicinity of the project area, including a cluster north of State Route 12 just west of US Highway 101 and a large cluster of military cleanup sites just west of the Specific Plan area associated with the Santa Rosa Naval Auxiliary Air Station.

The sites listed in **Appendix 3.8** may pose an existing threat to soil and groundwater, to workers during construction from exposure, and to future occupants of and visitors if the site were redeveloped. The level of exposure risk on these sites is variable. The greatest exposure risk is likely to occur during construction, when demolition and excavation may expose and potentially spread contaminated soil and debris from impacted areas. Contamination would most likely be spread through surface runoff, windblown dust, or groundwater seepage. Identified construction and demolition hazards include inhalation of possible asbestos, lead, and creosote associated with old structures and railroad ties, and general exposure associated with site redevelopment, including remediation. Certain sites may require closure of existing hazardous material storage facilities. These sites may be contaminated and need remediation. For subdivisions, multi-family residential, and commercial developments on parcels or properties that are not listed in Appendix 3.8 (i.e., sites that have not been identified as having contaminants), the SRFD will nevertheless require the site be investigated before development can occur.

In order to develop or redevelop sites included in Appendix 3.8, regulatory oversight will be required by the SRFD, the California Department of Toxic Substances Control, the Regional Water Quality Control Board, and/or another agency to determine whether the conditions or previous remediation is adequate for the proposed land use. For example, a site that may have been remediated to a use suitable for commercial development could pose a greater risk if the site were to be redeveloped with residential uses.

Development of any site, particularly commercial sites, also has the potential to encounter previously undiscovered contamination or subsurface features (e.g., USTs or pipelines that may have contained hazardous materials that may been installed illegally or before permits were required). As described above, this could pose a risk to construction workers and the public.

Because there is the potential for future projects that could be constructed in the project area to encounter hazardous materials contamination that could pose a risk to the public and the environment, this is considered a **potentially significant impact**.

Mitigation Measures

MM 3.8.4a Phase I Environmental Site Assessment. Developers shall be required to complete a Phase I environmental site assessment for each property to be developed or redeveloped. If a Recognized Environmental Condition (REC) is identified in a Phase I environmental site assessment, a Phase II environmental site assessment shall be prepared to determine whether conditions are present that require remediation or other controls to minimize the potential for hazardous materials contamination to adversely affect public health and the environment. If remediation is required, developers shall complete site remediation in accordance with OSHA standards and Santa Rosa Fire Department, Sonoma County Environmental Health Department, and State Water Resources Control Board guidelines. The Department of Toxic Substances

Control (DTSC) may become involved wherever toxic levels of contaminants are found that pose an immediate hazard. Remediation shall reduce human exposure risk and environmental hazards, both during and after construction. The remediation plan shall be prepared in accordance with the environmental consultant's recommendations and established procedures for safe remediation. Specific mitigation measures designed to protect human health and the environment will be provided in the plan. Requirements shall include but not be limited to the following:

- Documentation of the extent of previous environmental investigation and remediation at the site, including closure reports for underground storage tanks (USTs) and contaminant concentrations.

- A site-specific health and safety plan to be prepared by all contractors at the project site, where applicable. The plan must address all demolition, grading, and excavation on the site, as well as for future subsurface maintenance work. The plan shall include appropriate training, any required personal protective equipment, and monitoring of contaminants to determine exposure. The Health and Safety Plan shall be reviewed and approved by a certified industrial hygienist.

- Description of protocols for the investigation and evaluation of previously unidentified hazardous materials that could be encountered during project development, including engineering controls that may be required to reduce exposure to construction workers and future users of the site.

- Requirements for site-specific construction techniques that would minimize exposure to any subsurface contamination, where applicable, which shall include treatment and disposal measures for any contaminated groundwater removed from excavations, trenches, and dewatering systems in accordance with local and Regional Water Quality Control Board guidelines.

- Sampling and testing plan for excavated soils to determine suitability for reuse or acceptability for disposal at a state-licensed landfill facility.

- Restrictions limiting future excavation or development of the subsurface by residents and visitors to the proposed development, and prohibition of groundwater development should it be determined from test results that contamination is present. The restrictions would be developed based on site-specific conditions and would reflect the requirements of the RWQCB and/or DTSC, depending on which agency is responsible for oversight of the particular site. Restrictions, which are sometimes also referred to as land use covenants, shall be recorded with the parcel(s), shall run with the land. The developer or land owner successor(s)-in-interest shall be responsible for ensuring development complies with the restrictions. Compliance with the restrictions must be demonstrated to the satisfaction of the City before a grading permit is issued.

- Completion of an approved remediation plan should land use restrictions be insufficient to allow development to proceed safely. Remediation measures may include excavation and replacement of contaminated soil with clean fill, pumping and treatment of groundwater, thermal treatment, etc.

MM 3.8.4b In the event previously unknown contaminated soil, groundwater, or subsurface features are encountered or have the potential be present during ground-disturbing activities at any site, work shall cease immediately, and the developer's contractor shall notify the City of Santa Rosa Fire Department for further instruction. The City shall ensure any grading or improvement plan or building permit includes a statement specifying that if hazardous materials contamination is discovered or suspected during construction activities, all work shall stop immediately until the City of Santa Rosa Fire Department has determined an appropriate course of action. Such actions may include, but would not be limited to, site investigation, human health and environmental risk assessment, implementation of a health and safety plan, and remediation and/or site management controls. The City of Santa Rosa Fire Department shall be responsible for notifying the appropriate regulatory agencies and providing evidence to the City Planning and Economic Development Department that potential risks have been mitigated to the extent required by regulatory agencies. Work shall not recommence on an impacted site until the applicable regulatory agency has determined further work would not pose an unacceptable human health or environmental risk. Deed restrictions may be required as provided under mitigation measure MM 3.8.4a.

Timing/Implementation: *As a condition of subsequent project approval, and implemented during construction activities*

Enforcement/Monitoring: *City of Santa Rosa Fire Department; City of Santa Rosa Planning and Economic Development Department*

Implementation of mitigation measures **MM 3.8.4a** and **MM 3.8.4b** would ensure that on-site hazardous materials contamination effects are identified and remediated to acceptable levels, resulting in a **less than significant** impact after mitigation.

Emergency Plans (Standard of Significance 7)

Impact 3.8.5 The proposed project could have an impact on area roadways used to respond to hazardous materials incidents and/or for emergency evacuations. Impacts associated with adopted emergency response and evacuation plans would be **less than significant**.

The City's Draft Emergency Operations Plan (EOP) provides a blueprint for emergency management in Santa Rosa in the case of a major earthquake, hazardous materials incident, flood, national security emergency, wildfire, landslide, dam failure, or other emergency. The EOP guides the City's response to an emergency in four phases: preparedness, response, recovery, and mitigation.

General Plan Policy NS-A-1 requires the City to maintain the EOP as the City's disaster response plan and to work with Sonoma County to update joint emergency response and disaster response plans, as needed. Policy NS-A-3 requires the establishment of a community program to train volunteers to assist police, fire, and civil defense personnel during and after disasters.

The SRFD would review construction plans for roadway modifications in the project area and would establish temporary alternative emergency routes necessary for the duration of a construction project. During design review of subsequent projects, the City would ensure that roads and driveways are designed and constructed to meet City standards as well as California Fire Code requirements for emergency access. The SRFD would also review building plans for compliance with the Fire Code and establish a future inspection schedule for continuing compliance.

When taken together, existing policies and standards would ensure the potential impact of interference with an emergency access or evacuation plan would be **less than significant**.

Mitigation Measures

None required.

3.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for hazards associated with the proposed project consists of Santa Rosa and the city's Urban Growth Boundary, including future growth anticipated in the City's General Plan. Cumulative impacts associated with hazards and hazardous materials risks from increased development may include but are not limited to impacts on transportation, air quality, hydrology and water quality, and biological resources. The cumulative impacts associated with these potentially affected resources are analyzed in the applicable sections of this Draft EIR.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Hazards and Hazardous Materials Impacts

Impact 3.8.6 Implementation of the proposed project, in combination with other existing and reasonably foreseeable future projects, may result in cumulative hazards and hazardous materials impacts. These cumulative hazards impacts would be **less than cumulatively considerable**.

Hazardous materials are transported on virtually all public roads, particularly since all motor vehicles contain hazardous materials (e.g., fuel) in addition to any hazardous cargo that may be on board. In addition, cumulative development in the city and in portions of Sonoma County would increase the amount of development, which would result in increased use of household and other potentially hazardous chemicals associated with nonresidential uses.

As discussed above, the transport, use, storage, and disposal of hazardous materials are governed by a substantial body of existing regulations intended to reduce the potential for exposure by controlling the pathways by which persons could be exposed to hazardous substances. Compliance with these regulations is required by all projects, including any projects developed under the proposed project.

In addition, potentially adverse environmental effects associated with the use, storage, transport, and disposal of hazardous materials are usually site-specific in nature, although their long-term impacts may be regional in extent. Individual incidents generally do not combine with similar effects that could occur with other projects in the city. Implementation of the provisions of the EPA, US Department of Transportation, Caltrans, OSHA, Cal/OSHA, and CUPA permitting processes, in combination with the environmental site assessment requirements of **MM 3.8.4a** and **MM 3.8.4b** would ensure cumulative hazardous materials impacts are **less than cumulatively considerable**.

Mitigation Measures

None required.

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3.9 HYDROLOGY AND WATER QUALITY

This section addresses the potential environmental impacts of the proposed project related to hydrology and water quality. The existing surface water and groundwater hydrologic conditions of the project area and the surrounding area are characterized and a summary of relevant laws and regulations as they apply to the proposed project is provided. The impact analysis focuses on potential degradation of water quality, alteration of existing drainage patterns, and flooding hazards.

3.9.1 EXISTING SETTING

REGIONAL CONDITIONS

Climate

Santa Rosa is in a Mediterranean climate zone typical of central coastal California. This climate zone is characterized by cool, wet winters and warm, dry summers. The city receives a mean annual precipitation of approximately 30 inches in the lower elevations and about 45 inches in the higher elevations. The majority of the rainfall typically occurs between October 1 and April 1. Influenced by marine air about 85 percent of the time, the region is generally protected from the hot weather of the Central Valley by the interior Coast Ranges. Although the Pacific Ocean moderates temperatures, the temperatures still have a wider range in the City than along the coast, occasionally exceeding 100 degrees Fahrenheit and sometimes falling as low as several degrees below freezing for several consecutive nights.

Hydrology

Santa Rosa Creek is the major collector stream in the city and is central to the hydrologic system. The Santa Rosa Creek watershed encompasses approximately 78.6 square miles, with headwaters on the northwestern slope of Hood Mountain. The approximately 22-mile-long creek flows through a canyon that roughly parallels Los Alamos Road, then flows west through the urban area and agricultural lands before joining Laguna de Santa Rosa north of Sebastopol. Laguna de Santa Rosa flows northerly to its confluence with Mark West Creek and on to the Russian River at Mirabel. Several creeks in southwest Santa Rosa, including Colgan and Roseland Creeks, flow directly into the Laguna de Santa Rosa (Santa Rosa 2013).

Surface Water Quality

Surface water quality in the city is overseen by the North Coast Regional Water Quality Control Board (RWQCB) and the City of Santa Rosa. Laguna de Santa Rosa water quality is affected by a number of factors, including the flow and quality of waters in its tributaries, runoff from urban and agricultural activities, and natural processes such as erosion, sedimentation, algal growth, and infrequently, recycled water discharge from the subregional system, (Winzler & Kelly 2008). The Laguna de Santa Rosa unit of the Russian River is listed under Clean Water Act Section 303(d) for impairments associated with indicator bacteria, mercury, nitrogen, dissolved oxygen, phosphorus, sediment/siltation, and temperature (SWRCB 2011).

Groundwater Resources

The City's groundwater supply is derived exclusively from the Santa Rosa Plain Subbasin. The Santa Rosa Plain Subbasin of the Santa Rosa Valley Groundwater Basin covers an area of 80,000 acres, or approximately 125 square miles. It is the largest subbasin of the Santa Rosa Valley Groundwater Basin.

The City maintains a total of six municipal groundwater wells in the subbasin, two of which are production wells permitted for regular production of up to 2,300 acre-feet per year (AFY) of potable supply. Three of the City's remaining wells provide emergency stand-by supply and one provides a minor amount of landscape irrigation water supply. The Sonoma County Water Agency (SCWA) also has three groundwater wells in the subbasin. Although there are no legal constraints to the SCWA's ability to use groundwater supplies, the amount of groundwater expected to be pumped by the agency is projected to remain stable until 2035, at 2,300 acre-feet annually.

The overall quality of groundwater in the subbasin is good, although high iron, manganese, and hardness have been reported in groundwater for some portions of the subbasin. Groundwater underlying the City's service area generally meets primary and secondary drinking water standards for municipal use. The City's Farmers Lane wells have historically exhibited slightly elevated concentrations of both iron and manganese, exceeding secondary drinking water standards (Santa Rosa 2012b). However, water from these wells are treated to meet secondary drinking water standards prior to the well water entering the City's system.

SPECIFIC PLAN AREA CONDITIONS

Hydrology and Drainage

Two creeks flow through the Specific Plan area. Roseland Creek is an ephemeral stream that drains an area of 4.6 square miles. It flows from an outfall at the Northwestern Pacific Railroad in the northeastern portion of the plan area southwesterly, exiting the plan area at the approximate midpoint of its western boundary. The upper portion of Roseland Creek (Reaches 1 and 2, US Highway 101 [US 101] to Burbank Avenue) is generally characterized by a natural, meandering channel with some riparian habitat. Reach 3 (Burbank Avenue to Stony Point Road) is primarily considered a modified creek characterized by a grass-lined flood control channel. All three reaches of Roseland Creek in the Specific Plan area are recommended for preservation by the Santa Rosa Citywide Creek Master Plan. Reaches 2 and 3 are covered by the City's adopted Roseland Creek Restoration Concept Plan; some segments may be subject to the City's 50-foot setback requirements due to habitat value for wildlife (Santa Rosa 2013).

The Colgan Creek drainage area is 7.8 square miles, most of which is in Santa Rosa's Urban Growth Boundary. Colgan Creek flows under US 101 at the approximate midpoint of the plan area's eastern boundary southwesterly to Bellevue Avenue and then flows westerly along the roadway and the plan area's southern boundary. Colgan Creek is considered a modified creek consisting largely of a SCWA flood control channel that is grass-lined and has minimal associated riparian habitat. According to the Citywide Creek Master Plan, Reach 1 (US 101 to Victoria Drive) is recommended for habitat enhancement, while Reach 2 (Victoria Drive to Bellevue Avenue) is recommended for restoration per the City's adopted Lower Colgan Creek Restoration Concept Plan. That restoration is underway. Portions of the creek are under easements to cross private properties (Santa Rosa 2013).

The municipal storm drain system in the project area generally consists of a series of pipes, culverts, creeks, and surface drainage features that are owned and operated by one of three public agencies: the City of Santa Rosa, County of Sonoma, or the SCWA. Additional information about these systems is presented in Section 3.15.3, Stormwater Drainage, in Section 3.15, Public Utilities. Portions of the storm drain network have been identified as in need of repair, rehabilitation, or other improvements (Michael Baker International 2016). Not all locations in the project area are connected to storm drain system.

Flood Hazards

Major creeks in Santa Rosa have the potential to cause flooding during a large storm event, and historically flooding has occurred in areas near creeks. The majority of stormwater in southern Santa Rosa, which includes the project area, is channeled into Roseland and Colgan creeks. The flat topography, limited capacity, and concentrated discharge place these creeks at greatest risk of flooding. Drainage improvements to both creeks are necessary to minimize future flooding risks (Santa Rosa 2009a).

The infrastructure report for the proposed project (**Appendix 2.0**) identified the following specific locations in the project area where localized drainage and flooding needs to be addressed (Michael Baker International 2016):

- Upper Roseland Creek at West Avenue, McMinn Avenue, and Burbank Avenue, where flooding issues were confirmed in the 2009 Santa Rosa Flood Insurance Study (identified as a SCWA Zone 1A project)
- Colgan Creek from Corby Avenue to the railroad tracks
- Lower Colgan Creek at Dutton Meadow to Boron Avenue, and Boron Avenue to Victoria Drive
- Earl and Boyd streets, nuisance flooding
- O'Hair Court, persistent flooding when high water backs up the storm drain and floods the court

100-Year Flood Hazard Zones

The Roseland Creek and Colgan Creek floodways within the plan area are designated by FEMA as Zone AE indicating that they must be kept free of encroachment to ensure that the 1 percent annual chance flood (also referred to as the "100-year flood") can be carried without substantial increases in flood height (FEMA 2012). In addition, two larger areas adjacent to Roseland Creek (west of McMinn Avenue and east of Old Stony Point Road) and one area adjacent to Colgan Creek (between US 101 and the railroad) that extend outside of the floodway are also designated by Federal Emergency Management Agency (FEMA) as Zone AE, indicating that they are subject to inundation by the 1 percent annual chance flood. **Figure 3.9-1** shows the locations of the flood hazard zones.

Dam Failure Inundation

In addition to natural flood hazards, flooding can also occur as a result of dam inundation caused by dam failure. Structural failure may be caused by seismic activity. The most extreme flood risk to the project area would be as the result of an uncontrolled release from a failure at Matanzas Creek Reservoir, or to a lesser degree Lake Ralphine or Spring Lake (Santa Rosa Creek Reservoir). The dams impounding the Matanzas Creek Reservoir, Lake Ralphine, and Spring Lake are operated by the SCWA and are annually inspected by California Division of Safety of Dams (DSOD) engineers to ensure the dams are performing and being maintained in a safe manner. When determined to be structurally inadequate to withstand anticipated ground shaking, dams under DSOD jurisdiction are required to undergo seismic retrofitting. With annual DSOD inspection and oversight, the potential for catastrophic failure is considered to be very low (Santa Rosa 2009b). The SCWA reports there is no history of dam failure at these three facilities, and the frequency and probability of failure is low (SCWA 2008).

A segment of Colgan Creek south of Hearn Avenue is subject to inundation in the event of a failure of Matanzas Creek Dam located east of the plan area. The inundation area is the same as the 100-year flood zone described previously.

Tsunami, Sea Level Rise, Seiche, and Mudflows

Flooding can also occur due to tsunamis, seiches, or mudflows. Tsunamis are waves caused by an underwater earthquake, landslide, or volcanic eruption. Because the project site is located inland, it could not experience a tsunami or climate change–induced sea level rise effects. A seiche is a rhythmic motion of water in a partially or completely landlocked water body caused by landslides, earthquake-induced ground accelerations, or ground offset. Several reservoirs located within or near the city limits could potentially experience seiche waves from a significant seismic event. However, none of these reservoirs are in the vicinity of the Specific Plan area. A mudflow or mudslide is the most rapid and fluid type of downhill mass wasting. It is a rapid movement of a large mass of mud formed from loose earth and water. The plan area is not located near any sources of mudflows (Santa Rosa 2009a).

Groundwater

Gasoline, diesel, and chlorinated solvents from commercial and industrial facilities have impacted groundwater in the Roseland area around Sebastopol Road near McMinn Avenue. The North Coast RWQCB provides regulatory oversight of the groundwater investigation and remediation for 15 open cleanup sites (North Coast RWQCB 2015). Other sites where contamination has been identified have been remediated. Additional information about contaminated sites is presented in Section 3.8, Hazards and Hazardous Materials.

North Coast RWQCB staff has noted that sensitive receptor surveys conducted in the Roseland Area have identified numerous domestic groundwater wells. Their field interviews indicate that some of these wells were properly destroyed, some are still used for domestic and/or irrigation use, and some are not used. There may be additional domestic wells that have not been identified. North Coast RWQCB staff have recommended that the City conduct a water well survey in the Roseland/Sebastopol Road area to identify these wells.

T:_GIS\Sonoma_County\MXDs\Santa_Rosa\SRRASP\EIR_Figures\FEMA Flood Zones.mxd (5/5/2016)

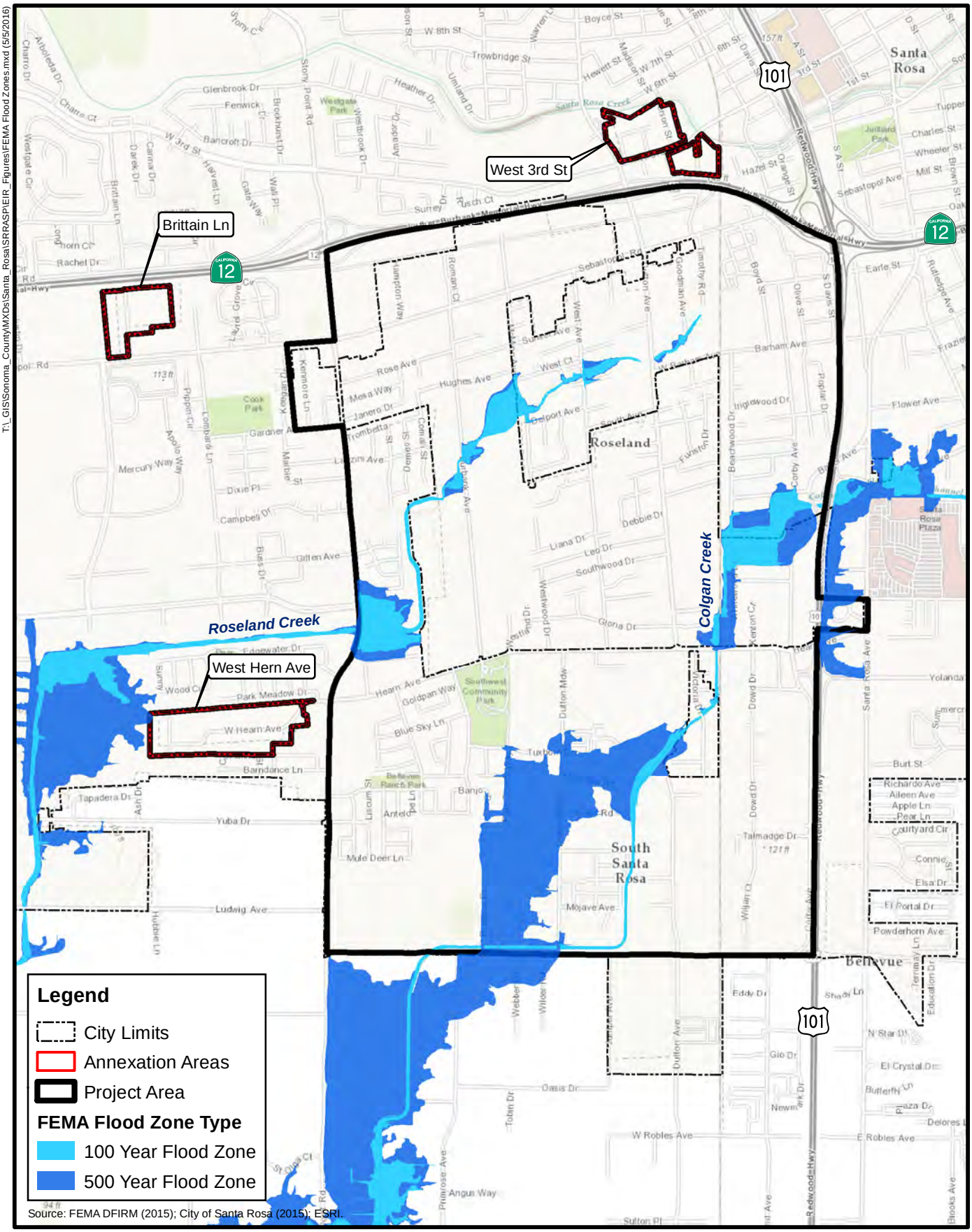

FIGURE 3.9-1
FEMA Flood Zones

Michael Baker INTERNATIONAL

Annexation Area Conditions

Hydrology

Santa Rosa Creek flows along the northerly boundary of the West Third Street Annexation area. As described previously, Santa Rosa Creek is approximately 22 miles long and drains an area of approximately 78.6 square miles. The creek flows from its headwaters on the northwestern slope of Hood Mountain through a canyon that roughly parallels Los Alamos Road, then flows west through the urban area and through agricultural lands before joining Laguna de Santa Rosa north of Sebastopol. The portion of Santa Rosa Creek that flows along the West Third Street Annexation area, identified as Reach 5 (Pierson Street to Stony Point Road), is characterized as a modified-natural channel with some maturing trees along its bank providing canopy cover. This reach is recommended for riparian enhancement, including removal of invasive species and replanting with natives (Santa Rosa 2013). There are no surface water resources in either the Brittain Lane or the West Hearn Avenue annexation areas.

Flood Hazards

100-Year Flood Hazard Zones

The West Third Annexation area, the Brittain Lane Annexation area, and the majority of the West Hearn Avenue Annexation area are located outside the 100-year flood hazard area and are considered to be at minimal risk of flood inundation based on current FEMA mapping. The westernmost portions of two parcels in the West Hearn Avenue Annexation area are within the 500-year flood hazard area and are considered to be at moderate risk of flood inundation (FEMA 2012). **Figure 3.9-1** shows the location of the flood hazard zone in the West Hearn Avenue Annexation area.

Dam Inundation

The inundation area for Matanzas Creek Dam coincides with the 100-year flood zone for Colgan Creek (Figure 3.9-1), as noted above. None of the annexation areas is within the inundation area for Matanzas Creek Dam.

Tsunami, Sea Level Rise, Seiche, and Mudflows

Similar to the Specific Plan area, the Annexation areas are not at risk of inundation from tsunami, sea level rise, seiche, or mudflows.

3.9.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The federal Clean Water Act (CWA) gives states the primary responsibility for protecting and restoring water quality. In California, the State Water Resources Control Board (SWRCB) and the nine RWQCBs are the agencies with the primary responsibility for implementing federal CWA requirements, including developing and implementing programs to achieve compliance with water quality standards. Water quality standards include designated beneficial uses of water bodies, criteria or objectives (numeric or narrative) which are protective of those beneficial uses,

and policies to limit the degradation of water bodies. The proposed project is located in a portion of the state that is regulated by the North Coast RWQCB.

Section 303 of the CWA

Section 303(d) of the federal Clean Water Act requires that all states in the United States identify water bodies that do not meet specified water quality standards and do not support intended beneficial uses. Identified waters are placed on the Section 303(d) List of Impaired Water Bodies. Once a water body is placed on this list, states are required to develop a water quality control plan for the water body and each associated pollutant/stressor.

Santa Rosa Creek, as a tributary to the Russian River, is listed on the Section 303(d) as a Category 5A impaired water body, indicating that a Total Maximum Daily Load (TMDL) is required but has not yet been developed to address the identified impairments. The listed impairments for Santa Rosa Creek are indicator bacteria from an unknown source; sedimentation/siltation from numerous sources including land development, road construction, and urban runoff; and water temperature resulting from hydromodification, removal of riparian vegetation, and streambank modification. Neither Roseland nor Colgan creek is included on the Section 303(d) list (SWRCB 2011).

Sections 401 and 404 of the CWA

Sections 401 and 404 of the CWA are administered through the regulatory program of the US Army Corps of Engineers (USACE) and regulate the water quality of all discharges of fill or dredged material into waters of the United States, including wetlands and intermittent stream channels. Section 401 (Title 33, USC Section 1341) of the Clean Water Act sets forth water quality certification requirements for any applicant applying for a federal license or permit to conduct any activity, including but not limited to the construction or operation of facilities which may result in any discharge into the waters of the United States. In California, certifications must be approved by the SWRCB or the local RWQCB.

Section 404 of the CWA

As authorized by Section 402(p) of the CWA, the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Waste discharge requirements for discharges to surface waters also serve as NPDES permits.

Federal Emergency Management Agency

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps identifying which land areas are subject to flooding. The maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 annual exceedance probability (i.e., the 100-year flood event).

STATE

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the SWRCB and the nine RWQCBs as the principal state agencies with the responsibility for controlling water quality in California. The act contains water quality policies and water quality standards that apply to both surface water and groundwater. It provides the legislative framework for regulations governing the discharges of pollutants from point and nonpoint sources.

Each RWQCB is required to develop, adopt, and implement a Water Quality Control Plan for its respective region. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in each region. Basin Plans identify beneficial uses of surface waters and groundwater in the corresponding region; specify water quality standards, known as water quality objectives, for both surface water and groundwater; and develop the actions necessary to maintain the standards to control nonpoint and point sources of pollutants to the state's waters.

The SWRCB issues NPDES permits to cities and counties through the RWQCBs, and it is the responsibility of the RWQCBs to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements. The project area is under a MS4 permit from the RWQCB and LID requirements.

General Construction Activity Storm Water Permits and Stormwater Pollution Prevention Plans

The SWRCB has adopted a General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ and Order 2012-0006-DWQ). The Construction General Permit applies to any construction activity affecting 1 acre or more. The focus of the permit is to minimize the potential effects of construction runoff on receiving water quality. The permit requires preparation of a stormwater pollution prevention plan (SWPPP) that identifies best management practices (BMPs) describing erosion control measures. Examples of typical construction BMPs to address water quality include using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils.

Project proponents are required to submit to the RWQCB a Notice of Intent, a site map, a signed certification statement, an annual fee, and a SWPPP. The permit program is risk-based, wherein a project's risk is based on the project's potential to cause sedimentation and the risk of such sedimentation on the receiving waters. A project's risk determines its water quality control requirements, ranging from Risk Level 1, which consists of only narrative effluent standards, implementation of best management practices, and visual monitoring, to Risk Level 3, which consists of numeric effluent limitations, additional sediment control measures, and receiving water monitoring. Additional requirements include compliance with post-construction standards, preparation of rain event action plans, increased reporting requirements, and specific certification requirements for certain project personnel.

The SWPPP must include best management practices to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction best management practices included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to

ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters.

REGIONAL

Regional Water Quality Control Board, North Coast Region

The project area is within the jurisdiction of the North Coast RWQCB. The Water Quality Control Plan for the North Coast Region (Basin Plan), prepared by the North Coast RWQCB, identifies the beneficial uses of surface waters in its region and specifies water quality objectives to maintain the continued beneficial uses of these waters. According to the Basin Plan, beneficial uses of the Santa Rosa subarea of the Russian River include municipal, agricultural, and industrial supply; groundwater recharge; warm and cold freshwater habitat; navigation; spawning, reproduction, and development; water contact recreation; non-water contact recreation; wildlife habitat; rare species; and possible shellfish and aquatic plant and animal harvesting (North Coast RWQCB 2011).

The North Coast RWQCB also issues the NPDES Municipal Separate Storm Sewer (MS4) Phase 1 permit to the City requiring post-construction stormwater quality measures and site design consistent with the Storm Water Low Impact Development Technical Design Manual and pollution preparation measures.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan policies most pertinent to the proposed project in regard to hydrology or water quality and flooding issues.

Public Services and Facilities Element

Goal PSF-I: **Manage, maintain, and improve stormwater drainage and capacity.**

Policy PSF-I-1: Require dedication, improvement and maintenance of stormwater flow and retention areas as a condition of approval.

Policy PSF-I-2: Require developers to cover the costs of drainage facilities needed for surface runoff generated as a result of new development.

Policy PSF-I-3: Require erosion and sedimentation control measures to maintain an operational drainage system, preserve drainage capacity and protect water quality.

Policy PSF-I-4: Require measures to maintain and improve the storm drainage system, consistent with goals of the Santa Rosa Citywide Creek Master Plan, to preserve natural conditions of waterways and minimize paving of creek channels.

Policy PSF-I-5: Cooperate with the Sonoma County Water Agency and the Northern California Regional Water Quality Control Board to conduct regular assessment of stormwater drainage facilities, to ensure that adequate drainage capacity is maintained throughout the system to accommodate increases in residential and commercial development.

Policy PSF-I-6: Require implementation of Best Management Practices to reduce drainage system discharge of non-point source pollutants originating from streets, parking lots, residential areas, businesses, industrial operations and those open space areas involved with pesticide application.

Policy PSF-I-7: Prepare and distribute information to increase awareness of businesses and residents about the need to reduce drainage system discharge of non-point source pollutants.

Policy PSF-I-8: Implement the Standard Urban Stormwater Mitigation Plan (SUSMP) in order to reduce pollutants and runoffs flows from new development and significant redevelopment projects.

Policy PSF-I-9: Consider installation of creekside pathways, consistent with the Citywide Creek Master Plan and Bicycle and Pedestrian Master Plan, when possible as part of stormwater improvement projects along the city's creek corridors.

Open Space and Conservation Element

Goal OSC-E: **Ensure local creeks and riparian corridors are preserved, enhanced, and restored as habitat for fish, birds, mammals and other wildlife.**

Policy OSC-E-1: Maintain creek areas using practices that protect and support fish and wildlife as well as help retain hydraulic capacity.

Policy OSC-E-2: Plan and perform stream maintenance activities that respect the balance of flood protection and environmental protection**.**

Goal OSC-I: **Conserve and maintain water quality.**

Policy OSC-I-1: Maintain high levels of water quality for human consumption and for other life systems in the region by regularly monitoring water quality.

Policy OSC-I-6: Protect groundwater recharge areas, particularly creeks and riparian corridors. Identify and protect other potential groundwater recharge areas.

Noise and Safety Element

Goal NS-D: **Minimize hazards associated with storm flooding.**

Policy NS-D-1: Ensure flood plain protection by retaining existing open areas and creating new open areas needed to retain stormwater, recharge aquifers and prevent flooding.

Policy NS-D-2: Maintain current flood hazard data and coordinate with the Army Corps of Engineers, FEMA, Sonoma County Water Agency and other responsible agencies to coordinate flood hazard analysis and management activities.

Policy NS-D-3: Require that new development and redevelopment projects meet the requirements of the Storm Water Low Impact Development Technical Design Manual to reduce impermeable surface area, increase surface water infiltration and minimize surface water runoff during storm events. Such features may include:

- Additional landscape areas,
- Vegetated swales with bioretention;
- Rain gardens; and
- Pervious pavement.

Policy NS-D-4: Incorporate features and appropriate standards that reduce flooding hazards.

Policy NS-D-5: Apply design standards to new development that help reduce project runoff into local creeks, tributaries, and drainage ways.

Policy NS-D-6: Evaluate flood hazards prior to approval of development projects within a Federal Emergency Management Agency (FEMA) designated flood zone. Ensure that new development within flood zones is designed to be protected from flooding without negatively affecting adjacent areas.

Goal NS-E: **Provide protection of public and private properties from hazards associated with dam inundation.**

Policy NS-E-1: Support efforts to conduct periodic inspections of local dams to ensure all safety measures are in place.

City of Santa Rosa City Code

City Code Chapter 17.12, Storm Water, regulates modifications to the natural flow of storm waters as well as discharges to the City's stormwater system in compliance with applicable NPDES stormwater discharge permits.

Storm Water Low Impact Development Technical Design Manual

The Storm Water Low Impact Development Technical Design Manual (LID Manual), adopted by the City of Santa Rosa in October 2011 and implemented in 2012, applies to both privately sponsored projects and municipal capital improvement projects. The LID Manual requires applicable projects to design and implement post-development measures to reduce stormwater pollution. Under the LID Manual, applicable projects are required to design and implement post-development measures for the management of stormwater quality and stormwater volume for the entire development site. The LID Manual emphasizes managing stormwater runoff through landscape-based treatment and retention methods to reduce the potential impacts to local waterways.

The goal of the manual is to reduce pollution and runoff volumes to the maximum extent possible for capital improvement projects and new development or redevelopment projects meeting the following criteria:

- Development that creates or replaces a combined total of 1 acre or more of new impervious surface.
- Street, road, highway, or freeway construction or reconstruction, creating or replacing 10,000 square feet or more of impervious surface.
- All development that includes four or more dwelling units.
- Industrial parks, commercial strip malls, retail gasoline outlets, restaurants, or automotive service facilities creating or replacing 10,000 square feet or more of impervious surface.
- Parking lots with 25 or more spaces or 10,000 square feet not associated with other projects.

City of Santa Rosa Citywide Creek Master Plan

The Santa Rosa Citywide Creek Master Plan, revised and adopted by the City Council in August 2013, implements General Plan 2035 Goal OSC-E and provides guidelines for the care, management, restoration, and enhancement of nearly 90 miles of creeks in Santa Rosa. The master plan is intended for use by City and County staff when planning creek enhancement and restoration activities, coordination and expansion of creekside trail systems, making broader land-use planning decisions concerning creeks, and in the development approval process for projects proposed adjacent to a waterway. Conceptual restoration plans for Roseland Creek and Colgan Creek are included in the Master Plan.

The Citywide Creek Master Plan includes policies for habitat preservation, enhancement, restoration, and development of trails by each watershed. The following policies in the Master Plan are relevant to the proposed project.

Policy HA-1-2: Meet or exceed the required creek setback distance to provide ecological buffers, recognize the 100 year floodplain, and allow for stream corridor restoration. Development shall locate outside the creek setback, as defined within the Santa Rosa Zoning Code.

Policy HA-2-3: Allow streambank and waterway stability repairs as necessary and reasonable to protect the integrity of adjacent properties and public health and safety. Repairs should be sensitive to the natural environment. Use bioengineering techniques, where possible.

Policy SW-1-1: Cooperate with partner agencies to conduct regular assessment of storm water drainage facilities to ensure that adequate drainage capacity is maintained throughout the system.

Policy SW-1-2: Maintain current flood hazard data, and coordinate with responsible agencies to coordinate flood hazard analyses and management activities.

Policy SW-1-3: Balance habitat restoration and hydraulic capacity. Provide a detailed hydraulic analysis for every project component affecting flood conveyance

prior to implementation to identify allowable "roughness" values and to interpret those values in the form of a vegetation planting and monitoring plan. Consider use of detention basins and diversion channels where appropriate to maintain hydraulic capacity.

Policy SW-2-1: New development and redevelopment projects shall comply with the City NPDES storm water permit and with the Storm Water Low Impact Development Technical Design Manual.

Policy SW-2-2: Storm water treatment measures that involve small scale landscape based Low Impact Development Best Management Practices (BMPs) that treat storm water as close to the source as possible shall be prioritized over other BMPs.

Policy SW-2-3: Future storm water offset projects which fulfill City NPDES storm water permit hydromodification requirements shall implement projects identified in the Citywide Creek Master Plan where feasible.

Policy EC-1-1: Where discretionary approval for new development is sought adjacent to the creek, that development shall, to the extent possible, be consistent with and support the Master Plan. Planners and decision-makers will look for consistency between proposed projects and the Master Plan. The overall intent of this policy is to incorporate the creek into the project design.

Policy EC-1-2: Conditions of approval for development should include dedication (per fee-title and/or easement) of land and construction of Master Plan improvements as appropriate, and where a nexus can be demonstrated.

Policy EC-1-3: The design of new development adjacent to the creek shall, to the extent possible, allow for future public improvements consistent with the Master Plan.

Policy WQ-1-1: Preserve waterways by informing residents of the environmental effects of dumping yard waste, pet waste, or pollutants such as motor oil into creeks or into storm drains that empty into creeks as well as littering. The Storm Water and Creeks section of the Utilities Department has created several brochures about storm water pollution prevention and the benefits of local creeks.

Policy WQ-2-1: Require implementation of Best Management Practices to reduce drainage system discharge of non-point source pollutants originating from streets, parking lots, residential areas, business, industrial operations and those open space areas involved with the application of chemicals. Continue implementation of the Integrated Pest Management program.

Policy WQ-2-2: Implement the Storm Water Low Impact Development Technical Design Manual to reduce pollutants and runoff flows from new development and redevelopment projects.

Policy WQ-3-1: Ensure that construction and other activities adjacent to creek channels are sensitive to the natural environment. Avoidance of work adjacent to creek channels is always preferred but if necessary, impacts to the natural environment shall be minimized or mitigated. Ensure that these activities do not disrupt or pollute the waterway.

Policy PR-1-1: Proposed improvements associated with development projects should be consistent with the Master Plan.

Policy HS-1-1: Minimize hazards associated with storm flooding.

Sonoma County Water Agency Flood Control Design Criteria

The SCWA works cooperatively with the incorporated cities, unincorporated communities, and the state and federal governments to oversee flood control channel modifications and flood control revenue collection in flood protection zones. Santa Rosa is located in Flood Zone 1A—Laguna de Santa Rosa—Mark West Creek Watershed.

Storm drainage infrastructure in unincorporated Sonoma County is designed using SCWA Flood Control Design Criteria. In compliance with these criteria, all culverts and drainage systems in the City of Santa Rosa must be designed to accommodate the runoff from a 10-year recurrence interval storm event and protect finished floors from the 100-year recurrence interval storm. The SCWA reviews project plans for proposed drainage improvements, and all new private development projects or redevelopment projects that could be implemented under the proposed project are required to demonstrate compliance with SCWA design criteria. Prior to approving a private development project in the project area, the City requires written confirmation from the SCWA that the project meets applicable SCWA criteria.

3.9.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G standards. An impact to hydrology and water quality is considered significant if the project would:

1) Violate any water quality standards or waste discharge requirements.

2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

5) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

6) Otherwise substantially degrade water quality.

7) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

9) Expose people or structures to a significant loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

10) Inundation by seiche, tsunami, or mudflow.

METHODOLOGY

The hydrology and water quality analysis presented below is based on a review of published information, reports, and plans regarding regional and local hydrology, climate, topography, and geology obtained from private and governmental agencies as well as from Internet websites. Primary sources include the Santa Rosa General Plan 2035, Santa Rosa Citywide Creek Master Plan, the infrastructure report prepared for the proposed project (**Appendix 2.0**), and FEMA Flood Insurance Rate Maps.

Impacts Not Evaluated in Detail

The project area is not located in an area subject to tsunami, seiche, sea level rise effects, or mudflow. There would be no impact relative to Standard of Significance 10, and these issues are not further evaluated.

PROJECT IMPACTS AND MITIGATION MEASURES

Water Quality (Standards of Significance 1, 5, and 6)

Impact 3.9.1 Construction and operation of subsequent projects in the project area could generate stormwater runoff containing pollutants from construction sites and new impervious surfaces, which could affect water quality. This impact would be **less than significant**.

Construction activities associated with subsequent projects that involve grading, excavation, or trenching could temporarily disturb soils. Soils could be subject to erosion from wind and rain, resulting in potential sediment transport from the project sites to Roseland and Colgan creeks. Other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported with sediment to downstream locations. Sediment-associated pollutants could also cause or contribute to degradation of surface water quality. The delivery, handling, and storage of construction materials and wastes, as well as the use of construction equipment containing fuel, oil, and grease, could also introduce a risk for contamination that could impact surface water or groundwater quality as result of spills or leaks from heavy equipment and machinery. Equipment and material staging areas could be sources of surface water and groundwater pollution because of the use of paints, solvents, cleaning agents, and metals during construction. Pesticide use (including herbicides and fungicides) associated with site preparation work is another potential source of contamination related to construction activities. These construction activities could impact surface water and groundwater quality in a manner that could lead to violations of water quality standards, if controls are not in place to minimize potential impacts.

The areas of potential development in the project area are primarily vacant or underutilized parcels surrounded by developed sites. The modification of these parcels to an area with buildings, parking, and landscaping could increase the rate and amount of stormwater runoff and change the types and amounts of urban pollutants in stormwater runoff compared to existing conditions because there could be more impervious surface over which stormwater would flow. Urban stormwater discharged to Santa Rosa, Roseland, and Colgan creeks through the City's drainage system or overland flow has the potential to violate water quality standards, if measures are not in place to minimize the types and amounts of pollutants in the runoff discharged to the creeks. Sedimentation and erosion would not be a substantial component of post-construction stormwater runoff because soils exposed during construction would be covered with impervious surfaces (buildings, parking areas, hardscaping) or landscaped.

Every project that is subject to the General Construction Permit is required to apply for coverage and develop and implement a project-specific SWPPP. The SWPPP must include erosion control/soil stabilization techniques, best management practices for preventing the discharge of construction-related pollutants, drainage facility inspections, monitoring and maintenance programs, and training and information programs. In addition, any project larger than 1 acre must comply with the NPDES Construction General Permit. The City is required to verify that the applicant has filed a Notice of Intent under the Construction General Permit and has prepared a SWPPP before issuing a grading or building permit. The City requires developers to prepare and implement the requirements set forth in the Storm Water Low Impact Development Technical Design Manual (LID Manual), pursuant to NPDES Municipal Separate Storm Sewer (MS4) Permit requirements. As the area is gradually built out consistent with the LID Manual, the water quality associated with stormwater runoff would gradually be expected to improve compared to existing conditions. Incorporation of the LID Manual requirements into new projects would be reviewed by City staff in conjunction with issuance of grading and/or building permits.

Projects not subject to the LID Manual or the NPDES Construction General Permit would be subject to Santa Rosa City Code Chapter 17.12, which requires implementation of all practicable measures to reduce and/or eliminate the release of pollutants to the stormwater system; requires construction contractors to implement BMPs to prevent the discharge of construction wastes, debris, and contaminants from entering the system; and requires compliance with all applicable BMP guidelines and requirements adopted by agencies with jurisdiction over the project area.

Compliance with these existing regulations would ensure that subsequent projects in the project area are designed and operated to minimize the potential for violations of water quality standards. Therefore, impacts to water quality would be **less than significant**.

Mitigation Measures

None required.

Groundwater Resources (Standard of Significance 2)

Impact 3.9.2 Future development in the project area would not significantly deplete groundwater supplies or alter the area available for recharge of the groundwater aquifer. This impact would be **less than significant.**

Subsequent projects in the project area would use municipal water sources, which would include the use of groundwater. As discussed in more detail in Section 3.15, Public Utilities, the City anticipates having surplus water supply in year 2035, and the proposed project would

reduce water demand compared to that assumed in the City's long-range water planning documents. There would be adequate supply to meet existing demands and planned future demands, and no new or expanded water entitlements would be required. As a result, the proposed project would not substantially deplete groundwater supplies because it would not result in the need to pump more water from the local groundwater basin than assumed in the City's 2010 Urban Water Management Plan.

The areas of potential future development in the project area are generally limited to vacant and underutilized parcels. Although development of these parcels would introduce new impervious surfaces such as buildings and roadways, most of the parcels in the project area are planned for low-density residential and open space, which would allow continued on-site percolation of runoff. Higher density development is generally limited to corridors along Sebastopol Road and Hearn Avenue. No development would be allowed within the floodways of Colgan and Roseland creeks, which are identified as primary areas of recharge in the city. Therefore, the proposed project would not be anticipated to significantly alter groundwater recharge. This impact would be **less than significant.**

Mitigation Measures

None required.

Drainage Patterns (Standards of Significance 3 and 4)

Impact 3.9.3 Future development in the project area could alter drainage patterns, but would not result in substantial erosion or flooding. This impact would be **less than significant**.

Areas of potential development in the project area are generally limited to vacant and underutilized parcels surrounded by existing development. Thus, major drainage patterns in the vicinity of these parcels have already been established. Future projects in the project area would not likely result in substantial alteration of existing drainage patterns.

Development near Roseland or Colgan creeks may require permitting with the California Department of Fish and Wildlife (CDFW), North Coast RWQCB, and/or the SCWA, where applicable. The following potential permits or approvals may be required:

- Streambed Alteration Agreement. Any portions of a proposed project occurring along the banks of Roseland Creek or Colgan Creek may be subject to the requirements for a CDFW Streambed Alteration Agreement. Restoration and enhancement of bank areas covered by concrete slabs and riprap would be included as part of any project located adjacent to the creek.

- 401 permit from Regional Water Quality Control Board.

- Sonoma County Water Agency Review. For any portions of a project occurring along the banks of Roseland Creek or Colgan Creek, applicants would be required to obtain a revocable license from the SCWA prior to construction on the agency's property.

In addition, as described in Impact 3.9.4, below, subsequent projects in the project area would be required to comply with the City's General Plan goals and policies that require the City to manage, maintain, and improve stormwater drainage and capacity. The two General Plan policies most relevant under this goal are Policy PSF-I-1 and Policy PSF-I-3 These policies require

dedication, improvement, and maintenance of stormwater flow and retention areas as a condition of approval, and implementation of erosion and sediment control measures to maintain an operational drainage system and preserve drainage capacity. In addition, subsequent projects in the project area would need to demonstrate conformance with the applicable policies in the Santa Rosa Citywide Creek Master Plan, such as Policies SW-2-1 through SW-2-3, which require new development to comply with the City's NPDES stormwater permit and the Storm Water Low Impact Development Technical Design Manual, encourage the use of small-scale landscape-based LID best management practices over other BMPs, and require implementation of projects identified in the Master Plan as part of future stormwater offset projects where feasible. With compliance with these existing regulations and requirements, this impact would be **less than significant**.

Mitigation Measures

None required.

Storm Drain Capacity (Standard of Significance 5)

Impact 3.9.4 Future development in the project area may result in increased stormwater runoff to the municipal storm drain system. This impact would be **less than significant.**

Subsequent development in the project area may result in increased runoff and flows to the municipal storm drain system due to new paving or surfacing, the addition or removal of storm drain inlets, or other changes to the existing storm drain system. Increased flows contributed as a result of the proposed project may have an adverse impact on the capacity of storm drain conveyance in the municipal system. The infrastructure report for the proposed project has identified improvements within the project area for the overall storm drainage system to address the known drainage and flooding issues along lower Colgan Creek, upper Roseland Creek, and other locations (see **Appendix 2.0**, Table 7).

In accordance with the SCWA flood control criteria, every private development project would be required to develop hydrology and hydraulic calculations, maps, and a report. All culverts and drainage systems in the City of Santa Rosa must be designed to accommodate the runoff from a 10-year recurrence interval storm event and protect finished floors from the 100-year recurrence interval storm. The SCWA reviews project plans for proposed drainage improvements, and all new private development projects or redevelopment projects that could be implemented under the proposed project are required to demonstrate compliance with SCWA design criteria. Prior to approving a private development project in the project area, the City requires written confirmation from the SCWA that the project meets applicable SCWA criteria. If the results of a hydraulic analysis for a project indicate that stormwater discharges to Roseland or Colgan creeks would increase water surface elevations (and the potential for flooding), the City requires that features be included in project design to demonstrate that the storm system has capacity to accommodate any increased flows resulting from the proposed project, or that upgrades to the system are made.

Pursuant to the City's Low Impact Development (LID) Manual and City Code Chapter 17-12, the City would require future individual development projects to mitigate the stormwater runoff generated by the project so that post-development runoff would not exceed the pre-development conditions. While the goal of the LID requirements is to reduce pollutants in stormwater and the design criteria for the LID features focuses on smaller, more frequent storms,

this would also help reduce stormwater flows to the drainage system. General Plan Policy PSF-1-1 requires drainage improvements to be completed prior to occupancy of projects.

Citywide Creek Master Plan Goal SW-1 requires that the hydraulic capacity of the city's creeks be maintained, based on current runoff, to ensure an adequate level of flood control protection. Pertinent policies under this goal include Policy SW-1-1, which requires regular assessments of stormwater drainage facilities, and Policy SW-1-3, which requires projects that would affect flood conveyance to provide a detailed hydraulic analysis prior to implementation.

Therefore, compliance with the City's General Plan 2035 and the Citywide Creek Master Plan policies, City Code, and SCWA requirements described above would ensure that adequate stormwater capacity is available to serve future development projects, which would reduce this impact to **less than significant**.

Mitigation Measures

None required.

Flooding Hazards (Standards of Significance 7, 8, and 9)

Impact 3.9.5 Future development in the project area may occur in areas subject to flooding hazards. This impact would be **less than significant**.

As shown on **Figure 3.9-1**, FEMA designates portions of the project area as 100- and 500-year flood hazard areas. However, General Plan Policy NS-D-6 requires the City to evaluate flood hazards prior to approval of development projects in FEMA-designated flood zones and to ensure that new development in such zones is designed to be protected from flooding. Citywide Creek Master Plan Policy SW-1-3 requires projects that would affect flood conveyance to provide a detailed hydraulic analysis prior to implementation.

There are dams that have the potential to cause flooding in the project area, should a dam failure occur. The inundation area for the Matanzas Creek Dam coincides with the Colgan Creek 100-year floodplain. As described above, implementation of Policy ND-D-6 would ensure new development is protected from flood hazards. The Matanzas Creek, Lake Ralphine, and Spring Lake dams are under the jurisdiction of the DSOD, which routinely inspects dams to ensure public safety. In accordance with General Plan Policy NS-E-1, the City supports efforts of the DSOD and other agencies to conduct periodic inspections of local dams to ensure all safety measures are in place.

Although portions of the project area are subject to potential flooding hazards, existing City policies and state programs minimize the potential for risks to structures and the public associated with flood hazards and dam failure. This impact would be **less than significant**.

Mitigation Measures

None required.

3.9.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for hydrology and water quality is the Laguna de Santa Rosa watershed, which originates at Hood Mountain in the Mayacamas Mountains to the east and discharges to Laguna de Santa Rosa, a large wetland complex downstream of the Santa Rosa urban area. Various cities, water districts, sanitation districts, school districts, public lands, and private lands are also devoted to resource extraction and other uses in the watershed.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Water Quality, Runoff, and Flooding Impacts

Impact 3.9.6 The proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the Laguna de Santa Rosa watershed, would alter drainage conditions, rates, volumes, and water quality, which could result in potential flooding and stormwater quality impacts in the overall watershed. This cumulative impact is considered **less than cumulatively considerable**.

Development in the Santa Rosa Urban Growth Boundary has the potential to result in a cumulative impact related to hydrology and water quality. However, the General Plan 2035 EIR identified that with implementation of the policies included in the General Plan, the General Plan would result in a less than significant cumulative impact related to hydrology and water quality. Development in the project area was assumed in the General Plan and would be subject to all applicable General Plan policies considered in the General Plan 2035 EIR. Therefore, development of the lands in the project area is not expected to contribute to a cumulative hydrologic or water quality impact in the Santa Rosa area.

Cumulative development would use municipal water sources, which would include the use of groundwater. While there are some changes to the General Plan land use diagram, as described in Section 2.0, the population increases and land use intensities possible as a result of the proposed project would not exceed the City's projected growth identified in the General Plan. As discussed in more detail in Section 3.15, Public Utilities, the groundwater supply would be adequate to support the projected amount of groundwater anticipated to be pumped to support future growth in Santa Rosa, including the project area (see Impacts 3.15.1.1 and 3.15.1.3). Therefore, the resulting cumulative impact on groundwater resources is less than significant.

Peak runoff could increase gradually, due to increased impervious surface area, as development proceeds. However, these impacts would be reduced through improvements to the storm drain network within the project area, and are not expected to contribute to the cumulative effects to stormwater capacity (see subsection 3.15.3 for more details). The City requires written confirmation from the SCWA that projects meets applicable SCWA criteria. If the results of a hydraulic analysis for a project indicate that stormwater discharges to Roseland or Colgan creeks would increase water surface elevations (and the potential for flooding), the City requires that features be included in project design to demonstrate that the storm system has capacity to accommodate any increased flows resulting from the proposed project, or that upgrades to the system are made. For any project that may be situated in a FEMA floodplain, the City requires hydraulic studies to ensure flood risk would not be exacerbated and that structures are protected from flood hazards.

The impact on water quality would depend on the effectiveness of best management practices and engineering controls to prevent pollution from entering the storm drain system and area waterways. Adherence to the City's Storm Water Low Impact Development Technical Design Manual and developing a site-specific SWPPP based on current best management practices would ensure that cumulative impacts on water quality would not be significant.

Taken together, existing General Plan policies and requirements ensure that cumulative hydrologic and water quality impacts are **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

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3.10 Land Use and Planning

This section describes the existing and proposed land uses in the project area, characterizes current and proposed surrounding land uses, and describes the land use designations according to the City of Santa Rosa General Plan and zoning in the project area. The assessment focuses on proposed changes in land use, use compatibility, and General Plan consistency to the extent that potential General Plan conflicts may lead to physical impacts on the environment. Physical effects on the environment that could result from implementation of the project are addressed in the appropriate technical sections of this Draft EIR (see Sections 3.1 through 3.15).

3.10.1 EXISTING SETTING

SANTA ROSA

Urban Growth Boundary

The City of Santa Rosa 2035 General Plan establishes the limited of the City's Urban Growth Boundary (UGB). The UGB contains 29,140 acres, a little more than 45 square miles, and encompasses all incorporated land as well as unincorporated land that will eventually be annexed and served by the city. The city's planning area extends outside of the UGB on all sides of Santa Rosa, and includes the Charles M. Schulz-Sonoma County Airport to the northwest and Annadel State Park to the southeast. The planning area encompasses approximately 75,200 acres, or 118 square miles. The General Plan assumes all urban development through 2035 will be contained within the UGB. All land use classifications outside the UGB on the General Plan Land Use Diagram reflect Sonoma County General Plan designations – primarily rural residential and agricultural uses. Development outside the UGB is discouraged in order to promote open areas around the city and to demarcate an obvious end to urban development.

Santa Rosa voters approved a 5-year UGB in 1990, and a 20-year UGB measure in 1996. The current voter-approved UGB will expire in 2016. Current projections indicate that there is sufficient land available within the UGB to accommodate growth needs until 2035 (Santa Rosa 2009a).

Existing land uses in the city are described in the General Plan (Santa Rosa 2009a, p. 2-2) as follows:

> *Santa Rosa has a traditional downtown, which, together with the nearby Santa Rosa Junior College (JC) area, holds approximately one-quarter of the 16.5 million square feet of commercial/office space within the UGB. About half of the city's commercial acreage (660 acres of a total of 1,370 acres) is in strip retail uses. Another 10.6 million square feet of industrial space is scattered in peripheral locations. The city's residential neighborhoods are diverse, ranging from the traditional - such as JC, Burbank, and West End – with grid street patterns and moderately high densities, to low density hillside neighborhoods such as Chanate/Hidden Valley, Rincon Valley, and Fountaingrove. With the exception of downtown, land uses are contained in single-use districts, and mixed use (residential and non-residential) development is sparse. Approximately 16 percent of land (approximately 4,655 acres of a total of 29,140 acres) within the UGB is vacant.*

SPECIFIC PLAN AREA

The Specific Plan area has a mix of uses, including low, medium, and medium-high density residential, and office, retail, industrial, public institutional, recreational, and educational facilities (see **Figure 3.10-1**). Retail development occurs mainly along Sebastopol Road. Industrial and auto-oriented land uses are concentrated along US Highway101 and the rail corridor, south of Hearn Avenue, with some additional industrial land along the rail corridor between Sebastopol Road and Barham Avenue. There are a number of schools in the community, in both the incorporated

and unincorporated areas of the plan area. The plan area is served by four parks, Southwest Community Park, Bayer Park, Bellevue Ranch Park and South Davis Park. The largest of the parks is Southwest Community Park, which is located on Hearn Avenue next to the Southside Bus Transfer Center and comprises 19.7 acres. Two additional parks are in the planning stage of development, including Lower Colgan Park along Colgan Creek and Roseland Creek Community Park on Burbank Avenue. The remainder of the Specific Plan area is composed primarily of single-family and multi-family residential.

ANNEXATION AREAS

West Third Street

The area north of Third Street is primarily developed as a low-density, suburban residential neighborhood with few vacant lots. South of Third Street, the area is developed with primarily industrial uses, including automotive and other repair shops, contractors and wholesale warehouses, and manufacturing. Several single-family homes also front Third Street.

Brittain Lane

The Brittain Lane Annexation area is primarily developed as low-density, rural residential neighborhoods with scattered vacant parcels. The Joe Rodota Trail is located along the northern boundary of the area.

West Hearn Avenue

The West Hearn Avenue Annexation area is primarily developed with low-density, rural residential neighborhoods with scattered vacant parcels.

CURRENT LAND USE DESIGNATIONS AND ZONING

Existing Santa Rosa General Plan land use designations in the project area are shown on **Figure 2.0-3** (see Section 2.0, Project Description). Existing City zoning in the project area is shown on **Figure 2.0-4.** Sonoma County General Plan land use designations and zoning in the project area are shown on **Figure 2.0-5** and **Figure 2.0-6**, respectively. As shown in these figures, the project area is designated and zoned for a variety of uses including residential at various densities, mixed use, commercial, office, industrial, and public/institutional.

3.10.2 REGULATORY FRAMEWORK

FEDERAL AND STATE

There are no federal or state regulations applicable to land use and the proposed project.

LOCAL

City of Santa Rosa General Plan

The Santa Rosa General Plan 2035 serves as the overall guiding policy document for the city. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project with regard to land use and planning.

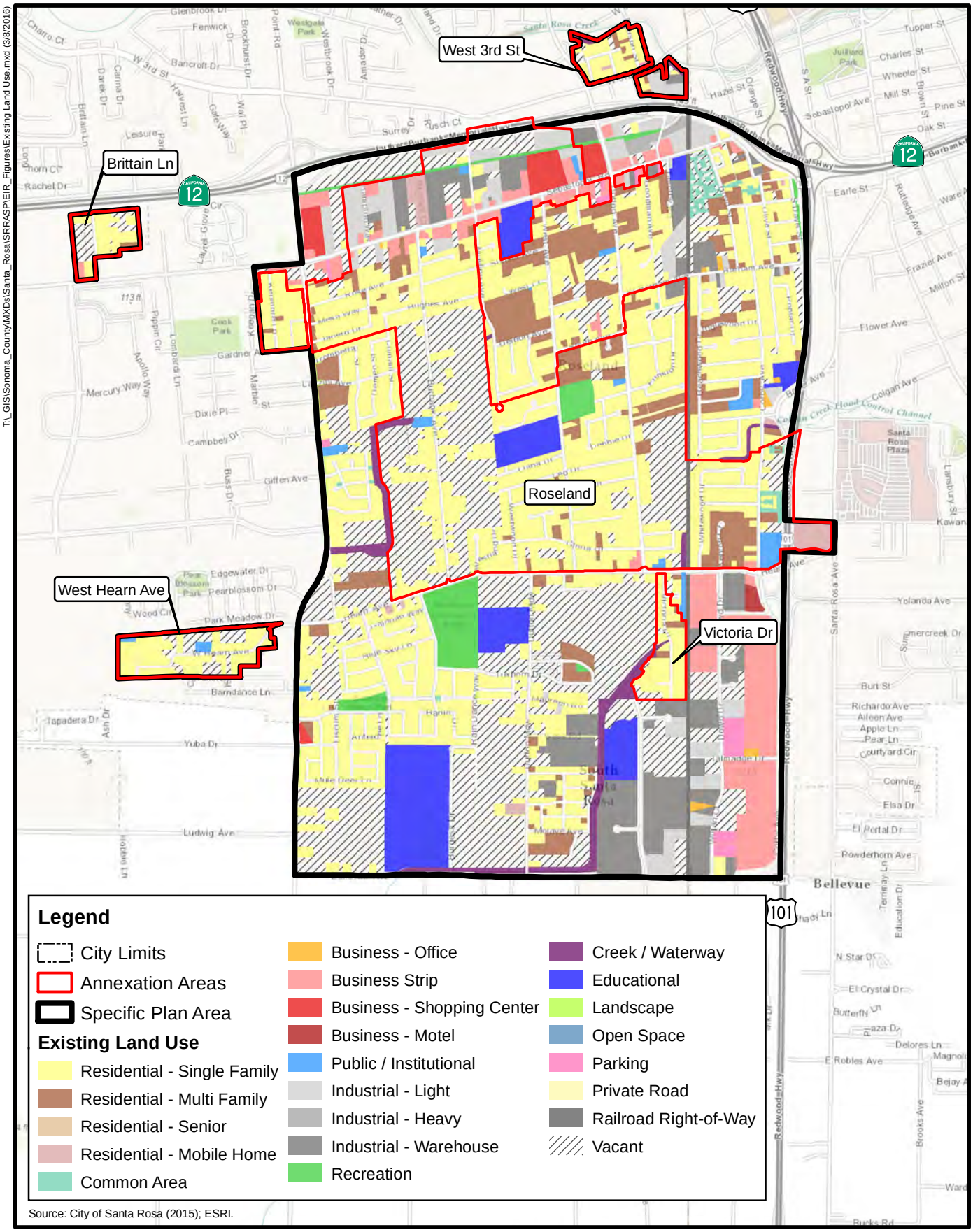

FIGURE 3.10-1
Existing Land Use

Michael Baker INTERNATIONAL

Land Use and Livability Element

Goal LUL-A: **Foster a compact rather than a scattered development pattern in order to reduce travel, energy, land, and materials consumption while promoting greenhouse gas emission reductions citywide.**

Policy LUL-A-1: As part of plan implementation—including development review, capital improvements programming, and preparation of detailed area plans—foster close land use/transportation relationships to promote use of alternative transportation modes and discourage travel by automobile.

Policy LUL-A-2: Annex unincorporated land adjacent to city limits and within the Urban Growth Boundary, when the proposal is timely and only if adequate services are available. Ensure that lands proposed for annexation provide a rational expansion and are contiguous to existing urban development.

Policy LUL-A-3: Require development in county areas within the Santa Rosa Urban Growth Boundary to be built to City of Santa Rosa standards to ensure consistency upon annexation.

Policy LUL-A-4: Review the policy of providing city services to county areas prior to annexation. Evaluate the following:

- Annexation prior to allowing development;
- City and county development standards;
- Payment of development impact fees; and
- Agreements with county for provision of services.

Goal LUL-E: **Promote livable neighborhoods by requiring compliance with green building programs to ensure that new construction meets high standards of energy efficiency and sustainable material use. Ensure that everyday shopping, park and recreation facilities, and schools are within easy walking distance of most residents.**

Policy LUL-E-1: Provide new neighborhood parks and recreation facilities, elementary schools, and convenience shopping in accordance with the General Plan Land Use Diagram and General Plan Table 2-4.

Policy LUL-E-4: Protect the rural quality of Very Low Density areas within the Urban Growth Boundary through design and development standards in the Zoning Code, and development review.

Goal LUL-F: **Maintain a diversity of neighborhoods and varied housing stock to satisfy a wide range of needs.**

Policy LUL-F-3: Maintain a balance of various housing types in each neighborhood and ensure that new development does not result in undue concentration of a single housing type in any one neighborhood. Downtown is excepted.

Goal LUL-G: **Promote mixed use sites and centers.**

POLICY LUL-G-1: DEVELOP THE FOLLOWING AREAS AS MIXED USE CENTERS (SEE GENERAL PLAN LAND USE DIAGRAM):

Community Shopping Centers:

- South of Hearn Avenue, at Dutton Meadow Avenue
- West of Corporate Center Parkway, at Northpoint Parkway
- Piner Road, at Marlow Road
- Petaluma Hill Road, at Yolanda Avenue

Goal LUL-I: **Maintain vibrant, convenient, and attractive commercial centers.**

Policy LUL-I-3: Allow neighborhood centers that include small grocery stores, cleaners, and similar establishments, where they can be supported, within walking distance of residential uses. Ensure that neighborhood centers do not create unacceptable traffic or nuisances for residents due to the hours and nature of their operation, and are designed to facilitate walking and bicycling.

Residential developments which are not within walking distance of convenience shopping are encouraged to provide small centers envisioned by this policy.

Goal LUL-K: **Protect industrial land supply and ensure compatibility between industrial development and surrounding neighborhoods.**

Policy LUL-K-1: Require industrial development adjacent to residential areas to provide buffers, and institute setback, landscaping, and screening requirements intended to minimize noise, light, and glare and other impacts.

Southwest Area Plan

Policy LUL-R: **Establish rational patterns of population densities, transportation, and services**

Policy LUL-R-1: Require that neighborhoods be comprised of a mix of residential housing types and neighborhood serving facilities which support one another. Regional serving uses are not permitted within residential neighborhoods.

Goal LUL-T: **Preserve the Northwestern Pacific Railroad corridor for public and commercial transportation uses.**

Policy LUL-T-1: Utilize the Northwestern Pacific corridor for public transportation uses and improve its long term viability by designating potential future rail stations/stops and intensive land use.

Goal LUL-U: **Preserve, as permanent open space, areas which contain state or federally listed rare and endangered species.**

Policy LUL-U-1: Designate areas with state or federally listed endangered species as permanent open space.

Policy LUL-U-2: Utilize the Residential, Low Density/Open Space land use category as a "holding zone" for areas where the ultimate disposition of resources has not yet been determined.

Policy LUL-U-3: Develop plans for long term maintenance of permanent open space.

Policy LUL-U-4: Protect biologically sensitive habitats and incorporate riparian plant materials in the landscape plans for projects.

City of Santa Rosa Zoning Code

The Santa Rosa Zoning Code implements the goals and policies of the City's General Plan by classifying and regulating the uses of land and structures in the city. In addition, the Zoning Code is adopted to protect and promote the public health, safety, and general welfare of residents and to preserve and enhance the city's aesthetic quality.

City of Santa Rosa Citywide Creek Master Plan

The Citywide Creek Master Plan, adopted by the City Council in August 2013, implements General Plan 2035 Goal OSC-E and provides guidelines for the care, management, restoration, and enhancement of nearly 90 miles of creeks in Santa Rosa. The master plan is intended for use by City and County staff when planning creek enhancement and restoration activities, coordination and expansion of creekside trail systems, making broader land-use planning decisions concerning creeks, and in the development approval process for projects proposed adjacent to a waterway.

3.10.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G standards. A land use and planning impact is considered significant if the project would:

1) Physically divide an established community.

2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

3) Conflict with any applicable habitat conservation plan or natural community conservation plan.

METHODOLOGY

The following impact analysis is based on a review of relevant land use planning documents including the Santa Rosa 2035 General Plan and the City's Zoning Code.

Impacts Not Evaluated in Detail

No adopted habitat conservation plans or natural community conservation plans cover Santa Rosa.[1] There would be no impact relative to Standard of Significance 3, and the issue is not further evaluated.

PROJECT IMPACTS AND MITIGATION MEASURES

Divide Established Community (Standard of Significance 1)

Impact 3.10.1 The proposed project would not divide an established community. There would be **no impact**.

The proposed project consists of the preparation and implementation of a comprehensive land use, circulation, and infrastructure plan for the community of Roseland and would result in the annexation of the remaining unincorporated islands in southwest Santa Rosa. These actions are intended to create a more cohesive and connected community while preserving existing uses and the unique character of the area. The proposed project does not include any design features or other characteristics that would divide the community. Rather, the proposed project would improve community connectivity by improving motor vehicle, bicycle, and pedestrian facilities throughout the area. There would be **no impact**.

Mitigation Measures

None required.

Consistency with Applicable Land Use Plans or Existing Uses (Standard of Significance 2)

Impact 3.10.2 The proposed project would not conflict with applicable land use plans. This impact would be **less than significant**.

As shown in **Figure 2.0-6** in Section 2.0, Project Description, the proposed land plan is substantially the same as the land use diagram contained in the City's General Plan 2035 (**Figure 2.0-3** in Section 2.0, Project Description). However, the project proposes to change land use designations in the following areas:

- West of Burbank Avenue south of Hughes Avenue, land use designations would change from Low Density Residential and Medium Density Residential to Public/Institutional. These parcels are currently developed as Roseland Creek Elementary School and surrounded by residential uses. The proposed amendment at this location would make the existing use consistent with the General Plan and would not result in any land use incompatibilities.

- East of Burbank Avenue south of Hughes Avenue, land use designations would change from Medium Density Residential and Retail/Medium Density Residential to Parks/Recreation and Medium Low Density Residential. The parcels to be designated

[1] The Santa Rosa Plain Conservation Strategy was completed in 2005, but neither the City nor Sonoma County have adopted it. It is a guidance document that the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife use in conjunction with their review of permits. Projects in the plan area are individually required to mitigate impacts on the species covered in the Conservation Strategy if the project would affect the covered species.

Parks/Recreation are largely undeveloped, with the exception of a few single-family residential units and associated outbuildings, and are part of the proposed Roseland Creek Community Park. Development of parks at these locations would be compatible with the surrounding residential uses. The parcels to be designated Medium-Low Density Residential are surrounded by land with the same designation and are currently vacant or developed as residential. The proposed amendment at this location would be compatible with surrounding uses.

- Along the north side of Hearn Avenue, west of Burbank Avenue, land use designations would change from Low Density Residential and Medium Density Residential to Medium High Density Residential. Development of higher-density housing in this location would be compatible with the Low and Medium Density Residential designations to the north and would complement the adjacent Southside Bus Transfer Center consistent with General Plan Policy LUL-A-1.

- At the Colgan Creek Park site the land use designation would change from Medium Density Residential to Parks and Recreation. This property is adjacent the Lower Colgan Creek Park and existing residential uses. The property is also adjacent existing warehousing/distribution operations but is separated from these uses by the Roseland Creek corridor and landscaping. The proposed amendment at this location would be compatible with these surrounding uses.

- Along the south side of Hearn Avenue, just east of Southwest Community Park, the land use designations would change from Medium and Medium Low Density Residential to Medium High Density Residential/Public Institutional. Development of higher-density housing and institutional uses at this location would be compatible with the public/institutional designation to the south and would complement the nearby Southside Bus Transfer Center consistent with General Plan Policy LUL-A-1.

- East of Dutton Meadow, across from Meadow View Elementary School, the land use designation would change from Medium Density/Retail and Business Services to Medium Low Density Residential. Development of medium density housing at this location would be consistent with the residential and mixed-use designations surrounding the site.

- In the West Hearn Annexation area, the existing land use designation of Low Density Residential would be changed to Very Low Density Residential. The proposed designation would be compatible with the rural residential development along this street.

Where changes in land use designation are proposed, a General Plan Amendment is proposed as part of the project to ensure consistency with the General Plan. Rezoning in the Specific Plan area and establishment of pre-zoning in the Annexation areas consistent with the proposed Specific Plan and General Plan land use designations is also proposed as a part of the project.

The proposed project promotes the use of alternative transportation modes consistent with General Plan Policy LUL-A-1 by increasing density adjacent to the Southside Bus Transfer Center and by improving east/west connectivity and additional bicycle and pedestrian connections. The project is also consistent with General Plan Policies LUL-R-1 and LUL-U-2 by providing for a range of residential housing types and densities. The proposed annexations would be consistent with General Plan Policy LUL-A-2, as the islands proposed for annexation are adjacent to the city limits, are within the Urban Growth Boundary, are contiguous to existing urban development, would be adequately served by the City's existing services, and would represent a rational expansion of the city.

Therefore, with approval of the proposed General Plan Amendment and zoning changes, the proposed project would be consistent with applicable land use plans. This impact would be **less than significant**.

Mitigation Measures

None required.

3.10.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for land use consists of the City of Santa Rosa Urban Growth Boundary (UGB), as identified in the General Plan 2035.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Land Use Impacts

Impact 3.10.3 Implementation of the proposed project would not significantly contribute to adverse cumulative impacts related to land use including conflicts with applicable land use plans. This impact would be **less than cumulatively considerable.**

The General Plan 2035 evaluated cumulative land use impacts and determined that, with implementation of the goals and policies contained in the General Plan, land use impacts would be cumulatively less than significant. As discussed in this section, the land uses and use intensities contemplated by the proposed project are substantially similar to the vision presented for the area in the General Plan 2035 and previously analyzed in the General Plan EIR. Therefore, the proposed project would not result in any new or previously unidentified cumulative impacts related to land use and planning. This cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Santa Rosa, City of. 2009a. *Santa Rosa General Plan 2035*.

———. 2009b. *Santa Rosa General Plan 2035 Draft Environmental Impact Report*.

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3.11 Noise

This section includes a description of existing noise conditions, a summary of applicable regulations, and an analysis of potential noise impacts associated with the proposed project. Mitigation measures are recommended, as necessary, to reduce significant noise impacts. Data used to prepare this section was taken from the transportation impact study (**Appendix 3.14**) and information obtained by modeling existing and future traffic noise levels in the project area and the surrounding area (**Appendix 3.11).**

3.11.1 EXISTING SETTING

FUNDAMENTALS OF SOUND AND ENVIRONMENTAL NOISE

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations which make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Because the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound because of its potential to disrupt sleep, to interfere with speech communication, and to damage hearing. A typical noise environment consists of a base of steady "background" noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway.

Amplitude

Amplitude is the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels on a logarithmic scale. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

Frequency

Frequency is the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hertz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. To approximate this sensitivity, environmental sound is usually measured in A-weighted decibels. On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA. Common community noise sources and associated noise levels, in dBA, are depicted in **Figure 3.11-1**.

Addition of Decibels

Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

Sound Propagation and Attenuation

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such soft dirt or grass, can absorb sound, so an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

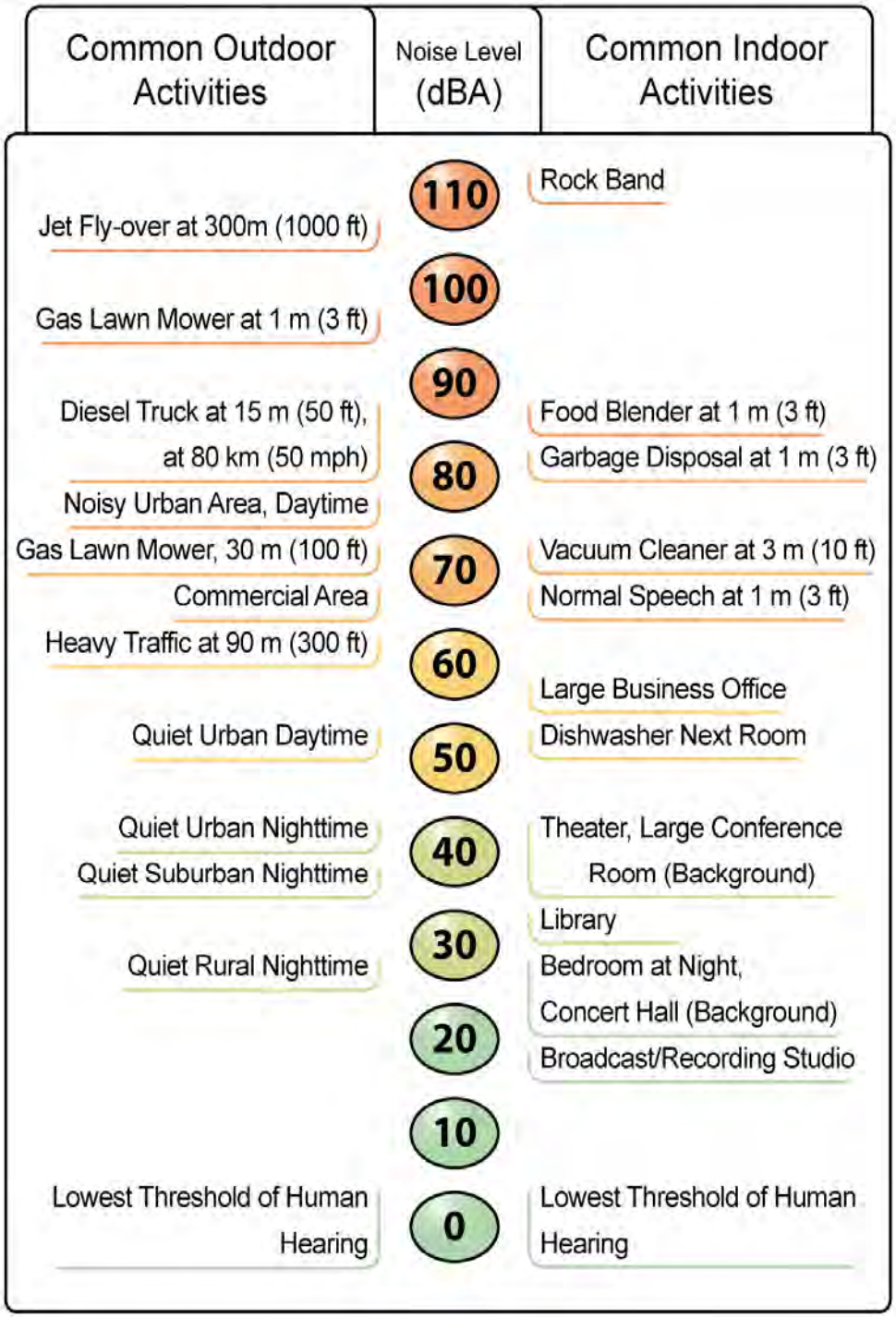
NOISE DESCRIPTORS

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined in **Table 3.11-1**.

The A-weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

FIGURE 3.11-1
TYPICAL COMMUNITY NOISE LEVELS



Source: Caltrans 2012

TABLE 3.11-1
DEFINITIONS OF ACOUSTICAL TERMS

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	L_{eq}, the equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	L_{dn}, the Day-Night Average Level, is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60–70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings that can provide noise levels as low as 20 dBA and quiet, suburban, residential streets that can provide noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55–60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60–75 dBA) or dense urban or industrial areas (65–80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted for understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

EFFECTS OF NOISE ON PEOPLE

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even in a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Sleep and Speech Interference

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors, the thresholds are about 15 dBA higher. Steady noise of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level during the daytime is roughly equal to the L_{dn} and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection, and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12–17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57–62 dBA L_{dn} with open windows and 65–70 dBA L_{dn} if the windows are closed. Levels of 55–60 dBA are common along collector streets and secondary arterials, while 65–70 dBA is a typical value for a primary/major arterial. Levels of 75–80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed; those facing major roadways and freeways typically need special glass windows with Sound Transmission Class (STC) ratings greater than 30 STC.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 55 dBA L_{dn}. At an L_{dn} of about 60 dBA, approximately 2 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the percentage of the population highly annoyed increases to about 12 percent. There is an increase in annoyance due to ground vehicle noise of approximately 1 percent per dBA for an L_{dn} of 60–70 dBA. For an L_{dn} of 70–80 dBA, each decibel increase increases the percentage of the population highly annoyed by about 2 percent. People appear to respond more adversely to aircraft noise. When the L_{dn} due to aircraft noise is 60 dBA, approximately 10 percent of the population is believed to be highly annoyed. Each decibel increase up to 70 dBA adds about 2 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase in aircraft noise results in about a 3 percent increase in the percentage of the population highly annoyed.

FUNDAMENTALS OF ENVIRONMENTAL GROUNDBORNE VIBRATION

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and in the United States is referenced as vibration decibels (VdB).

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within

buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. Groundborne vibration is almost never annoying to people who are outdoors. Although the motion of the ground may be perceived, without the effects associated with the shaking of a building, the motion does not provoke the same adverse human reaction. In addition, the rumble noise that usually accompanies building vibration is perceptible only inside buildings (FTA 2006). As such, the range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

The general human response to different levels of groundborne vibration velocity levels is described in **Table 3.11-2.**

TABLE 3.11-2
HUMAN RESPONSE TO DIFFERENT LEVELS OF GROUNDBORNE VIBRATION

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Source: FTA 2006

In urban environments, such as the project area and Santa Rosa as a whole, sources of groundborne vibration include construction activities, light rail transit, and heavy trucks and buses. Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction-related groundborne vibration levels. Rail operations are potential sources of substantial groundborne vibration depending on distance, the type and the speed of trains, and the type of railroad track. People's response to groundborne vibration has been correlated best with the velocity of the ground. The velocity of the ground is expressed on the decibel scale. The reference velocity is 1×10^{-6} inches per second (in/sec). RMS, which equals 0 VdB and 1 in/sec, equals 120 VdB. Groundborne vibration levels from heavy trucks and buses are not normally perceptible, especially if roadway surfaces are smooth. Buses and trucks typically generate groundborne vibration levels of about 63 VdB at a distance of 25 feet when traveling at a speed of 30 mph. Higher vibration levels can occur when buses or trucks travel at higher rates of speed or when the pavement is in poor condition. Vibration levels below 65 VdB are below the threshold for human perception.

NOISE-SENSITIVE RECEPTORS

Noise-sensitive land uses are those that may be subject to stress and/or interference from excessive noise. Noise-sensitive land uses in Santa Rosa include public schools, hospitals, and institutional uses such as churches, museums, and private schools. Typically, residential uses are also considered noise-sensitive receptors. Industrial and commercial land uses are generally not considered sensitive to noise.

EXISTING AMBIENT NOISE LEVELS

Noise is a significant and inherent part of Santa Rosa's environment. According to the Santa Rosa General Plan Noise and Safety Element (2009), throughout most of the city, noise can be characterized as routine background sounds and unusual or intermittent events. Cars, trucks, buses, trains, air conditioning systems, and aircraft generate background noise. Intermittent, and sometimes excessive, noise can come from leaf blowers, helicopters, train whistles (at grade crossings), chain saws, un-muffled motor vehicles, and similar sources. Excessive noise can cause annoyance, health problems, economic loss, and ultimately hearing impairment.

The project area noise environment is defined primarily by vehicular traffic along area roadways. This noise is a result of historical land use decisions, competing regional and community goals, geographic factors, and limited local controls. The major sources of noise in the project vicinity include highways such as US Highway 101 (US 101) and State Route (SR) 12, as well as regional and arterial streets such as Bellevue Avenue, Stony Point Road, and Sebastopol Road. In addition, Northwestern Pacific freight trains have resumed service along the existing rail corridor traversing the project area and contribute to the existing noise environment. Railroad noise is most noticeable from horn soundings at grade crossings. This same railroad corridor is also planned for future Sonoma-Marin Area Rail Transit (SMART) commuter/passenger operations. To a lesser extent, activities at nearby commercial and industrial uses also contribute on an intermittent basis to ambient noise levels in the project area. Primary existing noise sources are discussed below.

Railroad Noise

Northwestern Pacific Railroad

The North Coast Railroad Authority (NCRA) has resumed service along the Northwestern Pacific Railroad. Based on information derived from the NCRA's Russian River Division Freight Rail Project Draft Environmental Impact Report prepared in November 2009, freight train service along the railroad line would consist of a total of two round-trip freight train operations per day. One of these trains is anticipated to include a single locomotive engine with 10 to 25 cars, while the second would likely consist of two locomotive engines with approximately 60 cars. Based on this information, predicted freight train noise levels in the project area would be approximately 58 dBA L_{dn} at 50 feet from the track centerline, without the sounding of locomotive warning horns (NCRA 2009). Assuming a maximum instantaneous noise level of 108 dB with locomotive warning horns sounding, predicted average-daily noise levels at 50 feet from the track centerline would be 67 dBA L_{dn}. The sounding of warning horns generally occurs within approximately one-quarter mile of a grade crossing. Given the number of grade crossings in the project area, the sounding of warning horns would be expected. Predicted distances to train noise contours are summarized in **Table 3.11-3**.

Sonoma-Marin Area Rail Transit

In addition to the Northwestern Pacific trains, SMART plans to use the Northwestern Pacific Railroad corridor as a rail transit corridor. According to the Sonoma-Marin Area Rail Transit DEIR prepared in 2005, approximately 12 passenger trains would travel along this rail corridor between the hours of 5:00 a.m. and 8:00 p.m. The predicted 60 dBA L_{dn} noise contour for the SMART rail corridor would extend to a distance of approximately 25 feet from the track centerline, without the sounding of train horns. The sounding of train horns is typically required within approximately one-quarter mile of grade crossings. With the sounding of train horns, instantaneous maximum noise levels could reach 105 dBA at 70 feet. However, the SMART DEIR does not present calculated average-daily

noise levels (in CNEL/L_{dn}) or projected average-daily noise contours with the sounding of train horns (SMART 2005).

Predicted noise contours for the SMART passenger trains, with the sounding of train horns, were calculated based on the noise data and anticipated hours of operation provided in the SMART DEIR and assuming that trains would be somewhat equally distributed throughout the anticipated hours of operation (Santa Rosa 2012). Trains will operate in both directions every 30 minutes during peak commute hours. There is also a mid-weekday trip scheduled as well as more intermittent weekend service (SMART 2016). Based on the modeling conducted, SMART train noise levels would be approximately 74 dBA L_{dn} at 50 feet from the track centerline (Santa Rosa 2012). Predicted noise levels are summarized in **Table 3.11-3**.

Cumulative Train Noise Levels

Cumulative average-daily train noise levels were calculated based on the above predicted noise levels for freight and passenger trains (Santa Rosa 2012). Given the number of grade crossings and distances between grade crossings, the sounding of locomotive warning horns would be anticipated in the project area. Predicted distances to average-daily noise contours were calculated assuming an average noise attenuation rate of 4.5 dB per doubling of distance from the railroad centerline. Predicted train noise levels and distances to cumulative train noise contours are summarized in **Table 3.11-3**. As depicted, predicted cumulative train noise levels would be 75 dBA L_{dn} at 50 feet from the track (Santa Rosa 2012). The projected 60 dBA L_{dn} noise contour would extend to a distance of approximately 430 feet from the track centerline (Santa Rosa 2012). The 65 and 70 L_{dn} contours would extend to approximately 200 and 90 feet from the track centerline, respectively (Santa Rosa 2012).

TABLE 3.11-3
RAILROAD CORRIDOR NOISE LEVELS

L_{dn} at 50 Feet from Railroad Centerline			Distance (feet) to Cumulative L_{dn} Contours from Railroad Centerline		
NWPR	SMART	Cumulative	60	65	70
67	74	75	430	200	90

Source: Santa Rosa 2012

Note: Assumes a maximum instantaneous noise level of 108 dB with horns sounding. Assumes 2 freight trains and 12 passenger trains daily.

Airport Noise

The Charles M. Shultz-Sonoma County Airport is the nearest airport to the proposed project area, located approximately 5.25 miles to the northwest. While the southwestern corner of the project area is located within the Area of Influence for this airport, which regulates building height limits, the project is not located within the airport's measured noise contours (Sonoma County 2016).

Existing Freeway Noise

Existing roadway noise levels were calculated for the roadway segments within and surrounding the project area using the Federal Highway Administration (FHWA) Highway Noise Prediction Model (FHWA-RD-77-108) and traffic volumes from the project traffic analysis (see **Appendix 3.11**). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle

noise rates (energy rates) utilized in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along plan area roadway segments are presented in **Table 3.11-4**.

TABLE 3.11-4
EXISTING TRAFFIC NOISE LEVELS

Roadway Segment	Surrounding Uses	Ldn at 75 Feet from Near-Travel-Lane Centerline
Sebastopol Road		
Stony Point Road to Dutton Avenue	Commercial & Residential	64.7
Dutton Avenue to SR 12 Corridor	Commercial, Industrial & Residential	57.7
Stony Point Road		
SR 12 Corridor to Sebastopol Road	Commercial	66.9
Sebastopol Road to Northpoint Parkway	Residential	66.0
Northpoint Parkway to Hearn Avenue	Residential	66.6
Hearn Avenue to Bellevue Avenue	Residential	65.7
Dutton Avenue		
SR 12 to Sebastopol Road	Commercial	65.9
Sebastopol Road to W. Barham Avenue	Residential	61.4
W. Barham Avenue to Hearn Avenue	Residential	59.0
Duke Court to Bellevue Avenue	Commercial & Light Industrial	53.6
W. Barham Avenue		
Dutton Road to US 101 Corridor	Residential & Commercial	56.1
Hearn Avenue		
Stony Point Road to Burbank Avenue	Residential & School	60.3
Burbank Avenue to Dutton Avenue	Residential & School	61.7
Dutton Avenue to Corby Avenue	Residential & Light Industrial	63.8
Bellevue Avenue		
Stony Point Road to Dutton Meadow	Residential & School	56.6
Dutton Meadow to Dutton Avenue	Residential & Light Industrial	58.6
Dutton Avenue to Wiljan Court	Commercial & Industrial	59.1
Burbank Avenue		
Sebastopol Road to Hearn Avenue	Residential & School	59.4
Dutton Meadow		
Hearn Avenue to Bellevue Avenue	Residential & School	59.4
Dowd Drive		
Hearn Avenue to Bellevue	Commercial & Industrial	58.2

*Note: Traffic noise levels were calculated using the FHWA roadway noise prediction model. Refer to **Appendix 3.11** for noise modeling assumptions and results.*

3.11.2 REGULATORY FRAMEWORK

FEDERAL

Department of Housing and Urban Development

The US Department of Housing and Urban Development (HUD) environmental criteria and standards are presented in 24 Code of Federal Regulations (CFR) Part 51. New residential construction qualifying for HUD financing proposed in high noise areas (exceeding 65 dBA L_{dn}) must incorporate noise attenuation features to maintain acceptable interior noise levels. A goal of 45 dBA L_{dn} is set for interior noise levels, and attenuation requirements are geared toward achieving that goal. It is assumed that with standard construction, any building will provide sufficient attenuation to achieve an interior level of 45 dBA L_{dn} or less if the exterior level is 65 dBA L_{dn} or less. Approvals in a normally unacceptable noise zone (exceeding 65 decibels but not exceeding 75 decibels) require a minimum of 5 decibels additional noise attenuation for buildings if the day-night average is greater than 65 decibels but does not exceed 70 decibels, or a minimum of 10 decibels of additional noise attenuation if the day-night average is greater than 70 decibels but does not exceed 75 decibels.

Federal Highway Administration

Proposed federal or federal-aid highway construction projects at a new location, or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes, requires an assessment of noise and consideration of noise abatement per 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise. The Federal Highway Administration has adopted noise abatement criteria (NAC) for sensitive receivers such as picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals when "worst-hour" noise levels approach or exceed 67 dBA L_{eq}. Caltrans has further defined approaching the NAC to be 1 dBA below the NAC for noise-sensitive receivers identified as Category B activity areas (e.g., 66 dBA L_{eq} is considered approaching the NAC) (Caltrans 2011).

Federal Transit Administration

The Federal Transit Administration (FTA) has identified vibration impact criteria for sensitive buildings, residences, and institutional land uses near rail transit and railroads. The thresholds for residences and buildings where people normally sleep (e.g., nearby residences) are 72 VdB for frequent events (more than 70 events of the same source per day), 75 VdB for occasional events (30 to 70 vibration events of the same source per day), and 85 VdB for infrequent events (less than 30 vibration events of the same source per day).

STATE

California Noise Insulation Standards

The State of California establishes minimum noise insulation performance standards for hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings as set forth in the 2010 California Building Code (Chapter 12, Appendix Section 1207.11). The noise limit is a maximum interior noise level of 45 dBA L_{dn}. Where exterior noise levels exceed 60 dBA L_{dn}, a report must be submitted with the building plans describing the noise control measures that have been incorporated into the design of the project to meet the noise limit.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the Specific Plan in regard to noise.

Noise and Safety Element

Goal NS-B: **Maintain an acceptable community noise level to protect the health and comfort of people living, working and/or visiting in Santa Rosa, while maintaining a visually appealing community.**

Policy NS-B-1: Do not locate noise-sensitive uses in proximity to major noise sources, except residential is allowed near rail to promote future ridership.

Policy NS-B-2: Encourage residential developers to provide buffers other than sound walls, where practical. Allow sound walls only when projected noise levels at a site exceed land use compatibility standards in Figure 12-1.

In some established neighborhoods and subdivisions, sound walls may provide the only alternative to reduce noise to acceptable community standards. The Design Review process shall evaluate sound wall aesthetics and landscaping to ensure attractiveness along with functionality.

Policy NS-B-3: Prevent new stationary and transportation noise sources from creating a nuisance in existing developed areas. Use a comprehensive program of noise prevention through planning and mitigation, and consider noise impacts as a crucial factor in project approval.

The Land Use Compatibility Standards specify normally acceptable levels for community noise in various land use areas.

Policy NS-B-4: Require new projects in the following categories to submit an acoustical study, prepared by a qualified acoustical consultant:

- All new projects proposed for areas with existing noise above 60 dBA DNL. Mitigation shall be sufficient to reduce noise levels below 45 dBA DNL in habitable rooms and 60 dBA DNL in private and shared recreational facilities. Additions to existing housing units are exempt.

- All new projects that could generate noise whose impacts on other existing uses would be greater than those normally acceptable (as specified in the Land Use Compatibility Standards).

Policy NS-B-5: Pursue measures to reduce noise impacts primarily through site planning. Engineering solutions for noise mitigation, such as sound walls, are the least desirable alternative.

Policy NS-B-8: Adopt mitigations, including reduced speed limits, improved paving texture, and traffic controls, to reduce noise to normally acceptable levels in areas where noise standards may be exceeded (e.g., where homes front regional/arterial streets and in areas of mixed use development.)

Policy NS-B-9: Encourage developers to incorporate acoustical site planning into their projects. Recommended measures include:

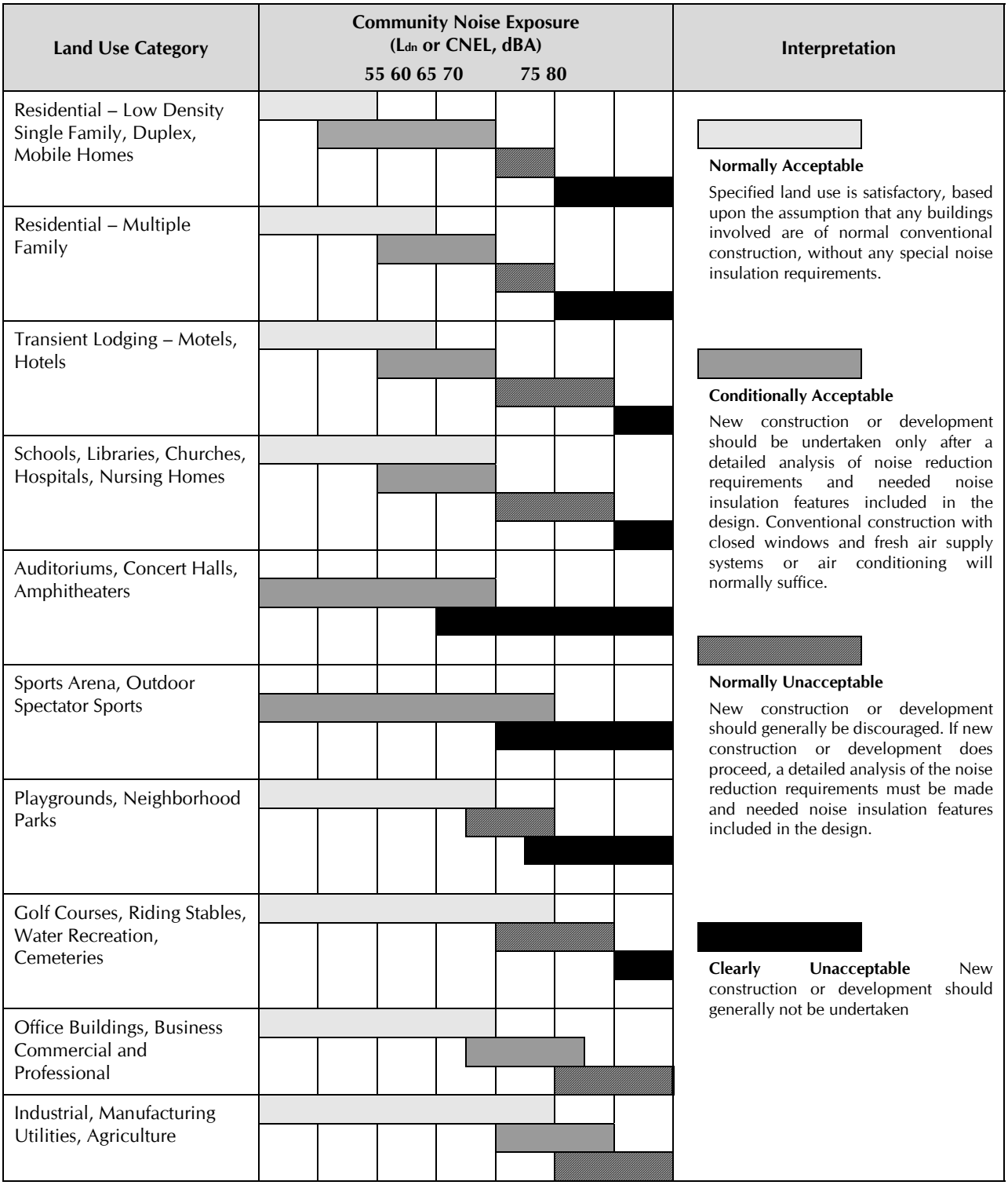
- Incorporating buffers and/or landscaped earth berms;
- Orienting windows and outdoor living areas away from unacceptable noise exposure;
- Using reduced-noise pavement (rubberized asphalt);
- Incorporating traffic calming measures, alternative intersection designs, and lower speed limits; and
- Incorporating state-of-the-art structural sound attenuation and setbacks.

Policy NS-B-10: Work with private enterprises to reduce or eliminate nuisance noise from industrial and commercial sources that impact nearby residential areas. If progress is not made within a reasonable time, the city shall issue abatement orders or take other legal measures.

Policy NS-B-11: Work with Caltrans to assign a high priority to traffic noise mitigation programs. Support construction of attractive sound walls, as necessary along Highway 101 and Highway 12.

Policy NS-B-14: Discourage new projects that have potential to create ambient noise levels more than 5 dBA DNL above existing background, within 250 feet of sensitive receptors.

FIGURE 3.11-2
CITY OF SANTA ROSA LAND USE COMPATIBILITY NOISE CRITERIA



Source: Santa Rosa 2009

City of Santa Rosa City Code, Chapter 17-16

City Code Chapter 17-16, Noise, states that it is unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, or unusual noise that disturbs the peace or quiet of any neighborhood or causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standards considered in determining whether a violation of the provisions of this section exists include:

- The level of noise
- The intensity of the noise
- Whether the nature of the noise is usual or unusual
- Whether the origin of the noise is natural or unnatural
- The level and intensity of the background noise, if any
- The proximity of the noise to residential sleeping facilities
- The nature and zoning of the area within which the noise emanates
- The density of the inhabitation of the area within which the noise emanates
- The time of the day or night the noise occurs
- The duration of the noise
- Whether the noise is recurrent, intermittent or constant
- Whether the noise is produced by a commercial or noncommercial activity

Chapter 17-16 establishes ambient base noise level criteria and prohibits the operation of any machinery, equipment, pump, fan, air-conditioning apparatus, or similar mechanical device in a manner that results in the noise level at the property line of any property to exceed the applicable noise criteria by more than 5 decibels.

City of Santa Rosa City Code, Section 20-30.090

City Code Section 20-30.090, Ground Vibration, states that no ground vibration shall be generated that is perceptible without instruments by a reasonable person at the property lines of the site, except for vibrations from temporary construction or demolition activities, and motor vehicle operations.

3.11.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G standards of significance. An impact to noise is considered significant if the project would result in:

1) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or of applicable standards of other agencies.

2) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

3) Exposure of persons to or generation of an excessive groundborne vibration or groundborne noise level.

4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

5) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, exposure of people residing or working in the project area to excessive noise levels.

6) For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

Criteria for determining the significance of noise impacts were developed based on information contained in CEQA Guidelines Appendix G and the City's noise standards and guidelines. Santa Rosa's land use compatibility noise standards for various land uses are shown in **Figure 3.11-2**. In addition to reviewing proposed development for compliance with these noise standards, the analysis takes into account the increases in noise levels over the pre-project noise conditions. General Plan Policy NS-B-14 states that the City will discourage new projects that have potential to create ambient noise levels more than 5 dBA L_{dn} above existing background, within 250 feet of sensitive receptors. As described in the Human Response to Noise subsection above, a change in level of at least 5 dB is the change required before any noticeable change in community response would be expected. Therefore, an increase of 5 dBA L_{dn} over the pre-project noise conditions is considered significant.

METHODOLOGY

This analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. The residential uses in the project area and vicinity are considered noise-sensitive receptors. Policies contained in the Santa Rosa General Plan and regulations set forth in the Santa Rosa City Code summarized in the Regulatory Framework subsection establish local noise standards. Future noise levels resulting from development facilitated by the proposed project and cumulative growth in the area were modeled and used to evaluate the significance of impacts assessed with respect to the applicable criteria. The compatibility of new development is evaluated with respect to the future (2040) noise environment assuming the buildout of the project area and cumulative development, because this corresponds to the highest expected noise environment. The impact of increased traffic noise is assessed for the project (project area–facilitated development) and the future (2040) condition assuming the buildout of the project area and other cumulative development.

Impacts Not Evaluated in Detail

As previously described, the project area is outside of the Charles M. Shultz-Sonoma County Airport's noise contours. Additionally, the project area is not located in the vicinity of a private airstrip. Therefore, this analysis does not further evaluate Standards of Significance 5 and 6.

PROJECT IMPACTS AND MITIGATION MEASURES

Exposure of Persons to or Generation of Noise Levels in Excess of Standards (Standard of Significance 1)

Impact 3.11.1 The proposed project would not expose residents to traffic noise or stationary sources of noise in excess of established standards. Impacts would be **less than significant.**

Automobile Traffic Noise

Future traffic noise levels throughout the project area were modeled based on the traffic volumes identified by W-Trans (2016) to determine the noise level contours along project area roadways. **Table 3.11-5** shows the calculated roadway noise levels with existing traffic compared to the development potential allowed under the proposed project.

TABLE 3.11-5
PROJECT CONDITIONS NOISE LEVELS ALONG PROJECT ROADWAYS

Roadway Segment	L_{dn} at 75 Feet, dBA*	
	Existing Conditions	Existing Plus Project Conditions
Sebastopol Road		
Stony Point Road to Dutton Avenue	64.7	65.2
Dutton Avenue to SR 12 Corridor	57.7	59.6
Stony Point Road		
SR 12 Corridor to Sebastopol Road	66.9	67.5
Sebastopol Road to Northpoint Parkway	66.0	67.0
Northpoint Parkway to Hearn Avenue	66.6	65.4
Hearn Avenue to Bellevue Avenue	65.7	65.3
Dutton Avenue		
SR 12 to Sebastopol Road	65.9	66.9
Sebastopol Road to W. Barham Avenue	61.4	62.1
W. Barham Avenue to Hearn Avenue	59.0	60.3
Duke Court to Bellevue Avenue	53.6	53.6
W. Barham Avenue		
Dutton Avenue to US 101 Corridor	56.1	58.3
Hearn Avenue		
Stony Point Road to Burbank Avenue	60.3	59.6
Burbank Avenue to Dutton Avenue	61.7	62.0
Dutton Avenue to Corby Avenue	63.8	65.5

Roadway Segment	L_{dn} at 75 Feet, dBA*	
	Existing Conditions	Existing Plus Project Conditions
Bellevue Avenue		
Stony Point Road to Dutton Meadow	56.6	58.8
Dutton Meadow to Dutton Avenue	58.6	60.5
Dutton Avenue to Wiljan Court	59.1	59.3
Burbank Avenue		
Sebastopol Road to Hearn Avenue	59.4	60.5
Dutton Meadow		
Hearn Avenue to Bellevue Avenue	59.4	62.8
Dowd Drive		
Hearn Avenue to Bellevue Avenue	58.2	59.4

** Noise levels for highways and expressways are given at a distance of 75 feet from the center of the near direction of travel.*

Residential and mixed-use residential development is proposed along major roadways. Noise levels in these areas range from 53.6 to 67.5 dBA L_{dn}, a conditionally acceptable noise environment for all land uses according to City noise provisions (see **Figure 3.11-2**). (As previously stated, in addition to reviewing proposed development for compliance with City noise standards, the analysis takes into account the increases in noise levels over the pre-project noise conditions. The reader is referred to Impact 3.11.2 for an evaluation of traffic accounting for the increases in noise levels over the pre-project noise conditions.)

New Sensitive Receptors

The project provides for a mix of land uses that would result in a blend of residential and nonresidential uses. In some areas, the project would allow the development at higher densities than currently allowed. Development facilitated by the proposed project would include noise-sensitive land uses (residences) that would be located in varying noise environments, including adjacent to and in the vicinity of major roadways, such as Stony Point Road, Sebastopol Road, and Dutton Avenue, and adjacent to and in the vicinity of the SMART corridor. Residential development is sensitive to community noise both outdoors and indoors during the daytime and nighttime. High-density/mixed-use residential, commercial, and office development is less noise sensitive because uses are primarily indoors and noise levels are mitigated with building design and construction. The placement of new residential development near major roadways and/or the railway corridors could result in noise exposures exceeding City standards for sensitive residential uses. For instance, as shown in **Table 3.11-3**, predicted cumulative train noise levels would be 75 dBA L_{dn} at 50 feet from the track, and the 65 and 70 L_{dn} contours would extend to approximately 200 and 90 feet from the track centerline, respectively (Santa Rosa 2012).

Interior noise levels are about 12 to 17 dBA lower than exterior levels in residential units with the windows partially open and approximately 20 to 25 decibels lower than exterior noise levels with the windows closed, assuming typical California construction methods. Where exterior day-night average noise levels are 60 to 70 dBA L_{dn}, interior noise levels can typically be maintained below 45 dBA L_{dn} with the incorporation of an adequate forced air mechanical ventilation system in the residential units to allow residents the option of controlling noise by keeping the windows closed. (Standard office construction methods typically provide about 25 to 30 decibels of noise reduction in interior spaces. In all areas exceeding 70 dBA L_{dn}, the inclusion of windows and doors with high

Sound Transmission Class (STC) ratings and the incorporation of forced-air mechanical ventilation systems would most likely be necessary to meet 45 dBA.) As previously stated, the State of California establishes minimum noise insulation performance standards for hotels, motels, dormitories, and apartment houses.

General Plan Policy NS-B-4 requires all new projects proposed for areas with existing noise above 60 dBA to submit an acoustical study prepared by a qualified acoustical consultant. In cases where acceptable or conditionally acceptable noise thresholds would be exceeded, project proponents would need to incorporate measures, such as adding buffers and/or landscaped earth berms, orienting windows and outdoor living areas away from unacceptable noise exposure, and/or incorporating state-of-the-art structural sound attenuation and setbacks, to reduce noise effects. In addition and more specific to train-related noise, General Plan Policy NS-B-1 prohibits noise-sensitive uses in proximity to major noise sources, except residential located near rail in order to promote future ridership.

The need for noise attenuation measures in building construction and project design from any noise source and for all land uses will be determined on a project-by-project basis at the time development is proposed. The City land use compatibility noise standard for all sensitive receptors in the city is 60 dBA L_{dn}, though noise levels up to 70 dBA are conditionally acceptable (General Plan noise standards for all land uses are summarized in **Figure 3.11-2**). The proposed project would not make any changes to current City noise standards. Compliance with existing regulations and City policies would ensure the proposed project would not expose residents to traffic noise or stationary sources of noise in excess of established standards. Impacts would be **less than significant.**

Mitigation Measures

None required.

Result in a Substantial Permanent Increase in Ambient Noise Levels Above Levels Existing Without the Project (Standard of Significance 2)

Impact 3.11.2 Project operation would generate increased local traffic volumes that could cause a substantial permanent increase in ambient noise levels in the project vicinity. This would be a **less than significant** impact.

As previously described, in addition to reviewing proposed development for compliance with specific noise thresholds, this analysis accounts for the increases in noise levels over pre-project noise conditions. General Plan Policy NS-B-14 states that the City will discourage new projects that have potential to create ambient noise levels more than 5 dBA L_{dn} above existing background, within 250 feet of sensitive receptors. As described in the Human Response to Noise subsection above, a change in level of at least 5 dBA is the change required before any noticeable change in community response would be expected. Therefore, an increase of 5 dBA over the pre-project noise conditions is considered significant.

The primary factor contributing to the ambient noise environment as a result of the project would be the increase in vehicular traffic from development in the project area. **Table 3.11-6** shows the calculated roadway noise levels under existing traffic levels compared to the development potential of the project area. In comparison to existing traffic noise levels, the project's predicted increase in traffic noise levels would be below the applicable noise level thresholds. Therefore, predicted traffic noise levels would not result in a substantial increase in traffic noise levels along other primarily affected roadways.

TABLE 3.11-6
PREDICTED INCREASES IN TRAFFIC NOISE LEVELS
EXISTING PLUS PROJECT CONDITIONS

Roadway Segment	L_{dn} at 75 Feet from Near-Travel-Lane Centerline[1]		Increase	Threshold	Impact	Affected Land Use
	Without Project	With Project				
Sebastopol Road						
Stony Point Road to Dutton Avenue	64.7	65.2	**0.5**	>5.0	**No**	Commercial & Residential
Dutton Avenue to SR 12 Corridor	57.7	59.6	**1.9**	>5.0	**No**	Commercial, Industrial & Residential
Stony Point Road						
SR 12 Corridor to Sebastopol Road	66.9	67.5	**0.6**	>5.0	**No**	Commercial
Sebastopol Road to Northpoint Parkway	66.0	67.0	**1.0**	>5.0	**No**	Residential
Northpoint Parkway to Hearn Avenue	66.6	65.4	**-1.2**	>5.0	**No**	Residential
Hearn Avenue to Bellevue Avenue	65.7	65.3	**-0.2**	>5.0	**No**	Residential
Dutton Avenue						
SR 12 to Sebastopol Road	65.9	66.9	**1.0**	>5.0	**No**	Commercial
Sebastopol Road to W. Barham Avenue	61.4	62.1	**0.7**	>5.0	**No**	Residential
W. Barham Avenue to Hearn Avenue	59.0	60.3	**1.3**	>5.0	**No**	Residential
Duke Court to Bellevue Avenue	63.8	65.5	**1.7**	>5.0	**No**	Commercial & Light Industrial
W Barham Avenue						
Dutton Avenue to US 101 Corridor	56.1	58.3	**2.2**	>5.0	**No**	Residential & Commercial
Hearn Avenue						
Stony Point Road to Burbank Avenue	60.3	59.6	**-0.7**	>5.0	**No**	Residential & School
Burbank Avenue to Dutton Avenue	61.7	62.0	**0.3**	>5.0	**No**	Residential & School
Dutton Avenue to Corby Avenue	63.8	65.5	**1.7**	>5.0	**No**	Residential & Light Industrial
Bellevue Avenue						
Stony Point Road to Dutton Meadow	56.6	58.8	**2.2**	>5.0	**No**	Residential & School
Dutton Meadow to Dutton Avenue	58.6	60.5	**1.9**	>5.0	**No**	Residential & Light Industrial
Dutton Avenue to Wiljan Court	59.1	59.3	**0.2**	>5.0	**No**	Commercial & Industrial

Roadway Segment	L_{dn} at 75 Feet from Near-Travel-Lane Centerline[1]		Increase	Threshold	Impact	Affected Land Use
	Without Project	With Project				
Burbank Avenue						
Sebastopol Road to Hearn Avenue	59.4	60.5	**1.1**	>5.0	**No**	Residential & School
Dutton Meadow						
Hearn Avenue to Bellevue Avenue	59.4	62.8	**3.4**	>5.0	**No**	Residential & School
Dowd Drive						
Hearn Avenue to Bellevue Avenue	58.2	59.4	**1.2**	>5.0	**No**	Commercial & Industrial

Notes:

*1. Traffic noise levels were calculated using the FHWA roadway noise prediction model based on data obtained from the traffic analysis prepared for this project (W-Trans 2016; **Appendix 3.11**).*

2. For purposes of this analysis, a noise level increase of 5.0 or greater would typically be considered to result in increased levels of annoyance.

As shown in **Table 3.11-6**, predicted increases in traffic noise levels associated with the project would not be greater than the applicable noise level thresholds and therefore would be **less than significant**.

Mitigation Measures

None required.

Exposure to Groundborne Vibration (Standard of Significance 3)

Impact 3.11.3 Planned development under the proposed project would be required to comply with City noise standards set forth in the City Code. This impact would be considered **less than significant**.

Ground vibration spreads through the ground and diminishes in strength with distance. The effects of ground vibration can vary, with no perceptible effects at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. For most structures, a peak particle velocity (ppv) threshold of 0.5 inches per second (in/sec) is sufficient to avoid structure damage, with the exception of fragile historic structures or ruins. For the protection of fragile, historic, and residential structures, Caltrans recommends a more conservative threshold of 0.2 inches per second ppv. This same threshold would represent the level at which vibrations would be potentially annoying to people in buildings (FTA 2006; Caltrans 2004).

Long-Term Exposure to Groundborne Vibration

Long-term operational activities associated with the proposed land uses are not anticipated to involve the use of any equipment or processes that would result in potentially significant levels of ground vibration. Future industrial land uses, which are currently allowed under existing General Plan land use designations (see Table 2.0-5 in Section 2.0, Project Description) and would not increase relative to the General Plan (see Table 2.0-6 in Section 2.0, Project Description),could potentially involve the use of a wide variety of equipment or processes that could produce ground vibration and could negatively affect adjacent properties. However, groundborne vibration is regulated in Santa Rosa by City Code Section 20-30.090, Ground Vibration, which states that no ground vibration that is perceptible without instruments by a reasonable person at the property lines of the site is permissible. This regulation will prevent future industrial land uses from instigating significant groundborne vibration-related impacts.

Future development would occur in proximity to the planned future SMART corridor associated with the operation of passenger rail trains. In addition, the North Coast Railroad Authority (NCRA) recently resumed service along this corridor. Groundborne vibration impacts associated with the SMART trains were previously analyzed in the Sonoma-Marin Area Rail Transit Draft Environmental Impact Report (2005). Based on the analysis conducted for the SMART DEIR, groundborne vibration levels associated with SMART train operations were determined to not result in groundborne vibration levels at land uses located along the SMART corridor that would exceed applicable impact significance thresholds. Concerning the two daily NCRA trains, the NCRA's Russian River Division Freight Rail Project Draft Environmental Impact Report prepared in November 2009 states that existing residential development within 100 feet of the corridor would experience significant levels of groundborne vibration.

The City General Plan considers potential groundborne vibration impacts from trains. Policy NS-B-1 states that noise-sensitive uses shall not be located in proximity to railways, except residential land uses are allowed in order to promote future ridership. General Plan Policy NS-B-4 requires all new projects proposed for areas with existing noise above 60 dBA to submit an acoustical study. Depending on the type and location of development, an analysis of potential groundborne vibration impacts may be a component of an acoustical study. In the cases where potential groundborne vibration-related impacts could occur, project proponents would need to incorporate measures, such as adding buffers and/or incorporating state-of-the-art structural design and setbacks, to reduce negative effects. City General Plan Policy NS-B-9 encourages developers to incorporate acoustical site planning into new projects. Recommended measures include the incorporation of buffers and/or landscaped earth berms between incompatible uses such as sensitive residential land uses and railway corridors. The need for noise-related attenuation measures in building construction and project design from any noise source and for all land uses will be determined on a project-by-project basis at the time development is proposed. The proposed project would not make any changes to current City standards. Required compliance with existing regulations would address impacts. For these reasons, long-term exposure of sensitive receptors to groundborne vibration within the project area would be considered to have a less than significant impact.

Short-Term Exposure to Groundborne Vibration

Construction activities would require the use of off-road equipment such as tractors, jackhammers, and haul trucks. Groundborne vibration levels associated with representative construction equipment are summarized in **Table 3.11-7**. As previously described, the Federal Transit Administration has identified vibration impact criteria. The FTA vibration impact threshold for construction activities is 85 VdB. Based on the vibration levels presented in **Table 3.11-7**, ground

vibration generated by construction equipment would not be anticipated to exceed 85 VdB at 50 feet.

TABLE 3.11-7
REPRESENTATIVE VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Approximate VdB	
	50 Feet	100 Feet
Pile Driver (impact)	98	92
Pile Driver (sonic)	87	81
Vibratory Roller	88	82
Large Bulldozer	81	75
Caisson Drilling	81	75
Loaded Trucks	80	74
Jackhammer	73	67
Small Bulldozer	52	46

Source: FTA 2006

Notes: The vibration levels at the off-site sensitive uses are determined with the following equation from the FTA Transit Noise and Vibration Impact Assessment, Final Report: Lv(D)=Lv(25 ft)–20log(D/25), where Lv = vibration level of equipment, D = distance from the equipment to the receiver, Lv(25 ft) = vibration level of equipment at 25 feet

The majority of construction equipment does not result in VdB in excess of FTA thresholds, even at 50 feet. In addition, City Code Section 20-30.090, Ground Vibration, states that no ground vibration will be generated that is perceptible without instruments by a reasonable person at the property lines of the site, except for vibrations from temporary construction or demolition activities. Because construction noise would be temporary, intermittent, and short in duration, future projects in the project area would be considered insubstantial.

For the reasons described, this impact would be **less than significant** during construction and operation of the project.

Mitigation Measures

None required.

Exposure to Short-Term Construction Noise (Standard of Significance 4)

Impact 3.11.4 Construction activities could cause a substantial temporary increase in ambient noise levels at nearby noise-sensitive land uses, which may result in increased levels of annoyance, activity interference, and sleep disruption. This impact is considered **less than significant**.

Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), when construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction durations last over extended periods of time.

Major noise-generating construction activities associated with new projects would include removal of existing pavement and structures, site grading and excavation, installation of utilities, the construction of building foundations, cores, and shells, paving, and landscaping. The highest noise levels would be generated during the demolition of existing structures when impact tools are used (e.g., jackhammers, hoe rams) and during the construction of building foundations when impact pile driving is required to support the structure. Site grading and excavation activities would also generate high noise levels, as these phases often require the simultaneous use of multiple pieces of heavy equipment such as dozers, excavators, scrapers, and loaders. Lower noise levels result from building construction activities when these activities move indoors and less heavy equipment is required to complete the tasks. Construction equipment would typically include but would not be limited to earth-moving equipment and trucks, pile driving rigs, mobile cranes, compressors, pumps, generators, paving equipment, and pneumatic, hydraulic, and electric tools. Noise levels associated with individual construction equipment are summarized in **Table 3.11-8.**

TABLE 3.11-8
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Typical Noise Level (dBA L_{max}) 50 Feet from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Vibrator	76
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jackhammer	88
Loader	85
Truck	88
Paver	89
Pneumatic Tool	85
Roller	74
Saw	76

Source: FTA 2006

As depicted in **Table 3.11-8**, noise levels generated by individual pieces of construction equipment typically range from approximately 74 dBA to 89 dBA L_{max} at 50 feet (FTA 2006). Average-hourly noise levels associated with construction projects can vary, depending on the activities performed, reaching levels of up to approximately 83 dBA L_{eq} at 50 feet. Short-term increases in vehicle traffic, including worker commute trips and haul truck trips, may also result in temporary increases in ambient noise levels at nearby receptors. During each stage of construction, there

would be a different mix of equipment operating, and noise levels would vary based on the amount of equipment on-site and the location of the activity. Construction noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and the receptor. Intervening structures or terrain would result in lower noise levels at distant receivers.

Existing and future land uses could be intermittently exposed to substantial increases in ambient noise levels associated with future construction-related activities occurring in the project area. However, the City of Santa Rosa does not establish quantitative noise limits for demolition or construction activities occurring in the city. This is because noise generated by infill development projects, such as those allowed by the proposed project, would likely have relatively short overall construction durations, with the noisiest phases of construction (e.g., demolition, foundations, project infrastructure, building core and shell) limited to a time frame of one year or less. As a standard condition of development approval, the City requires the implementation of best management practices (BMPs) for the control of construction-generated noise levels. Commonly applied BMPs in Santa Rosa include limiting noise-generating construction activities to the less noise-sensitive hours of the day, prohibiting idling of heavy-duty off-road equipment when not in use, and ensuring that construction equipment is properly maintained and equipped with noise-reduction intake and exhaust mufflers and shrouds, in accordance with manufacturers' recommendations. Implementation of these BMPs would minimize potential impacts to nearby noise-sensitive land uses. This impact would be considered **less than significant**.

Mitigation Measures

None required.

3.11.5 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The geographic extent of the cumulative setting for noise consists of the project area and vicinity. Based on the Figure 12-2 in the Santa Rosa General Plan Noise and Safety Element, ambient noise levels in the project area are primarily affected by vehicle traffic on nearby area roadways. As a result, the primary factor for cumulative noise impact analysis is the consideration of future traffic noise levels along area roadways under buildout of the City's General Plan.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Traffic Noise Impacts

Impact 3.11.5 The proposed project, when considered in combination with other past, existing, planned future projects, would result in increased noise levels. This cumulative impact would be considered **less than cumulatively considerable.**

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to buildout of the development potential allowed under the project and other projects in the vicinity. Therefore, cumulative traffic-generated noise impacts have been assessed based on the contribution of project area buildout to the future cumulative base traffic volumes in the project area and vicinity. The noise levels associated with cumulative base traffic volumes without the project and cumulative base traffic volumes with the project are identified in **Table 3.11-9**.

TABLE 3.11-9
PREDICTED INCREASES IN CUMULATIVE TRAFFIC NOISE LEVELS

Roadway Segment	L_{dn} at 75 Feet from Near-Travel-Lane Centerline[1]		Increase	Threshold	Impact	Affected Land Use
	Without Project	With Project				
Sebastopol Road						
Stony Point Road to Dutton Avenue	65.2	65.5	**0.3**	>5.0	**No**	Commercial & Residential
Dutton Avenue to SR 12 Corridor	58.8	59.5	**0.7**	>5.0	**No**	Commercial, Industrial & Residential
Stony Point Road						
SR 12 Corridor to Sebastopol Road	67.5	67.8	**0.3**	>5.0	**No**	Commercial
Sebastopol Road to Northpoint Parkway	66.9	67.4	**0.5**	>5.0	**No**	Residential
Northpoint Parkway to Hearn Avenue	68.3	66.6	**-1.7**	>5.0	**No**	Residential
Hearn Avenue to Bellevue Avenue	66.0	66.7	**0.7**	>5.0	**No**	Residential
Dutton Avenue						
SR 12 to Sebastopol Road	66.9	67.5	**0.6**	>5.0	**No**	Commercial
Sebastopol Road to W. Barham Avenue	62.1	62.5	**0.4**	>5.0	**No**	Residential
W. Barham Avenue to Hearn Avenue	59.9	58.3	**-1.6**	>5.0	**No**	Residential
Duke Court to Bellevue Avenue	53.7	56.6	**2.9**	>5.0	**No**	Commercial & Light Industrial
W Barham Avenue						
Dutton Avenue to US 101 Corridor	56.1	58.3	**2.2**	>5.0	**No**	Residential & Commercial
Hearn Avenue						
Stony Point Road to Burbank Avenue	60.7	60.4	**-0.3**	>5.0	**No**	Residential & School
Burbank Avenue to Dutton Avenue	61.2	62.7	**1.5**	>5.0	**No**	Residential & School
Dutton Avenue to Corby Avenue	64.8	65.7	**0.9**	>5.0	**No**	Residential & Light Industrial
Bellevue Avenue						
Stony Point Road to Dutton Meadow	60.1	60.1	**0.0**	>5.0	**No**	Residential & School
Dutton Meadow to Dutton Avenue	60.3	61.5	**1.2**	>5.0	**No**	Residential & Light Industrial
Dutton Avenue to Wiljan Court	61.5	62.0	**0.5**	>5.0	**No**	Commercial & Industrial
Burbank Avenue						
Sebastopol Road to Hearn Avenue	60.7	61.5	**0.8**	>5.0	**No**	Residential & School

Roadway Segment	L_{dn} at 75 Feet from Near-Travel-Lane Centerline[1]		Increase	Threshold	Impact	Affected Land Use
	Without Project	With Project				
Dutton Meadow						
Hearn Avenue to Bellevue Avenue	62.2	64.1	**1.9**	>5.0	**No**	Residential & School
Dowd Drive						
Hearn Avenue to Bellevue Avenue	59.4	60.1	**0.7**	>5.0	**No**	Commercial & Industrial

Notes:

1. Traffic noise levels were calculated using the FHWA roadway noise prediction model based on data obtained from the traffic analysis prepared for this project (W-Trans 2016; ***Appendix 3.14****).*

2. For purposes of this analysis, a noise level increase of 5.0 or greater would typically be considered to result in increased levels of annoyance.

Cumulative noise levels in these areas range from 58.3 to 67.8 dBA L_{dn}, a conditionally acceptable noise environment for all land uses according to City noise provisions (see **Figure 3.11-2**). In addition, predicted increases in traffic noise levels associated with the project would not be greater than 5 dB, which is the change required before any noticeable change in community response would be expected. This impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

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3.12 Population and Housing

This section evaluates the population and housing impacts of the proposed project on current and projected future conditions. The section also presents information regarding the proposed project's relationship to adopted programs and plans.

3.12.1 EXISTING SETTING

SANTA ROSA

As of January 1, 2015, Santa Rosa had an estimated population of 173,071 (DOF 2015a). According to the City of Santa Rosa 2035 General Plan, by 2035 the City's Urban Growth Boundary (UGB) is expected to have a total population of 237,000 residing in a total of 96,295 housing units (Santa Rosa 2009a, p. 2-15).

SPECIFIC PLAN AREA

Currently there are 18,918 residents and 5,080 households in the Specific Plan area, which includes both incorporated and unincorporated areas. The Roseland area gained 8,147 new residents between 1990 and 2013, an increase of 76 percent. By comparison, the city grew by 49 percent and the county by 10 percent between 1990 and 2013 (Santa Rosa 2015).

The majority of the Specific Plan area's housing units are single-family homes (63 percent), and this share has increased over time (Santa Rosa 2015). Between 1990 and 2013, there was a net increase of 1,609 single-family units in the Specific Plan area. During the same period, only 301 multi-family units were constructed. Just over half (54 percent) of the plan area's housing units are renter-occupied. Renter-occupied housing represents a greater share of units in the plan area compared to the city and county overall (47 percent and 40 percent, respectively). However, the share of owner-occupied housing is on the rise, due to the addition of almost 600 owner-occupied units between 2000 and 2013 (Strategic Economics 2015).

ANNEXATION AREAS

The Annexation areas currently contain approximately 162 residential units (Santa Rosa 2015). Based on an average rate of 2.61 persons per household (DOF 2015b), the Annexation areas have an estimated total population of 423, with approximately 78 residing in the Brittain Lane Annexation area, 125 in the West Hearn Annexation area, and 219 residing in the West Third Annexation area.

Housing units in the West Third Street Annexation area consist primarily of single-family detached units and some duplexes and are concentrated in a low-density, suburban neighborhood north of Third Street. Housing units in the Brittain Lane and West Hearn Avenue Annexation areas are largely detached, single-family units arranged in low-density, rural neighborhoods.

3.12.2 REGULATORY FRAMEWORK

FEDERAL AND STATE

There are no federal or state regulations that apply to the topic of population and housing and the proposed project.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project in regard to population and housing.

Housing Element

Goal H-A: **Meet the housing needs of all Santa Rosa residents.**

Policy H-A-1: Ensure adequate sites are available for development of a variety of housing types for all income levels, throughout the City, such as single- and multifamily units, mobile homes, transitional housing, and homeless shelters.

Policy H-A-3: Promote conservation and rehabilitation of the existing housing stock and discourage intrusion of incompatible uses into residential neighborhoods which would erode the character of established neighborhoods or lead to use conflicts.

Goal H-B: **Maintain and rehabilitate, as needed, the existing affordable housing supply.**

Policy H-B-2: Encourage the preservation of mobile home parks consistent with state law.

Goal H-C: **Expand the supply of housing available to lower-income housholds.**

Policy H-C-7: Promote the development of second units. Discuss this option with residential developers during initial development application meetings.

3.12.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G standards. A population and housing impact is considered significant if the project would:

1) Induce substantial 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).

2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

METHODOLOGY

The following impact analysis is based primarily on a review of available demographic data and projections for the city and the project area including California Department of Finance estimates and projections and the City's 2035 General Plan.

PROJECT IMPACTS AND MITIGATION MEASURES

Induce Substantial Population Growth (Standard of Significance 1)

Impact 3.12.1 The proposed project would result in population growth in the project area that is consistent with growth projections for the city. Therefore, this impact would be **less than significant**.

Table 2.0-5 in Section 2.0 summarizes the development potential in the project area with implementation of the proposed project compared to existing conditions. As shown in the table, project implementation would result in an increase of 3,702 residential units. Based on a rate of 2.61 persons per household (DOF 2015b), the additional 3,702 residential units would provide housing for an estimated 9,662 persons. This represents a 5.5 percent increase over the city's current population of 173,071. The City's General Plan assumes population growth of 63,929 over the next 20 years, with a total population of 237,000 in 2035. Therefore, the proposed project represents 15.1 percent of planned population growth in the city over the next 19 years.

As shown in **Tables 2.0-5** and **2.0-6** (see Section 2.0), compared to the growth potential for the project area under the General Plan, the proposed project would result in a net increase of 108 residential units and a net reduction of 51,756 square feet of nonresidential uses.

While buildout of the project area would include the development of a substantial number of new residential units that would increase the city's overall population, the increases are consistent with the growth planned for and evaluated in the General Plan. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

Impact 3.12.2 The proposed project could involve redevelopment activities on currently occupied residential parcels, but there would be no net displacement of people or housing overall. Therefore, this impact would be **less than significant**.

Many of the parcels in the project area have been developed and would remain unchanged with project implementation. In the plan area, the currently vacant parcels would be developed consistent with the proposed Specific Plan and the General Plan 2035. In the three Annexation areas located outside of the Specific Plan boundary, vacant parcels would be developed consistent with the existing General Plan, with the exception of West Hearn Avenue, which is proposed to be redesignated to Very Low Density Residential as part of the project.

There may be some underdeveloped parcels where there are existing single-family residences on a large lot where the plan provides the development potential for higher-intensity land uses. These potential changes and land use or redevelopment could displace people or housing.

The Land Use Chapter of the Specific Plan addresses the potential for displacement through affordable housing and anti-displacement goals and related policies. Goal AH-2 seeks to minimize displacement of existing residents. Under Policy AH-2.1, the city would continue to engage the community in developing new and refining existing affordable housing and anti-displacement strategies. To prevent displacement, the city would continue to preserve existing affordable housing in order to prevent displacement in the plan area, and identify funds to preserve units at risk of converting to market rate (Policy AH-2.2). Under Policy AH-2.4, the city would provide outreach and education to existing homeowners and offer resources and information to allow continued residence in their homes. Policy AH-2.5 provides for homebuyer assistance programs including a first-time homebuyer down payment assistance program, the CalHFA loan program, and the Mortgage Credit Certificate Program to residents in the plan area.

Through implementation of Specific Plan policies, the proposed project would not result in an overall net loss of housing that could result in the displacement of people. Impacts would be **less than significant.**

3.12.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting consists of the City's Urban Growth Boundary as defined in the Santa Rosa General Plan 2035 and includes all existing, approved, proposed, and reasonably foreseeable development in the City's Urban Growth Boundary.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Population Growth (Standard of Significance 1)

Impact 3.12.3 The proposed project, along with other approved, proposed, and reasonably foreseeable development, could induce population and housing growth in the City's Urban Growth Boundary. This cumulative growth is consistent with the City's General Plan 2035 population projections and is therefore **less than cumulatively considerable.**

As shown in **Tables 2.0-5** and **2.0-6** in Section 2.0, the proposed project would increase the residential development potential in the project area by approximately 108 units compared to the development scenario assumed under the General Plan 2035. As a result, the project has the potential to increase the city's population by approximately 282 residents when compared to the General Plan 2035 projection, amounting to a 0.12 percent increase over the city's projected 2035 population of 237,000.

The project's anticipated population growth was therefore accounted for in the City's General Plan 2035 EIR. The General Plan 2035 EIR determined that with policies included in the General Plan, the General Plan would result in a less than significant cumulative impact related to population and housing. The proposed Specific Plan policies regarding population and housing are intended to help the City better anticipate patterns of growth and focus development in the project area, consistent with the General Plan 2035. The Specific Plan is also intended to help Santa Rosa meet its housing demand through focused urban development. The impact would be **less than cumulatively considerable.**

Mitigation Measures

None required.

Impact 3.12.4 The proposed project, along with other approved, proposed, and reasonably foreseeable development, would not result in cumulative loss of housing or displacement of people. The impact would be **less than cumulatively considerable**.

As described in Impact 3.12.2, there is the potential the proposed project could displace people or housing. Through implementation of Specific Plan affordable housing and anti-displacement policies, the proposed project would not result in an overall net loss of housing. The plan establishes land uses and mechanisms to accommodate redevelopment-related housing. The General Plan 2035 EIR determined that with policies included in the General Plan, the result would be a less than significant cumulative impact related to population and housing. Any future development in the project area would also be required to comply with General Plan policies. The proposed project's contribution would be **less than cumulatively considerable**.

REFERENCES

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3.13 PUBLIC SERVICES

3.13.1 FIRE PROTECTION, EMERGENCY MEDICAL, AND LAW ENFORCEMENT SERVICES

3.13.1.1 EXISTING SETTING

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The project area is served by the Santa Rosa Fire Department (SRFD), which is responsible for protecting life, property, and the environment from fire, explosion, and hazardous materials incidents. The SRFD, which comprises three divisions—Administrative, Fire Suppression, and Fire Prevention—is staffed with 138 sworn employees and 10 civilians (SRFD 2014). In 2015, the SRFD responded to 25,111 total incidents. The City Council has set a goal for the SRFD to respond to 90 percent of all calls for service within 5 minutes or less, and to all calls for service within 6 minutes or less. In 2015, the response times were within 5 minutes 72 percent of the time (Santa Rosa 2016).

Station 8 is located in the project area at 830 Burbank Avenue just south of Sebastopol Road. The Santa Rosa General Plan indicates that the City may relocate this station to a site near the Sebastopol Road/Timothy Road intersection to better serve the community (Santa Rosa 2009a).

LAW ENFORCEMENT SERVICES

The majority of the project area is currently served by the Santa Rosa Police Department (SRPD). The unincorporated islands in the project area are currently served by the Sonoma County Sheriff's Office and the California Highway Patrol; upon annexation, these areas would be served by the SRPD only.

The SRPD provides neighborhood-oriented policing services via patrol operations and traffic enforcement. The SRPD has 256.75 employees (175 sworn officers and 81.75 civilians) organized into four divisions: Administrative; Field Services (patrol); Special Services (Investigations Bureau and Support Bureau); and Technical Services (Communications Bureau and Records Bureau). Officers are assigned to eight patrol teams, which are divided among nine beats. The project area is located primarily in Beat 7 with the exception of some areas north of Sebastopol Road, which are located in Beat 5. Under the Field Services Division, officers are assigned to a beat for six months at a time. The patrol teams are managed by a lieutenant and staffed with sergeants, patrol officers, community service officers and field and evidence technicians (Santa Rosa 2009b, 2015a; Santa Rosa 2016; SRPD 2014). In 2015, the SRPD received 55,273 calls for emergency response (Santa Rosa 2016).

3.13.1.2 REGULATORY FRAMEWORK

STATE

California Fire Code

The 2013 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems

such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

California Health and Safety Code

Additional state fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which include regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and child-care facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Fighting Equipment, the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project in regard to fire protection and law enforcement services.

Public Services and Facilities Element

Goal PSF-E: **Provide fire and police services that ensure the safety of the community.**

Policy PSF-E-1: Provide for citizen safety through expedient response to emergency calls. 1. The Fire Department shall achieve 90 percent performance of arrival of the first fire company at an emergency within 5 minutes of notification by the dispatch center. 2. The Fire Department shall achieve 90 percent performance of arrival of all units on first alarm fire suppression incidents within 9 minutes of notification by the dispatch center.

Policy PSF-E-2: Provide for the safety of Santa Rosa citizens by maintaining efficient, well trained, and adequately equipped police and fire personnel.

Policy PSF-E-3: Collaborate with other local jurisdictions in the provision of some police and fire services, if such collaboration can improve service levels and is cost effective.

Policy PSF-E-5: Assist neighborhoods and increase community contact through the Neighborhood Oriented Policing Program.

Policy PSF-E-7: To better serve the community, move the fire station on Parker Hill Road to a new location near Fountaingrove Parkway and Parker Hill Road and move the fire station on Burbank Avenue to a new location near Sebastopol Road and Timothy Road.

City of Santa Rosa Emergency Operations Plan

The Draft Emergency Operations Plan (EOP) identifies the City's emergency planning, organization, and response policies and procedures. The plan also addresses the integration and coordination with other governmental levels and special districts as required.

This plan is based on the principles and functions of the California-required Standardized Emergency Management System (SEMS), which is based on the FIRESCOPE Incident Command System, and identifies how the City of Santa Rosa fits in the overall state SEMS structure. In addition, the plan incorporates the additional required elements of the National Incident Management System (NIMS) as directed by Homeland Security Presidential Directive 5, issued February 28, 2003.

3.13.1.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G standards. A public services impact is considered significant if the project would:

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, emergency medical, and law enforcement services.

METHODOLOGY

The following impact analysis is based on review of available SRFD and SRPD documents, the City's General Plan 2035 and associated environmental impact report, the 2015 Annual Report for the 2035 General Plan (Santa Rosa 2016), as well as correspondence with agency staff.

PROJECT IMPACTS AND MITIGATION MEASURES

Increase Demand for Fire Protection, Fire Prevention, Emergency Medical, and Law Enforcement Services (Standard of Significance 1)

Impact 3.13.1.1 Development resulting from implementation of the proposed project could increase demand for fire protection, fire prevention, emergency medical, and law enforcement services, resulting in the need for new facilities, the construction of which could result in physical environmental effects. This impact would be **less than significant**.

Sonoma County provides services to those portions of the project area not currently in the city limits. While the majority of the project's anticipated population growth was evaluated in the City's General Plan 2035 EIR, as discussed in Section 2.0, Project Description, the proposed project would

increase the residential development potential of the project area by approximately 108 residential units while decreasing the nonresidential development potential by 51,756 square feet, compared to the growth assumed for the area in the City's General Plan. The General Plan 2035 EIR determined that with policies included in the General Plan, buildout of the General Plan would result in a less than significant impact on police and fire protection services.

The increase in service area and intensity of development under the proposed project would increase demand for fire protection, emergency medical, and law enforcement services beyond the demand evaluated in the General Plan 2035 EIR. Development in the project area would occur gradually over time as individual projects are proposed and constructed. Each project would be evaluated by the SRFD and SRPD as part of the City review process to determine whether additional resources (e.g., staff, equipment, and/or facilities) would be needed.

As discussed previously, the General Plan 2035 (Policy PSF-E-7) indicates that the City may relocate Station 8 from its current location at 830 Burbank Avenue to a site near the Sebastopol Road/Timothy Road intersection to better serve the community. The existing General Plan land use designations in the vicinity of this intersection would allow the development of a fire station with issuance of a minor use permit. Physical impacts of this relocation were already evaluated in the General Plan EIR; the proposed project would not alter those findings. Similarly, if future development in the project area requires the construction of emergency facilities, the impacts of that construction are considered as part of the project area's overall development. There would be no further impact from development of emergency facilities. The proposed project would not change the existing land use designations in this area and would not interfere with the planned relocation of the station. The impact would be **less than significant.**

Mitigation Measures

None required**.**

3.13.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for fire protection, emergency medical services, and law enforcement consists of the current service area boundaries of the SRFD and the SRPD, which include the current city limits.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts on Fire Protection, Fire Prevention, Emergency Medical, and Law Enforcement Services

Impact 3.13.1.2 The proposed project, in combination with other reasonably foreseeable development, would increase the city's population and could contribute to the need for expanded fire protection and emergency medical services that could cause significant physical impacts to the environment. The proposed project's contribution to this cumulative impact would be **less than cumulatively considerable.**

The General Plan 2035 EIR evaluated potential impacts to public safety services resulting from buildout of Santa Rosa and the City's Urban Growth Boundary, including the project area. The EIR determined that with implementation of the goals and policies in the General Plan 2035, potential cumulative impacts to fire protection and law enforcement services would be less than significant.

As discussed previously, the proposed project may require increased fire, emergency medical, and police staffing and equipment, as implementation of the project would increase the number of residents in the area beyond that considered in the General Plan 2035 EIR. However, the increase in intensity of development in the project area would not result in an increase in demand for fire, emergency medical, and police services such that facilities beyond those envisioned in the General Plan EIR would be required. In addition, each individual development project in the project area would be reviewed by the SRFD and SRPD to determine potential impacts. Upon approval of the proposed annexation, the entire project area would be subject to the goals and policies in the General Plan 2035. Thus, the cumulative impact would be **less than cumulatively considerable.**

Mitigation Measures

None required.

3.13.2 SCHOOLS

3.13.2.1 EXISTING SETTING

The project area is located within the boundaries of four elementary school districts: Santa Rosa; Roseland; Bellevue Union; and Wright. There are four existing elementary schools in the project area: Meadow View Elementary School; Sheppard Accelerated Elementary School; Roseland Elementary School; and Roseland Creek Elementary School. Also located within the project area is Roseland Accelerated Middle School and Roseland University Prep, which is a small college preparatory high school. The project area is also located in the Santa Rosa City High School District; Elsie Allen High School is located in the project area. Enrollment by school districts that serve the City of Santa Rosa for the 2014–2015 school year is shown in **Table 3.13-1**.

TABLE 3.13-1
TOTAL CURRENT ENROLLMENT IN PUBLIC SCHOOL DISTRICTS

School District	2014–2015 Enrollment
Santa Rosa Elementary School District	5,466
Roseland Elementary School District	2,755
Bellevue Union Elementary School District	1,872
Wright Elementary School District	1,622
Elementary District Total	*11,715*
Santa Rosa City High School District	11,244
Total	**22,959**

Source: Education Data Partnership 2015

3.13.2.2 REGULATORY FRAMEWORK

STATE

Leroy Green School Facilities Act

The Leroy F. Greene School Facilities Act of 1998, also known as Senate Bill 50 (Stats. 1998, Ch. 407), governs a school district's authority to levy school impact fees.

Senate Bill (SB) 50 prohibits local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate and imposes school facility fee caps for legislative actions (e.g., general plan amendments, specific plan adoption, zoning plan amendments). According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be full and complete school facilities mitigation.

LOCAL

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project in regard to schools.

Public Services and Facilities Element

Goal PSF-C: **Provide superior educational opportunities for children and all members of the community.**

Policy PSF-C-1: Assist the various school districts in developing school sites and facilities to serve all neighborhoods in the city, and to respond to the educational needs of various sectors of the population.

Policy PSF-C-2: Maintain good communication with area school districts on all matters pertaining to the need for and the provision of school sites and facilities. Integrate the planning efforts of the city and the school districts by:

- Locating school facilities that allow safe pedestrian and bicycle access, as well as ensuring construction of traffic calming measures in the vicinity; and
- Designing attractive facilities that contribute to neighborhood identity and pride.

In response to projected demand for new middle and elementary schools over the next 25 years, the City's General Plan identified sites for potential school facilities in Figure 6-2. Two middle school sites and four elementary school sites were identified in the event they are needed to accommodate Santa Rosa's student population. With the exception of one middle school site, all of these school sites are located within the southwestern portion of the city with one elementary school site located in the project area. The school site locations are not specific; they indicate a school is needed in the vicinity. Since publication of the General Plan, Roseland Creek Elementary School and Roseland Accelerated Middle School have been developed within the plan area.

3.13.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. A public services impact is considered significant if the project would:

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.

METHODOLOGY

The following impact analysis is based on a review of the project description and existing state law regarding public school funding.

PROJECT IMPACTS AND MITIGATION MEASURES

Generate Demand for New Schools (Standard of Significance 1)

Impact 3.13.2.1 The proposed project would result in the development of new residential and nonresidential uses in the project area, which would increase enrollment at local schools. This impact would be **less than significant**.

Implementation of the proposed project would result in the development of new residential uses in the project area, generating new student enrollments at local area schools. Project implementation would result in an increase of 3,702 residential units. Based on Santa Rosa City Schools' generation factor of 0.4 students per housing unit (Santa Rosa 2007), buildout of the project area would result in a total 1,481 students. The General Plan 2035 EIR assumed development of the project area and found impacts on schools to be less than significant. As shown in **Table 2.0-6**, the proposed project would increase the development potential of the project area by approximately 108 residential units beyond the number assumed in the General Plan 2035. Based on Santa Rosa City Schools' generation factor of 0.4 students per housing unit (Santa Rosa 2007), these additional residential units would generate approximately 44 new students.

New students generated as a result of development associated with the proposed project would attend various schools in and adjacent to the project area. It cannot be determined at this time which school(s) these students may attend or what grade levels would be affected. School districts routinely adjust attendance boundaries to ensure enrollment capacity is not exceeded at any one school. As stated previously, one elementary school and one middle school have recently been developed within the project area, and three additional elementary school sites are planned in southwest Santa Rosa that would provide additional school capacity.

Public school facilities and services are supported through the assessment of development fees in addition to funds from the state and from local school districts. All new development in the project area would be required to pay impact fees to offset the impact of new development on the school system. These fees would be assessed in accordance with the provisions of SB 50. Given that student generation expected to result from project implementation would be minor and

would develop over the next 25 years, could be managed through adjustments to school boundaries to ensure school capacity is not exceeded, would be funded by school impact fees pursuant to SB 50, and would be supported in existing and already planned educational facilities, the proposed project would not result in the need for new, unplanned facilities. Therefore, this impact would be **less than significant.**

Mitigation Measures

None required.

3.13.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting consists of the attendance areas of the Santa Rosa, Roseland, Bellevue Union, and Wright elementary school districts and the Santa Rosa City High School District.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts on Schools

Impact 3.13.2.2 The proposed project, in combination with other reasonably foreseeable development in the city, would generate new student enrollments at local area schools. The cumulative impact would be **less than cumulatively considerable.**

The General Plan 2035 EIR evaluated potential impacts to schools resulting from buildout of Santa Rosa and the City's Urban Growth Boundary, including the project area, under the General Plan 2035. The EIR determined that, with implementation of the goals and policies in the General Plan 2035, potential cumulative impacts on schools would be less than significant.

As described in Section 2.0, Project Description, the proposed project would increase the development potential of the project area beyond that assumed in the General Plan 2035 by 108 residential units. This additional development would generate approximately 44 more students than assumed in the General Plan EIR, which could be accommodated by existing and planned schools in and adjacent to the project area. Individual development projects in the project area would be subject to development impact fees based on the number of units developed, which would be used to fund school site construction and/or expansion. Upon approval of the proposed annexations, the entire project area would be subject to the goals and policies contained in the General Plan 2035. Therefore, the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

3.13.3 PARKS AND RECREATION

3.13.3.1 EXISTING SETTING

Two main types of parks exist in Santa Rosa—neighborhood parks and community parks. Neighborhood parks are generally between 2 and 10 acres in size and are located within approximately one-half mile of the residents they serve. Facilities at neighborhood parks often include picnic areas, playground equipment, and basketball courts. At about 10 to 25 acres, community parks serve residents throughout the city and contain more space and cost-intensive recreational facilities, such as ball fields and tennis courts. Community parks are sited so that most residents will be no farther than 1 mile from a community park facility.

Currently, the Santa Rosa Recreation and Parks Department operates and maintains 69 parks totaling approximately 558 acres of developed park (Santa Rosa 2016). In the project area, there are four existing developed parks—Bayer Park, Bellevue Park, South Davis Park, and Southwest Community Park—totaling 30 acres. In addition, Roseland Creek Community Park is currently in the planning stages. The City has acquired two of the three sites needed for the park, located on Burbank Avenue, which will total approximately 19.4 acres. The City's park acreage also includes 231.8 acres of acquired but undeveloped land, and 150 acres of golf course, for a total of 940 acres (Santa Rosa 2016). According to the Santa Rosa General Plan, the City plans to construct six additional neighborhood parks in the project area (Santa Rosa 2009a, Figure 6-1).

The City maintains a park standard of 6 acres of parkland per 1,000 residents. The City Council determines what ratio of neighborhood and community parkland, school playgrounds, and open space will satisfy this standard. Currently, this ratio is 3.5 acres of parkland per 1,000 residents, plus 1.4 acres of school recreational land and 1.1 acres of public-serving open space (Santa Rosa 2016). As of January 2015, the city had an estimated population of 173,071 (DOF 2015) and therefore exceeded this standard with approximately 3.8 acres of parkland per 1,000 residents.

In addition to neighborhood and community parks, Santa Rosa has two community centers (Steele Lane Community Center and Finley Community Center), two aquatic facilities (Ridgeway Swim Center and Finley Swim Center), the Bennett Valley Golf Course, and the Senior Center on Bennett Valley Road. While none of these facilities are located in the project area, the County of Sonoma's Community Development Commission recently opened the Roseland Village Neighborhood Center, which is located at the intersection of Sebastopol Road and West Avenue.

3.13.3.2 REGULATORY FRAMEWORK

STATE

Quimby Act

The goal of the 1975 Quimby Act (California Government Code Section 66477) was to require developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The act gave authority for passage of land dedication ordinances only to cities and counties, thus requiring special districts to work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide parks and recreation services communitywide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities (Westrup 2002).

Originally, the Quimby Act was designed to ensure "adequate" open space acreage in jurisdictions adopting Quimby Act standards (e.g., 3–5 acres per 1,000 residents). In some California communities, the acreage fee was very high where property values were high, and many local governments did not differentiate on their Quimby fees between infill projects and greenbelt developments.

In 1982, the act was substantially amended via Assembly Bill (AB) 1600. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. In other words, AB 1600 requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed (Westrup 2002).

Cities or counties with a high ratio of parkland to residents can set a standard of 5 acres per 1,000 residents for new development. Cities or counties with a lower ratio can require only the provision of up to 3 acres of parkland per 1,000 residents. The calculation of a city's or county's parkland-to-population ratio is based on a comparison of the population count of the last federal census to the amount of city- or county-owned parkland.

LOCAL

City of Santa Rosa City Code

Santa Rosa City Code Chapter 19-70, Park and Recreation Land and Fees, requires that 6 acres of property for each 1,000 persons residing in Santa Rosa be devoted to local parks and recreational purposes. The 6-acre requirement can be satisfied by a combination of parkland and park development dedications, open space, and school recreational land. The acreage of each park type per 1,000 residents is determined by the City Council by resolution. Additionally, parkland and park development standards are required to meet the minimum ratio of parkland to residents as set forth in the Quimby Act.

Santa Rosa Recreation and Parks Business and Strategic Action Plan

In 2008, the City of Santa Rosa developed the Santa Rosa Recreation and Parks Business and Strategic Action Plan to identify and assess current and anticipated parks and recreation needs and priorities; provide practical and strategic direction for meeting these needs; and prepare a financial plan for the financing and funding of parks and facilities. This plan outlines several goals and objectives that are relevant to the proposed project as follows:

Goal 1: Park Development Standards

Strategy 1.2: Pursuant to the General Plan, apply the standard of six acres of parkland per 1,000 residents to all development projects and ensure the following allocation is met:

- 3.5 acres of parkland designated as city parks
- 1.4 acres of parkland as accessible school recreational land; and
- 1.1 acres of public serving open space.

Strategy 1.3: Redefine access to park and public spaces for all residents to meet the following:

- within ¼ mile to public plazas and gathering spaces;
- within ½ mile to neighborhood parks; and
- within 1 mile to community parks.

Goal 4: Facilities

Strategy 4.2: Continue ongoing efforts to locate new facilities throughout the community and not concentrated in one planning area.

Strategy 4.3: Provide a balance of new facility types in all recreation and park planning area.

Goal 5: Connectivity

Strategy 5.1: Add trails and pathways to connect destinations throughout the city such as schools, libraries and parks.

Strategy 5.3: Integrate corridors and pathways into overall community design, planning and development decisions.

Strategy 5.4: Encourage new development to include a system of internal trails and pathways within developments and identify opportunities to connect with established trails and pathways.

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project in regard to parks.

Public Services and Facilities Element

Goal PSF-A: Provide recreational facilities and parks for all sectors of the community.

Policy PSF-A-1: Provide recreation and park facilities and services needed by various segments of the population – including specific age groups, persons with special physical requirements, and groups interested in particular activities – and make these facilities and services easily accessible and affordable to all users.

Policy PSF-A-2: Acquire and develop new park facilities to achieve a citywide standard of 6 acres of parkland per thousand residents:

- 3.5 acres of city park land;
- 1.4 acres of publicly accessible school recreational park land (defined as parkland that is open to the public during standard park hours when school is not in session);
- 1.1 acres of public serving open space.

This will require a total of 1,401 acres of city parks, publicly accessible school recreation areas, and open space to be available in 2035.

Policy PSF-A-5: Developing areas of the city (e.g., southwest Santa Rosa) should be given a higher priority for new park development, and underserved neighborhoods should be given priority during redevelopment and renovation of the park system. Priority for park development should also be given to areas of greatest density and areas that allow for safe and easy access and visibility. Priority should also be given to locations that minimize impacts to sensitive environmental resources that could require extensive and expansive mitigation; the most sensitive environmental resource areas should generally be preserved for more passive recreation that assures their protection.

Policy PSF-A-15: Require the provision of private play space and/or recreation centers for children, families, and older adults in small lot subdivisions, multifamily developments, and gated communities, on each lot or in common open space areas as part of the development project.

Policy PSF-A-18: Develop multi-use pathways and linear parks along creeks designated by the Santa Rosa Citywide Creek Master Plan. Create a system of interconnected linear parks that provide access to parks used for active recreation as well as to open space preserve areas that are used primarily for more passive recreation such as hiking and wildlife viewing.

Policy PSF-A-19: Provide recreational opportunities and establish bike and pedestrian paths along Santa Rosa Creek through implementation of the Santa Rosa Citywide Creek Master Plan.

Open Space and Conservation Element

Goal OSC-A: Maximize the benefits of open space.

Policy OSC-A-1: Cooperate with various public and private entities to create new public access trails and parks, open spaces, and drainage ways with the city, as well as to trail systems outside the UGB. Priorities for trail access outside of the UGB should include:

- Joe Rodota Trail (from Santa Rosa to Sebastopol);
- Bay Area Ridge Trail;
- Santa Rosa Creek Trail;
- Laguna Trail;
- Roseland Creek Trail;
- Colgan Creek Trail; and
- Paulin Creek Trail.

3.13.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. A parks and recreation impact is considered significant if the project would:

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks.

2) 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.

3) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

METHODOLOGY

The following impact analysis is based on a review of available information from the City of Santa Rosa Recreation and Parks Department as well as the General Plan 2035 and associated environmental impact report.

PROJECT IMPACTS AND MITIGATION MEASURES

Increase Demand for New Parks and Use of Existing Developed Parks (Standards of Significance 1, 2, and 3)

Impact 3.13.3.1 Implementation of the proposed project would increase demand for parks and recreational facilities. This impact would be **less than significant**.

Development projects have the potential to impact parks and recreational facilities in two ways. First, development introduces new residents to an area and increases the use of existing developed parks and other recreational facilities in the vicinity, thereby accelerating and/or escalating their physical deterioration requiring increased maintenance activities and renovation. Second, development results in demand for new parks and recreational facilities requiring the construction of new facilities or proposes the construction of new facilities as part of the development.

The proposed project is anticipated to increase the population of the project area by approximately 9,662 residents compared to existing conditions. Such a population increase could result in the physical deterioration of existing developed parks. In addition, based on the City's current park standards described above, the project's growth compared to existing conditions would require an additional 33.8 acres of city parkland, 13.5 acres of school recreational land, and 10.6 acres of public-serving open space, or a collective total of 57.9 acres. To accommodate this anticipated growth, the General Plan 2035 Land Use Diagram shows eight proposed community and neighborhood parks in the project area. Individual development projects would be subject to the City's Park Development Fees ordinance, under Chapter 19-70 (Park and

Recreation Land and Fees) of the City Code, which would provide funding for the development of new parks as needed.

As described previously, the majority of the anticipated growth in the project area was considered in the General Plan 2035. Compared to buildout of the General Plan, the proposed project would increase the population of the project area by approximately 282 residents. While the additional residents could increase the use of existing developed parks and recreational facilities in the project area, the increase would be minimal and would not be expected to substantially contribute to the facilities' deterioration.

Based on the City's park standards, the project's growth compared to General Plan buildout would require an additional 1.0 acre of city parkland, 0.4 acre of school recreational land, and 0.3 acre of public-serving open space, or a collective total of 1.7 acres. As shown on **Figure 2.0-7**, the project proposes to amend the General Plan land use designation in two areas totaling 16.4 acres from Residential to Parks/Recreation. This redesignation would allow the development of sufficient additional parkland in the project area to accommodate future growth with development funded through the City's Park Development Fees ordinance. The Roseland Creek Community Park is already in the planning stages within one the areas proposed for redesignation. Because a sufficient number of new parks are planned in the project area to serve anticipated growth and funding for development of these parks is available, this impact would be **less than significant**.

Mitigation Measures

None required.

3.13.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for parks and recreation consists of the Santa Rosa Recreation and Parks Department service area boundaries, which includes the entire city.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts on Parks and Recreational Facilities

Impact 3.13.3.2 Implementation of the proposed project, in combination with other reasonably foreseeable development in the city, would increase demand for parks and recreational facilities. This cumulative impact would be **less than cumulatively considerable**

The General Plan 2035 EIR evaluated potential impacts to parks and recreational facilities resulting from buildout of Santa Rosa and the City's Urban Growth Boundary, including the project area, under the General Plan 2035. The EIR determined that, with implementation of the goals and policies in the General Plan 2035, potential cumulative impacts to parks and recreational facilities would be less than significant.

The proposed project would increase the population of the project area by approximately 282 residents beyond the number considered in the General Plan 2035 EIR, requiring the construction of additional parkland. The proposed project would provide sufficient new land zoned for park and recreation use to accommodate the anticipated population increase, and park construction

would be funded via existing City fee programs. In addition, Roseland Creek Community Park is currently in the planning stages. The City has acquired two of the three sites needed for the park, located on Burbank Avenue, which will total approximately 19.4 acres. Upon approval of the proposed annexation areas, the entire project area would be subject to the goals and policies in the General Plan 2035. Therefore, the proposed project would not contribute significantly to this cumulative impact. The cumulative impact would be **less than cumulatively considerable.**

Mitigation Measures

None required.

REFERENCES

DOF (California Department of Finance). 2015. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change – January 1, 2014 and 2015*.

Education Data Partnership. 2015. Accessed November 9. http://www.ed-data.org/.

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SRPD (Santa Rosa Police Department). 2014. *Santa Rosa Police Department 2014 Annual Report*.

Westrup, Laura. 2002. *Quimby Act 101: An Abbreviated Overview*.

3.14 TRAFFIC AND TRANSPORTATION

This section is based on a traffic impact study (TIS) prepared for the proposed project by W-Trans dated April 19, 2016 (see **Appendix 3.14**). The TIS evaluated traffic data; intersection, roadway, and freeway ramp capacity; level of service; and traffic impacts of the proposed project in accordance with the requirements of the City of Santa Rosa and the California Department of Transportation (Caltrans). The study also included an evaluation of bicycle and pedestrian infrastructure, transit operators, air traffic, design features, emergency access, and construction traffic impacts.

3.14.1 EXISTING SETTING

STUDY AREA

Study Corridors

Auto corridor levels of service were analyzed on four arterial streets for both the weekday AM and PM peak hours, in accordance with the City's General Plan. Multimodal levels of service for pedestrian, bicycle, and transit modes on several additional corridors were assessed for informational purposes for existing conditions as well as for project buildout conditions. These additional corridors were selected to obtain a representative sample of the types of streets present in the project area. Transit levels of service were analyzed for the corridors (and individual corridor segments) where transit services currently operate. Pedestrian and bicycle levels of service on all corridors were analyzed. The list of study corridors, along with travel modes analyzed, is shown in **Table 3.14-1**.

TABLE 3.14-1
MULTIMODAL LEVEL OF SERVICE STANDARDS ANALYZED BY CORRIDOR

Study Corridor	Travel Mode			
	Auto	Transit	Pedestrian	Bicycle
1. Stony Point Road – SR 12 to Bellevue	X	X	X	X
2. Sebastopol Road – Stony Point to Olive	X	X	X	X
3. Dutton Avenue – SR 12 to Hearn	X		X	X
4. Hearn Avenue – Stony Point to Santa Rosa Avenue	X	X	X	X
5. Olive St-Corby Avenue – Sebastopol to Bellevue		X	X	X
6. West Avenue – Sebastopol to Hearn		X	X	X
7. Dutton Meadow – Hearn to Bellevue		X	X	X
8. Bellevue Avenue – Dutton to Corby		X	X	X
9. Burbank Avenue – Sebastopol to Hearn			X	X
10. Barham Avenue – Dutton to Olive			X	X

Source: W-Trans 2016

Freeway Analysis

In addition to the analysis of local streets, two bidirectional freeway segments were studied to determine the project's impact on freeway operations. These include State Route (SR) 12 between Stony Point Road and US Highway 101 (US 101), and US 101 between Todd Road and SR 12. Mainline freeway operations were studied for only the mixed-flow lanes of traffic and excluded

traffic using the high-occupancy vehicle (HOV) carpool lanes. Intersection operation and projected off-ramp queue lengths were also analyzed at the following interchanges:

- SR 12 at Stony Point Road
- SR 12 at Dutton Avenue
- US 101 at Baker Avenue
- US 101 at Hearn Avenue

Study Periods and Scenarios

The traffic analysis focuses on the weekday AM and PM peak hours. The following scenarios were analyzed:

- Existing Conditions – reflects current traffic levels and roadway configurations
- Existing plus Project Conditions – includes buildout of the Specific Plan and Annexation areas, as well as implementation of circulation network improvements outlined in the proposed Specific Plan
- Future (No Project) Conditions – includes regional buildout and planned regional roadway improvements, except that development within the project area is assumed to remain unchanged (remain at current levels), without implementation of plan-specified circulation improvements
- Future plus Project Conditions – includes buildout of the region and project area as well as all planned circulation improvements

Corridor Descriptions

Following are descriptions of the auto travel characteristics of the four arterial study corridors.

Stony Point Road

Stony Point Road is a major north–south corridor that extends nearly 13 miles from Petaluma to Santa Rosa, roughly paralleling the US 101 corridor. In the northernmost portion of the study area, Stony Point Road has an interchange at SR 12 and is a major six-lane street from SR 12 to Sebastopol Road. The remainder of the study corridor narrows to the south of Sebastopol Road to a predominantly two-lane arterial with turn pockets at select locations, with the exception of the segment between Northpoint Parkway and Hearn Avenue, where the corridor has been widened to include two southbound lanes and a landscaped median. A project is currently under construction to widen Stony Point Road between Sebastopol Road and Hearn Avenue to two lanes in each direction plus a center left turn lane or median.

Sebastopol Road

Sebastopol Road is an approximately 2.75-mile-long arterial in west Santa Rosa that generally parallels the south side of SR 12. In the western portion of the project area between Stony Point Road and Burbank Avenue, Sebastopol Road is a five-lane roadway including two lanes in each direction plus a center turn lane. The corridor transitions to a three-lane roadway between

Burbank Avenue and Dutton Avenue and to a two-lane roadway between Dutton Avenue and Olive Street.

Dutton Avenue

Dutton Avenue is a 3-mile-long north–south corridor that runs from northern to southern Santa Rosa, passing through predominantly business park–type uses to the north of SR 12 and through neighborhoods to the south of SR 12 and through the project area. Dutton Avenue includes a freeway interchange at SR 12 and is a five-lane street between SR 12 and Sebastopol Road. To the south of Sebastopol Road, the corridor narrows to a single lane in each direction with on-street parking all the way to Hearn Avenue.

Hearn Avenue

Almost the entire 1.5-mile length of Hearn Avenue is located within the boundaries of the Specific Plan area, running between Santa Rosa Avenue on the east and Stony Point Road on the west. Hearn Avenue includes a freeway interchange at US 101 near the western plan area boundary. The interchange is currently constrained from a capacity perspective by the Hearn Avenue freeway overpass, which only includes one lane in each direction, creating a bottleneck that results in congestion in the area.

Between US 101 and the Sonoma-Marin Area Rail Transit (SMART) tracks, the street includes two lanes in each direction plus a center turn lane. Between the SMART tracks and Stony Point Road, which comprises the majority of the corridor, the street generally includes one lane in each direction plus a center turn lane.

BASELINE (NO PROJECT) CONDITIONS

Existing AM and PM peak-hour traffic volumes on select roadway segments throughout the project area are shown in **Figure 3.14-1**.

Existing Corridor Operational Analysis

Automobile levels of service were determined using existing traffic volumes, current roadway configurations, phasing and timing of all traffic signals along each of the corridors, and analysis in the software application Synchro, and by conducting multiple traffic simulation runs using the software application SimTraffic to determine average speeds along each corridor and its individual segments. Automobile level of service (LOS) on roadways is intended to be analyzed at the corridor level, typically on segments that are at least 1 mile in length, rather than on shorter segments between signalized intersections. The consideration of corridor-based LOS is called for in the Santa Rosa General Plan, with operation at LOS D considered to be the minimum acceptable.

Automobile roadway segment levels of service are currently at LOS D or better during both the AM and PM peak hours. A summary of the corridor level of service results is shown in **Table 3.14-2**. **Appendix 3.14** includes copies of the segment-based speed projections in Appendix B and copies of individual intersection level of service calculations in Appendix C.

TABLE 3.14-2
ROADWAY SEGMENT EXISTING PEAK-HOUR LEVEL OF SERVICE SUMMARY

Corridor			Existing AM Peak Hour			Existing PM Peak Hour		
Direction	**Class**	**Free-Flow Speed**	**Avg. Speed**	**% FFS**	**LOS**	**Avg. Speed**	**% FFS**	**LOS**
Stony Point Road – SR 12 to Bellevue Avenue								
NB	II	40	23	58%	C	21	53%	C
SB	II	40	26	65%	C	18	45%	D
Sebastopol Road – Stony Point Road to Olive Street								
EB	III	35	23	66%	C	21	60%	C
WB	III	35	21	60%	C	18	51%	C
Dutton Avenue – SR 12 to Hearn Avenue								
NB	IV	30	22	73%	B	24	80%	B
SB	IV	30	20	67%	C	18	60%	C
Hearn Avenue – Stony Point Road to Santa Rosa Avenue								
EB	III	35	25	71%	B	24	69%	B
WB	III	35	24	69%	B	26	74%	B

Source: W-Trans 2016

Notes: Avg. Speed = average corridor speed in miles per hour; % FFS = percent of free-flow speed; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound

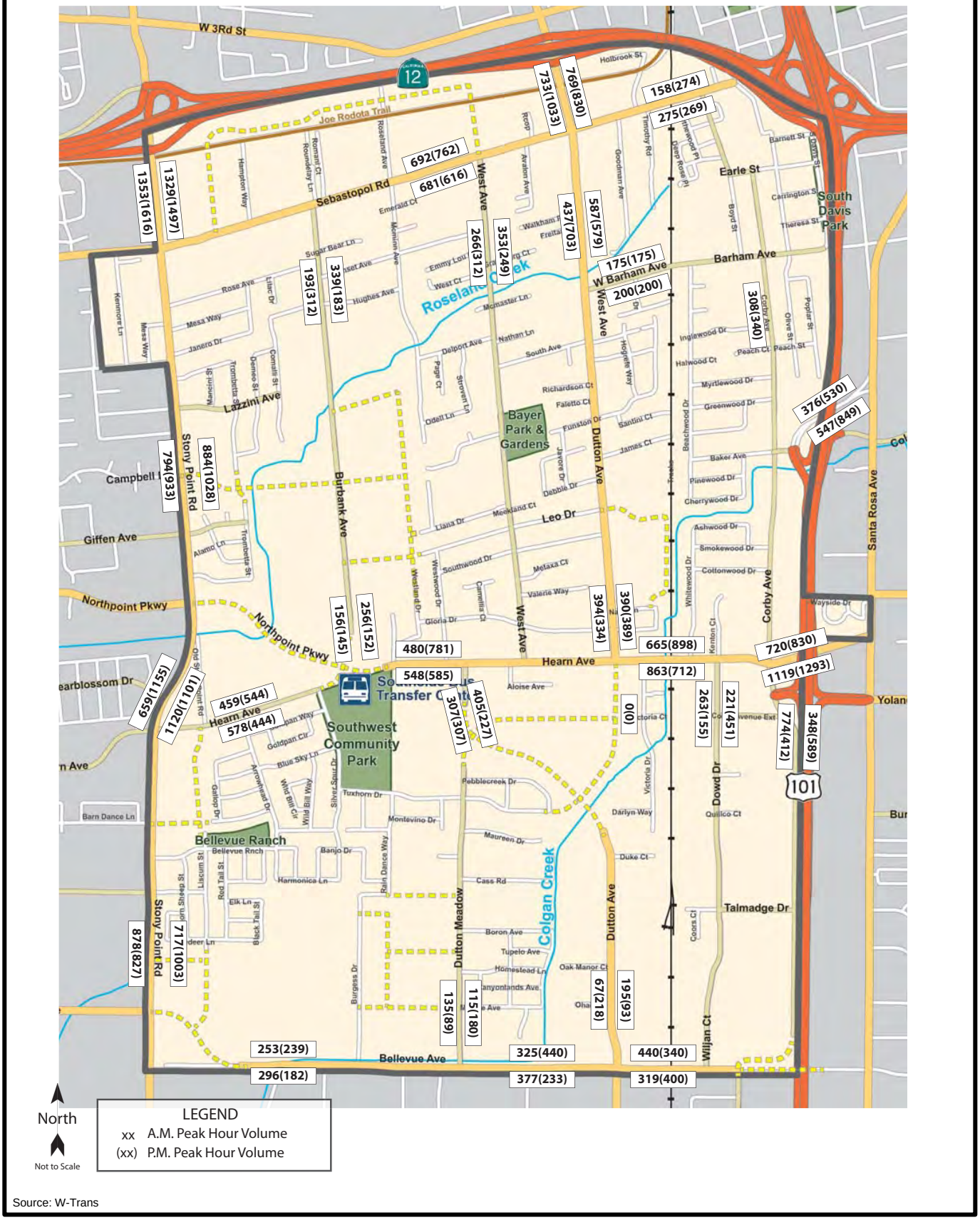
All four of the arterial corridors operate acceptably at LOS D or better, meeting the City's operational standards. It should be noted that the short segment of Stony Point Road between SR 12 and Sebastopol Road encounters delays that are indicative of LOS F even though the corridor overall operates at LOS C and D. The bottleneck created by the narrowing of southbound Stony Point Road south of Sebastopol Road is a major factor to this congestion, though some relief is expected upon the completion of the Stony Point Road widening project that is currently under way. Similarly, the segment of Hearn Avenue near US 101 typically operates poorly during peak hours due to the bottleneck created by the existing two-lane overpass even though the overall segment operates acceptably.

Existing US 101 Operation

Mainline Operation

The US 101 study freeway segment between Todd Road and SR 12 currently operates unacceptably at LOS D or E during the peak hours. It is noted that while LOS D operation is acceptable under the City's standards, the Caltrans standard of operation remaining above the LOS C/D threshold was applied. The SR 12 freeway segment between Stony Point Road and US 101 is operating acceptably at LOS C or better during both peak hours. Freeway operations are summarized in **Table 3.14-3** and calculations are provided in Appendix D of **Appendix 3.14**.

T:_CSWork\Santa Rosa, City ofRoseland Area Specific Plan\Figures



Source: W-Trans

FIGURE 3.14-1
Existing Traffic Volumes

Michael Baker INTERNATIONAL

TABLE 3.14-3
EXISTING (NO PROJECT) PEAK-HOUR FREEWAY OPERATIONS

Freeway Segment	AM Peak Hour	PM Peak Hour
US 101 North – Todd Road to SR 12		
Density	38.4	32.5
LOS	E	D
US 101 South – SR 12 to Todd Road		
Density	31.0	32.25
LOS	D	D
SR 12 East – Stony Point Road to US 101		
Density	21.8	21.3
LOS	C	C
SR 12 West – US 101 to Stony Point Road		
Density	16.3	24.9
LOS	B	C

Source: W-Trans 2016

Notes: Density is measured in passenger cars per mile per lane; LOS = level of service

Ramp Operation

Ramp intersections on SR 12 at the Stony Point Road and Dutton Avenue interchanges and on US 101 at the Baker Avenue and Hearn Avenue interchanges currently operate acceptably at LOS C or better during both the AM and PM peak hours. Vehicle queues at off-ramps are also generally accommodated within available storage. It should be noted that while queues on the Hearn Avenue southbound off-ramp are shown to be accommodated, observations during select peak periods (particularly the times when retail activity is highest, such as the holiday season) indicate that queues extend onto the mainline freeway. The existing freeway ramp level of service queuing projections are summarized in **Table 3.14-4**, and calculations are provided in Appendices C and E in **Appendix 3.14**.

TABLE 3.14-4
EXISTING PM PEAK-HOUR FREEWAY RAMP OPERATIONS

Freeway Interchange	Intersection Operations		Off-Ramp Queuing	
	Delay	LOS	Available Storage	Maximum Queue
SR 12/Stony Point Road				
Westbound	30.1	C	930	466
Eastbound	10.6	B	710	243
SR 12/Dutton Avenue				
Westbound	23.1	C	990	409
Eastbound	14.1	B	770	126
US 101/Baker Avenue				
Northbound	31.4	C	810	152
Southbound	9.9	A	340	163
US 101/Hearn Avenue				
Northbound	33.0	C	960	183
Southbound	16.7	B	620	495

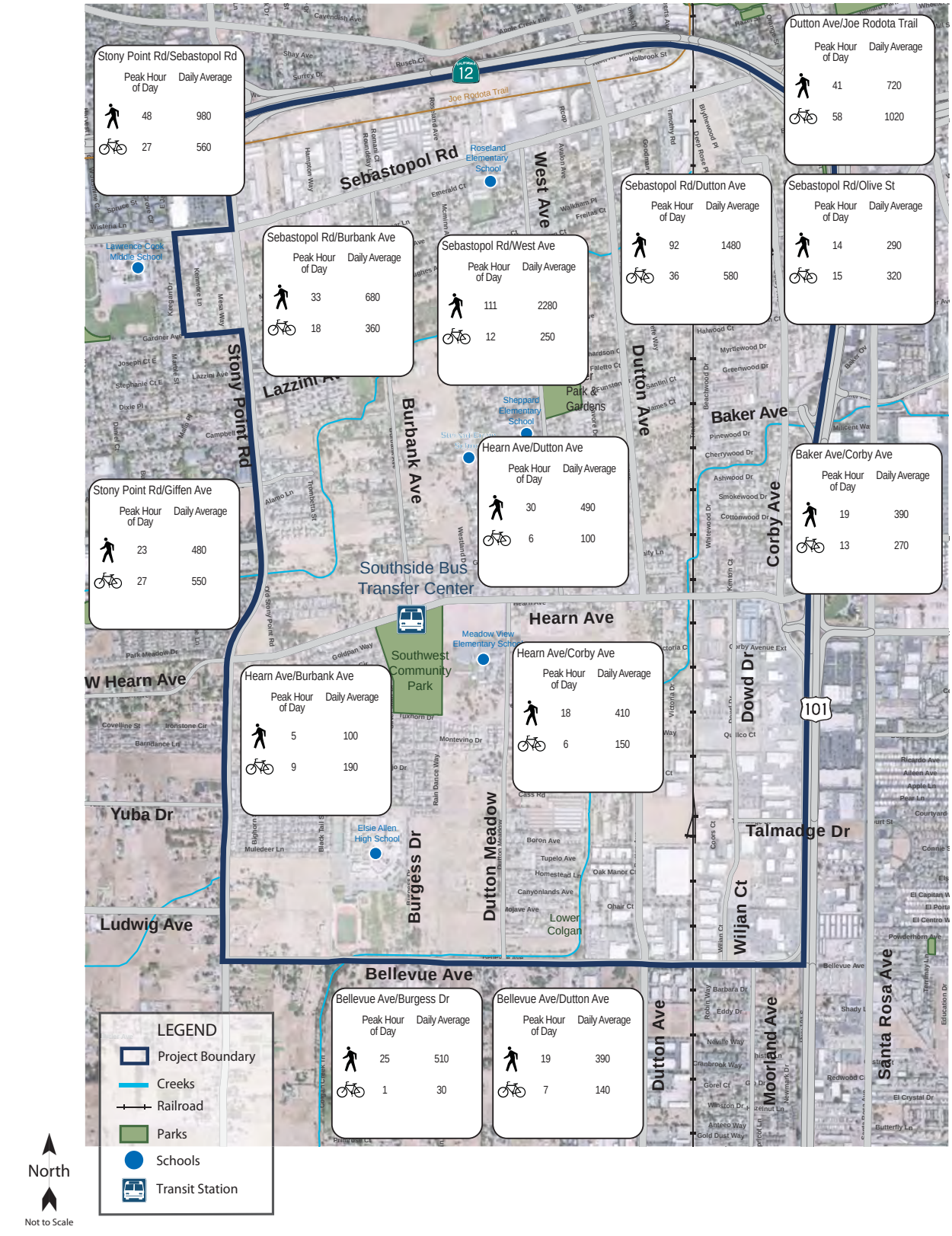
Source: W-Trans 2016

Notes: Delay is measured in seconds; LOS = level of service; Maximum Queue is the averaged maximum queue observed in 10 SimTraffic model runs measured in feet

EXISTING MULTIMODAL LEVELS OF SERVICE

Existing bicycle and pedestrian volumes on select roadway segments throughout the project area are shown on **Figure 3.14-2**. Based on analysis of the existing pedestrian, bicycle, and transit conditions on the study corridors, level of service was determined for each travel mode. The results are summarized in **Table 3.14-5**, and multimodal level of service score sheets are provided in Appendix A in **Appendix 3.14**.

T:_CSWork\Santa Rosa, City ofRoseland Area Specific Plan\Figures



Source: W-Trans

FIGURE 3.14-2

Existing Bicycle and Pedestrian Volumes

Michael Baker INTERNATIONAL

TABLE 3.14-5
EXISTING MULTIMODAL LEVELS OF SERVICE

Corridor Segment		Pedestrian LOS	Bicycle LOS	Transit LOS
1.	Stony Point Road			
	SR 12 to Sebastopol Rd	E	C	C
	Sebastopol Rd to Hearn Ave	F	F	C
	Hearn Ave to Bellevue Ave	F	F	E
2.	Sebastopol Road			
	Stony Point Rd to Burbank Ave	F	C	C
	Burbank Ave to Dutton Ave	C	E	C
	Dutton Ave to Olive St	F	F	C
3.	Dutton Avenue			
	SR12 to Sebastopol Rd	E	E	—
	Sebastopol Rd to Barham Ave	D	F	—
	Barham Ave to Hearn Ave	D	F	—
4.	Hearn Avenue			
	Stony Point Rd to Dutton Meadow	E	D	C
	Dutton Meadow to Dowd Dr	E	D	C
	Dowd Dr to Santa Rosa Ave	F	F	C
5.	Olive Street-Corby Avenue			
	Sebastopol Rd to Barham Ave	D	F	—
	Barham Ave to Baker Ave	D	F	D
	Baker Ave to Hearn Ave	D	F	D
	Hearn Ave to Bellevue Ave	F	F	E
6.	West Avenue			
	Sebastopol Rd to South Ave	C	F	—
	South Ave to Hearn Ave	C	F	D
7.	Dutton Meadow			
	Hearn Ave to Bellevue Ave	E	F	E
8.	Bellevue Ave			
	Stony Point Rd to Dutton Meadow	E	F	E
	Dutton Meadow to Corby Ave	F	F	—
9.	Burbank Avenue			
	Sebastopol Rd to Roseland Cr	D	D	—
	Roseland Creek to Hearn Ave	E	E	—
10.	Barham Avenue			
	Dutton Ave to S Davis St	E	F	—

Source: W-Trans 2016

Pedestrian and bicycle levels of service are poor along several corridors and for numerous segments. In many cases, operation in the LOS F range is attributable to sidewalks and bike facilities that are discontinuous or not present at all. LOS E conditions typically occur where limited facilities exist, but pedestrian and/or bicyclist comfort is generally not good due to factors such as vehicle speeds, lack of crossing enhancements, few amenities, and limited connectivity to other facilities. One area that fares better for pedestrians is Sebastopol Road between Burbank Avenue and Dutton Avenue, where a reasonably good pedestrian LOS C has been achieved through streetscape and crossing improvements. Bicycle LOS C is achieved on Sebastopol Road between Stony Point Road and Burbank Avenue through the combination of bike lanes, good pavement condition, bicycle detection at signals, and lack of on-street parking.

Transit levels of service were determined on the study corridors (or portions of corridors) where fixed-route transit currently operates. Transit levels of service are relatively good in the northern portion of the Roseland area along Sebastopol Road, Stony Point Road, and Hearn Avenue, all of which are currently operating at transit LOS C. The portions of Corby Avenue and West Avenue north of Hearn Avenue that are served by transit operate at LOS D. Transit operations are not as good to the south of Hearn Avenue, where all streets with transit service operate at LOS E, largely attributable to less-frequent service and less-robust pedestrian accessibility.

BICYCLE AND PEDESTRIAN INFRASTRUCTURE

The 2010 Santa Rosa Bicycle and Pedestrian Master Plan classifies bikeways into three categories:

- Class I Bike Path – provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow minimized
- Class II Bike Lane – provides a striped lane for one-way bike travel on a street or highway
- Class III Bike Route – provides for shared use with pedestrian or motor vehicle traffic

The plan also describes and depicts the future vision for bicycle facilities throughout the city. In 2014, the Sonoma County Transportation Authority (SCTA) prepared updated maps showing existing and planned bikeways throughout the county and in Santa Rosa, including the Roseland area, in the draft SCTA Countywide Bicycle and Pedestrian Master Plan. In collaboration with the City, the SCTA completed updates to the Santa Rosa bike plan, which serves as the city's official bicycle plan. Following is a summary of existing and key planned bicycle facilities in the project area.

Off-Street Trails

A major regional pathway facility, the Joe Rodota Trail, passes through the Specific Plan area, running in an east–west alignment between SR 12 and Sebastopol Road. The trail is a paved pathway connecting the city of Sebastopol to Railroad Square in Santa Rosa and to other major regional trails, including the West County Regional Trail and the Santa Rosa Creek Path. The Joe Rodota Trail crosses Stony Point Road at the signalized Stony Point Road/SR 12 East Ramps intersection and crosses Dutton Avenue at a dedicated mid-block signal that is coordinated with upstream and downstream signals.

Another existing off-street (Class I) pathway in the study area is a portion of the Colgan Creek Trail, which runs along the north side of Bellevue Avenue between Juniper Avenue and the western boundary of Elsie Allen High School and then turns southward and extends along the creek to Todd Road.

Several additional planned pathways are designated in the project area.

- SMART Multi-Use Pathway – The pathway will run north–south along the commuter rail corridor in the eastern portion of the project area. Through a combination of off-street and on-street facilities, the SMART path is ultimately planned to run the entire length of the commuter rail system from Cloverdale to Larkspur. A segment of the pathway has been completed between Joe Rodota Trail and Hearn Avenue.

- Colgan Creek Trail – This trail is planned to be extended northward to a future extension of Dutton Avenue, and southward is planned to be extended to the future Laguna de Santa Rosa Trail.

- Roseland Creek Trail – A portion of this trail has been completed, extending westward from Stony Point Road approximately 0.55 miles. Like the Colgan Creek Trail, this trail is planned to extend westward to the Laguna de Santa Rosa Trail. In the project area, the trail is planned to run alongside Roseland Creek between Stony Point Road and McMinn Avenue.

On-Street Bicycle Lanes

In the project area, bike lanes currently exist on Sebastopol Road between Stony Point Road and Dutton Avenue, on Stony Point Road between Bellevue Ranch Road and Bellevue Avenue, on Hearn Avenue between Stony Point Road and the SMART rail line, and on Sebastopol Road between North Dutton Avenue and Olive Street.

Future bike lanes are planned on the following segments:

- Sebastopol Road – North Dutton Avenue to Olive Street

- Dutton Avenue – SR 12 to Hearn Avenue, and eventually to the potential future Dutton Road extension

- Stony Point Road – SR 12 to Bellevue Ranch Road (the segment from Sebastopol Road to Hearn Avenue started construction in 2015)

- West Avenue – Sebastopol Road to Hearn Avenue

- Northpoint Parkway – along future extension of Northpoint Parkway from Stony Point Road to Burbank Avenue

- Dutton Meadow – Hearn Avenue to Bellevue Avenue

- Dutton Avenue Extension – Dutton Meadow to Bellevue Avenue

- Bellevue Avenue – Stony Point Road to Santa Rosa Avenue

Bike Routes

The segment of Dutton Avenue to the north of Sebastopol Road is a signed bike route, as is the entire length of Burbank Avenue. Future bike routes in the project area are designated on the following streets:

- Boyd Street
- Earle Street
- Corby Avenue Extension
- Dowd Drive – Corby Avenue Extension to Bellevue
- Corby Avenue – Barham to Corby Avenue Extension
- Barham Avenue
- South Avenue
- Delport Avenue
- McMinn Avenue – Delport to Hughes
- Hughes Avenue
- Lazzini Avenue

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals, curb ramps, crosswalk warning devices, and streetscape amenities. The entire Sebastopol Road corridor within the project boundaries has a significant amount of pedestrian activity throughout the day, particularly in commercial areas between Burbank Avenue and Dutton Avenue. In this core commercial segment, pedestrian-scale street lighting, street trees, 6- to 10-foot-wide sidewalks, and ADA-accessible curb ramps exist. Extending west from the commercial core, pedestrian facilities are continuous but lack added streetscape amenities. Extending east from the core, the sidewalk infrastructure is aging, and some gaps in the sidewalk network exist near the SMART rail crossing.

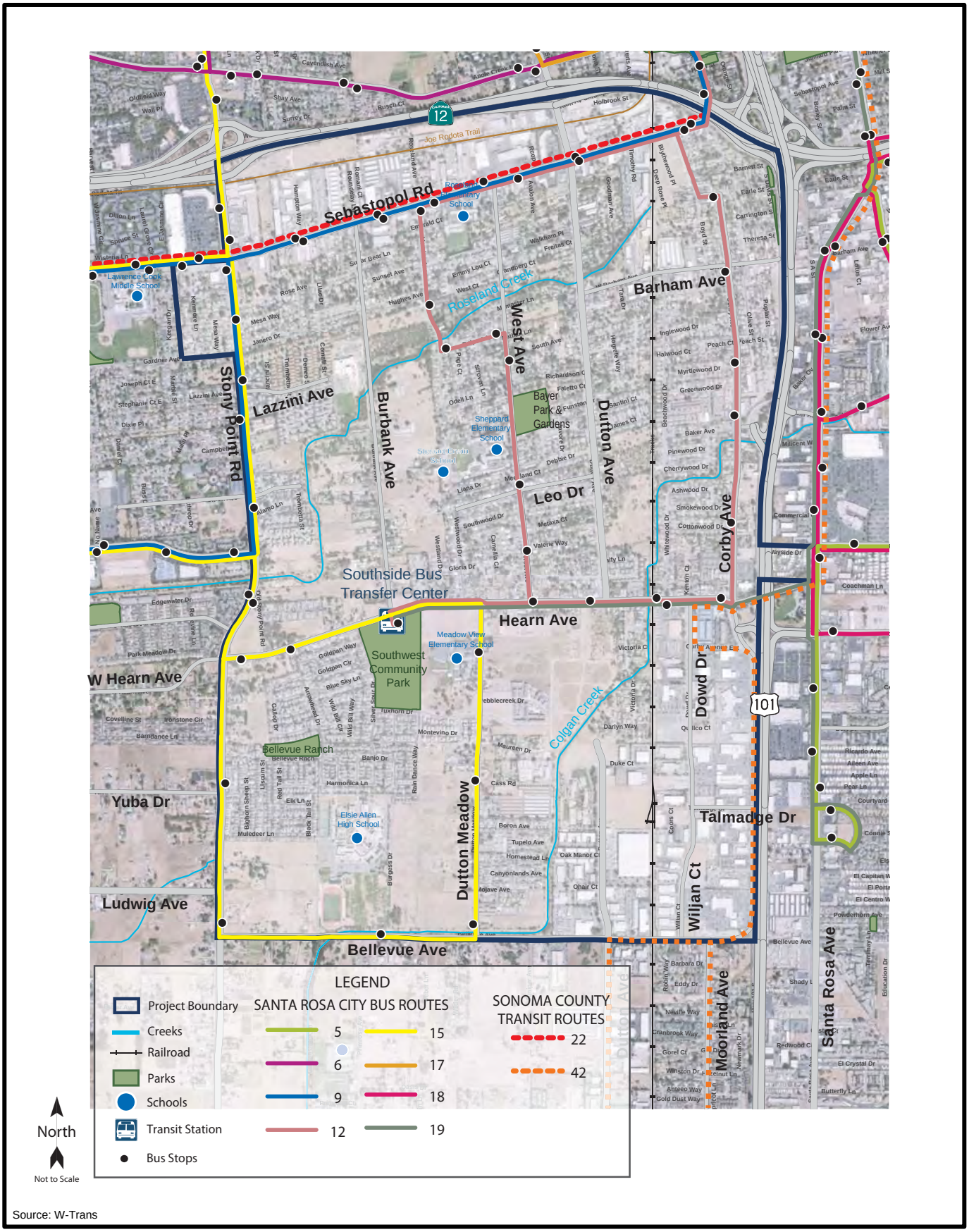
Schools have a major influence on pedestrian activity levels in the project area. Roseland Creek Elementary School on Burbank Avenue, Sheppard Elementary School on West Avenue, Roseland Elementary School on Sebastopol Road, Meadow Elementary School on Dutton Meadow, Roseland University Prep on Sebastopol Road, and Elsie Allen High School on Bellevue Avenue all generate school-age pedestrian traffic on school days. Bayer Park and Southwest Community Parks are also generators of pedestrian activity.

TRANSIT

Transit Operators

Transit service in the project area is provided by Santa Rosa CityBus and Sonoma County Transit. Existing transit routes are shown on **Figure 3.14-3**. **Table 3.14-6** summarizes routes, operating times, and headways.

T:_CSWork\Santa Rosa, City ofRoseland Area Specific Plan\Figures



Source: W-Trans

FIGURE 3.14-3
Existing Transit Routes

Michael Baker INTERNATIONAL

TABLE 3.14-6
PROJECT AREA TRANSIT ROUTES AND TYPICAL SERVICE LEVELS

Transit Operator Route	Weekday	Saturday	Sunday
Santa Rosa CityBus			
Route 9 – Sebastopol Road	6:20 AM–8:25 PM 30 minutes	7:20 AM–7:25 PM 30 minutes	10:35 AM–5:10 PM hourly
Route 12 – Roseland	6:05 AM–8:10 PM 30 minutes	7:35 AM – 7:10 PM hourly	10:00 AM–4:40 PM hourly
Route 15 – Stony Point Road	6:15 AM–8:05 PM hourly	8:15 AM – 5:05 PM hourly	No Sunday service
Route 19 – South City Circulator	6:05 AM–8:10 PM 30 minutes	7:30 AM – 7:10 PM hourly	10:30 AM–5:10 PM hourly
Sonoma County Transit			
Route 22 – Sebastopol, Santa Rosa	2 each direction during commute	No Saturday service	No Sunday service
Route 42 – Industry West Park	6:20 AM–5:40 PM 8 daily each direction	No Saturday service	No Sunday service

Source: W-Trans 2016

Santa Rosa CityBus

Santa Rosa CityBus is the primary transit provider in Santa Rosa. CityBus provides regularly scheduled fixed-route service to residential neighborhoods, major activity centers, and transit hubs within the city limits. Seventeen fixed routes are operated with wheelchair-accessible, low-floor buses that can accommodate up to two bikes on bike racks attached to the front of each bus. CityBus routes are designed around a timed-transfer method where buses serving different routes arrive and depart at designated transfer locations at routine periodic intervals.

CityBus Routes 9, 12, 15, and 19 serve portions of the project area. Routes 12, 15, and 19 serve the Southside Bus Transfer Center, which is located on Hearn Avenue at Southwest Community Park. The center includes shelters and lighting, and facilitates timed transfers among the Routes 12, 15, and 19.

Paratransit, also known as dial-a-ride or door-to-door service, is available for those who are unable to independently use the transit system because of a physical or mental disability. Individuals must be registered and certified as ADA eligible before using the service. CityBus currently contracts out paratransit service, which provides curb-to-curb transportation for disabled riders within city limits and in the project area. Service hours are Monday through Saturday from 6:00 AM to 8:00 PM and Sunday from 9:00 AM to 5:00 PM. Ride reservations can be scheduled daily.

Sonoma County Transit

Sonoma County Transit (SC Transit) provides regional transit service throughout the county. The primary transfer location in Santa Rosa is located at the downtown transit mall, where transfers to local CityBus routes can take place. Two SC Transit routes pass directly through the project area. Route 22 provides commute period service between Sebastopol and Santa Rosa, traveling along Sebastopol Road. Route 42 serves south Santa Rosa and the Industry West Business Park, traveling on Corby Avenue south of Hearn Avenue and the easternmost portion of Bellevue Avenue.

Golden Gate Transit

Golden Gate Transit is a regional operator that serves communities along the US 101 corridor between Santa Rosa and San Francisco. Golden Gate Transit has no stops in the project area, but is accessible via transfer from CityBus at the downtown transit mall.

SMART Rail Transit

The Sonoma-Marin Area Rail Transit (SMART) commuter rail system is a 70-mile rail line that is planned to run from Cloverdale, at the north end of Sonoma County, to Larkspur, where the Golden Gate Ferry connects Marin County with San Francisco. Along the way, SMART will have stations at the major population and job centers of the North Bay, including the downtown Santa Rosa station, which is located approximately one-half mile from Sebastopol Road in the northeastern portion of the project area. Train service will be provided by an estimated 14 round-trip trains on weekdays. Headways during the morning and evening commute periods will be 30 minutes, with longer headways during midday, evening, and weekend periods. SMART plans to initiate rail service between Airport Boulevard in northern Santa Rosa and downtown San Rafael in late 2016.

3.14.2 REGULATORY FRAMEWORK

STATE

Caltrans Traffic Operation Standards

The Caltrans Guide for the Preparation of Traffic Impact Studies (2002) includes criteria for evaluating the effects of land use development and changes to the circulation system on state highways. Caltrans maintains a target level of service at the transition between LOS C and LOS D for freeway facilities, which translates to a service flow rate of approximately 1,680 passenger cars per hour per lane.

LOCAL

Multimodal Operation Standards

The City of Santa Rosa has no established criteria for multimodal levels of service. For this Draft EIR, the multimodal level of service standard is LOS D.

City of Santa Rosa Traffic Operation Standards

General Plan Policy T-D-1 states that the City will maintain LOS D or better along all major corridors. Exceptions to meeting this standard are allowed in downtown, where attainment would result in significant environmental degradation, where topography or environmental impacts makes the improvement impossible, or where attainment would result in the loss of an area's unique character.

For the purposes of this analysis, the LOS D standard was also applied to the US 101 ramp intersections, which are part of the Guerneville Road-Steele Lane and College Avenue adaptive traffic control signal timing systems maintained by the City.

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project in regard to traffic and transportation.

Transportation Element

Goal T-A: **Provide a safe and sustainable transportation system.**

Policy T-A-5: Pursue cooperation between local and regional transportation agencies to coordinate multi-modal connections throughout the city.

Goal T-D: **Maintain acceptable motor vehicle traffic flows**

Policy T-D-1: Maintain a Level of Service (LOS) D or better along all major corridors. Exceptions to meeting the standard include:

- Within downtown;
- Where attainment would result in significant environmental degradation;
- Where topography or environmental impact makes the improvement impossible; or
- Where attainment would ensure loss of an area's unique character.

The LOS is to be calculated using the average traffic demand over the highest 60-minute period.

Goal T-F: **Develop a viable solution for regional through traffic on north-south and east-west corridors.**

Policy T-F-3: Explore alternative circulation network improvements to accommodate regional through-traffic, focusing on regional/arterial street circulation and regional transportation routes.

Goal T-H: **Expand the existing transit network to reduce greenhouse gas emissions and to provide convenient and efficient public transportation to workplaces, shopping, SMART stations, and other destinations.**

Policy T-H-3: Require new development to provide transit improvements, where a rough proportionality to demand from the project is established. Transit improvements may include:

- Direct and paved pedestrian access to transit stops;
- Bus turnouts and shelters; and
- Lane width to accommodate buses.

Goal T-I: **Support implementation of rail service along the Northwest Pacific Railroad.**

Policy T-I-1: Support efforts to implement rail service along the NWPRR.

Policy T-I-2: Preserve options for future rail stations along the NWPRR corridor by zoning land in proximity to the potential station sites for higher residential densities and/or mixed use development.

Goal T-J: **Provide attractive and safe streets for pedestrians and bicyclists.**

Policy T-J-3: Strengthen and expand east-west linkages across the Highway 101 corridor.

Policy T-J-4: Provide street trees to enhance the City's livability and to provide identity to neighborhoods and districts.

Goal T-K: **Develop a safe, convenient and continuous network of pedestrian sidewalks and pathways that link neighborhoods with schools, parks, shopping areas and employment centers.**

Policy T-K-2: Allow the sharing or parallel development of pedestrian walkways with bicycle paths, where this can be safely done, in order to maximize the use of public rights-of-way.

Goal T-L: **Develop a citywide system of designated bikeways that serves both experienced and casual bicyclists and which maximizes bicycle use for commuting, recreation and local transportation.**

Policy T-L-8: Require new development to dedicate land and/or construct/install bicycle facilities, and provide bicycle parking as specific in the Zoning Code, where a rough proportionality to demand from the project is established. Facilities such as showers and bicycle storage shall also be considered.

Policy T-L-9: Maintain and update, as appropriate, the city's Bicycle and Pedestrian Master Plan.

City of Santa Rosa Parking Requirements

The Santa Rosa Zoning Code establishes residential parking requirements for multi-family units of 1.0 covered space plus half a visitor space per studio or 1-bedroom unit. Units with 2.0 or more bedrooms are required to provide 1.0 covered space plus 1.5 visitor spaces per unit. On-street spaces fronting the development may be counted toward the supply of visitor spaces. General retail and general office uses are required to provide 1.0 parking space per 250 square feet of building space. Parking requirements for public and institutional uses vary by specific use (e.g., meeting facility, library, museum, park/playground, school).

3.14.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The following standards of significance are based on the California Environmental Quality Act (CEQA) Guidelines as well as criteria established by the City of Santa Rosa and Caltrans. Under these applied standards, the project would result in a significant impact on transportation if it would:

1) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

   a. City of Santa Rosa Corridors: General Plan Policy T-D-1 states that the City will maintain LOS D or better along all major corridors. Exceptions to meeting this standard are allowed in downtown, where attainment would result in significant environmental degradation, where topography or environmental impacts makes the improvement impossible, or where attainment would result in the loss of an area's unique character.

      For the purposes of this analysis, the LOS D standard was also applied to the US 101 and SR 12 ramp intersections.

   b. Freeway Operation: A significant freeway impact would occur if:

      i. Operation on US 101 or SR 12 fails to be maintained at or above the LOS C/D threshold, or in cases where the freeway is already projected to operate deficiently without the project, a significant impact would occur if the project increases freeway density by greater than 1 percent.

      ii. Intersection level of service at the freeway ramp terminal intersections falls below LOS D.

      iii. Vehicle queues on freeway off-ramps extend onto the mainline freeway.

2) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

3) Substantially increase hazards due to a design feature.

4) Result in inadequate emergency access.

5) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

   a. Consistency with alternative transportation policies: A significant impact would occur if the project violates alternative transportation policies set forth in the City of Santa Rosa General Plan or the Sonoma County Transportation Authority's Comprehensive Transportation Plan.

   b. Consistency with the Bicycle and Pedestrian Master Plan: A significant impact would occur if the project precludes pedestrian and bicycle improvements identified in the Santa Rosa Bicycle and Pedestrian Master Plan from being successfully implemented.

   c. Bicycle/Pedestrian Facilities: The project would have a significant impact if it would result in unsafe conditions for bicyclists and/or pedestrians, including creation of unsafe bicycle/pedestrian or bicycle/motor vehicle conditions.

d. Transit: The project would have a significant impact if it would cause a substantial delay in transit service or increase demand for transit beyond existing or planned service capacity, or create barriers to travel for pedestrians walking to transit terminals and bus stops.

METHODOLOGY

Data

Field visits in the study area surveying pedestrian, bicycle, and transit facilities took place several times between the fall of 2014 and early 2015. Intersection traffic volume data was obtained for most signalized study intersections in the study area (and all signals along the study corridors) as well as at key unsignalized intersections. All traffic data was collected between December 2013 and January 2015, with some data collected specifically for this analysis and other data supplied by the City of Santa Rosa.

Pedestrian and bicycle counts were obtained at 15 locations throughout the study area in 2014 and early 2015, and one count was conducted by the SCTA at the Joe Rodota Trail crossing of Dutton Avenue in 2013. All data collection occurred while area schools and colleges were in session and while weather conditions were good. Bicycle and pedestrian volumes were normalized using count adjustment factors obtained from the National Bicycle and Pedestrian Documentation Project published in 2009. The resulting pedestrian and bicycle volumes are shown on **Figure 3.14-2**.

Freeway traffic volumes were obtained from the Caltrans website as well as from the Caltrans Performance Measurement System (PeMS).

Level of Service Methodologies

Roadway Segment Level of Service Methodology

The roadway segment level of service methodology found in Chapter 17, Urban Street Segments, of the *Highway Capacity Manual 2010* (Transportation Research Board 2010) (HCM) is the basis of the automobile level of service analysis. This method does not directly focus on the capacity of a facility, but rather determines a level of service based on the calculated percentage of the street's base free-flow speed. In essence, congestion occurs as traffic volumes increase and the overall travel speed is reduced due to increased delay. Therefore, the slower the speed, the lower that speed is as a percentage of free-flow speed and the lower the level of service. Corridor levels of service were assessed using the software applications Synchro and SimTraffic. Synchro is used to analyze operation at each of the signalized intersections along a segment, which is where the majority of delay is encountered. SimTraffic is an extension of Synchro that simulates vehicle progression along a corridor, considering the operation of individual signals as well as influences such as interactions among signals, queue spillback, and merging activity. The average of 10 randomly seeded SimTraffic runs was determined in order to determine average travel speeds along the study corridors.

The relationship between level of service and percentages of free-flow speed is presented in **Table 3.14-7**.

TABLE 3.14-7
AUTOMOBILE LEVEL OF SERVICE CRITERIA

Level of Service	Travel Speed as a Percentage of Base Free-Flow Speed (%)
A	> 85
B	> 67–85
C	> 50–67
D	> 40–50
E	> 30–40
F	≤ 30

Source: Transportation Research Board 2010

Intersection Level of Service Methodology

The traffic signals located along the roadway segments, including freeway ramp study intersections controlled by traffic signals, were evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this level of service methodology. The range of delay associated with signalized intersection level of service criteria is provided in **Table 3.14-8**.

TABLE 3.14-8
SIGNALIZED INTERSECTION LEVEL OF SERVICE CRITERIA

LOS A	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
LOS B	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
LOS C	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
LOS D	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
LOS E	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
LOS F	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Source: Transportation Research Board 2000

Freeway Level of Service Methodology

The freeway analysis methodology contained in HCM Chapter 10, Freeway Facilities, was used to determine levels of service. The method analyzes extended lengths of freeway composed of continuously connected basic freeway, weaving, merge, and diverge segments, which are collectively referred to as a freeway facility. For each individual segment, the analysis methodologies from the relevant chapters of the HCM, including Chapter 11, Basic Freeway Segments, Chapter 12, Freeway Weaving Segments, and Chapter 13, Freeway Merge and Diverge Segments, were used. The method uses variables such as traffic volumes, geometric configuration of the freeway (i.e., number of lanes, presence of auxiliary lanes, distance between merges and diverges, widths of lanes and shoulders), topography, the percentage of heavy vehicles, and free-flow speeds. The data is used to determine the density of the segment, which is the criterion used for determining freeway level of service. Density is indicative of the travel

speed service flow rates and travel demand on a freeway facility and is measured in the number of passenger cars per mile per lane. The ranges of vehicle density associated with the various levels of service are presented in **Table 3.14-9**.

TABLE 3.14-9
FREEWAY LEVEL OF SERVICE CRITERIA

Level of Service	Freeway Segment Vehicle Density (passenger cars per mile per lane)
A	≤11
B	>11–18
C	>18–26
D	>26–35
E	>35–45
F	>45

Source: Transportation Research Board 2010

This methodology was applied to mixed-flow travel lanes on US 101, with the reported density and level of service reflecting overall operation of the freeway segment.

Queuing Methodology

Vehicle queuing was assessed at the freeway off-ramps directly serving the study area. This assessment was done to determine the likelihood for queues created by the ramp terminal intersection signals to extend onto the mainline freeway, indicating potential capacity problems as well as safety concerns. Maximum queue lengths were analyzed using traffic simulation as performed in SimTraffic, which uses the same signal timing, phasing, and geometric data included in Synchro for intersection analysis. Ten separate randomly seeded simulation "runs" were performed, with the maximum observed queues on the freeway ramps averaged and presented as the estimated maximum queue.

Multimodal Level of Service

The 2010 HCM includes a set of methodologies to determine pedestrian, bicycle, and transit levels of service. Recognizing limitations of the HCM methodology, several jurisdictions have developed their own multimodal level of service methods. The methods developed by the City of Carlsbad (which is located in northern San Diego County) translate particularly well to the project area since they are tailored to work in areas beyond the downtown core and use a scoring approach which considers the types of physical and operational improvements that are both relevant and likely to be successful in the project area. In coordination with City of Santa Rosa staff, the Carlsbad multimodal level of service scoring criteria were refined slightly to reflect local conditions and produce results that will be useful to the community and decision-makers as various plan alternatives are considered.

Following are brief descriptions of the data and physical factors used in the multimodal level of service methodology for each mode. A list of the inputs and potential score ranges for individual scoring components is provided for each study segment in Appendix A of **Appendix 3.14**. Some of the scoring inputs reflect a range of potential scores (such as wider streets receiving fewer points toward pedestrian level of service than narrower streets), whereas others are simply counted if the

amenity is present (such as the presence of pedestrian-scale lighting). Where certain criteria were met for only a portion of the segment, partial scores were allocated.

- Pedestrian LOS – The methodology considers factors such as the presence of pedestrian facilities, number of vehicle lanes, quality of and amenities used at crossings, streetscape components (including sidewalk widths, street trees, lighting, and buffers between pedestrians and moving vehicles), and urban context.

- Bicycle LOS – Factors such as the type of bicycle facility present, connectivity to other bike facilities, presence of amenities (bike racks, bike signage), use of bicycle detection at signals, use of innovative bike facility striping techniques, vehicle speeds, and type of on-street parking are considered in the bicycle LOS scoring.

- Transit LOS – The transit methodology considers factors such as the frequency of service, pedestrian accessibility to transit stops, ability to access regional routes (including SMART) with a single transfer, use of innovative techniques to aid bus progression ("queue jumps," dedicated lanes, signal priority), on-time performance and seat availability, and bus stop amenities (benches, shelters, bike parking, lighting).

Traffic Operation Standards

City of Santa Rosa

General Plan Policy T-D-1 states that the City will maintain LOS D or better along all major corridors. Exceptions to meeting this standard are allowed in downtown, where attainment would result in significant environmental degradation, where topography or environmental impacts makes the improvement impossible, or where attainment would ensure loss of an area's unique character.

The General Plan does not provide a standard for roadways other than major corridors.

Caltrans

The Caltrans (2002) *Guide for the Preparation of Traffic Impact Studies* includes criteria for evaluating the effects of land use development and changes to the circulation system on state highways. Caltrans maintains a target level of service at the transition between LOS C and LOS D for freeway facilities.

Multimodal Operation Standards

The City of Santa Rosa has no established criteria for multimodal levels of service. The multimodal level of service results for pedestrian, bicycle, and transit modes provided in this analysis are therefore considered informational, though they are useful in discerning potential impacts that project implementation may have on these modes.

Vehicle Miles Traveled

On September 27, 2013, Senate Bill (SB) 743 was signed into law creating a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service for evaluating transportation impacts. Particularly in areas served by transit, those alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (new Public

Resources Code Section 21099(b)(1)). According to the bill, measurements of transportation impacts may include vehicle miles traveled (VMT), VMT per capita, automobile trip generation rates, or automobile trips generated. Once the CEQA Guidelines are amended to include those alternative criteria, auto delay will no longer be considered a significant impact under CEQA (OPR 2016).

On January 20, 2016, OPR released for public review its most recent proposal for changes to the CEQA Guidelines in response to SB 743. These recommended changes include the use of VMT as the primary metric of transportation impact across the state. These proposed changes have not yet been approved, and there are currently no adopted standards for use in determining the significance of a project's VMT impacts.

As shown in **Table 3.14-10**, implementation of the proposed project would increase the annual VMT in the project area to 299,998,474, an increase of 99,292,227 or approximately 49.4 percent above existing conditions. However, when compared to annual VMT anticipated to result from buildout of the project area under the General Plan 2035, project implementation would reduce annual VMT by 16,041,919 or approximately 5.1 percent.

TABLE 3.14-10
SUMMARY OF ANNUAL VEHICLE MILES TRAVELED WITHIN PROJECT AREA

	Annual Vehicle Miles Traveled
Existing Conditions	200,706,247
General Plan Buildout	316,040,393
Specific Plan Buildout	299,998,474

Source: CalEEMod 2013 Appendix 3.3

Proposed Project

Buildout associated with the proposed project would include modifications to the circulation network as well as some changes to allowed land uses in the area. Many of the circulation network changes are the result of community input received during development of the Specific Plan and Annexation areas. Others reflect the results of past adopted plans including the City's General Plan and Sebastopol Road Urban Vision Plan. Finally, several roadway and intersection modifications were identified as being necessary to accommodate traffic volumes at project and regional buildout (approximately year 2040). The Specific Plan roadway network is shown on **Figure 2.0-7** (see Section 2.0, Project Description), and a summary of the proposed roadway modifications and configurations included in the Specific Plan as well as proposed intersection improvements are shown in **Tables 2.0-1** and **2.0-2** in Section 2.0.

Trip Generation and Assignment

The traffic generation and travel pattern characteristics associated with the increased development levels allowed by the project were determined through use of the regional travel demand model maintained by the SCTA. Dedicated model "runs" were developed to reflect the land use and circulation changes associated with the project under both near-term and buildout conditions. Through use of this type of regional model, intricacies such as the proximities among different types of land uses and the effects of the nearby and extended jobs-housing balance can be estimated. The regional model is also able to account for the effects of future infrastructure changes beyond the project area, such as a future Bellevue Avenue freeway overcrossing and

even more distant regional projects such as the future widening of US 101 in southern Sonoma County, that may affect travel patterns in the project area,. Finally, while not detailed at the local level, the model is able to consider future upgrades to regional transit, bicycle, and pedestrian networks and their effects on vehicular trip generation and mode choice.

The vehicular trip generations of the project area under both near-term (Existing plus Project) and long-range (Future plus Project) conditions are shown in **Table 3.14-11** for the weekday AM and PM peak hours, as used in the roadway, intersection, and freeway capacity analyses conducted.

TABLE 3.14-11
SPECIFIC PLAN AND ANNEXATION AREAS VEHICULAR TRIP GENERATION

Peak Hour	Existing plus Project	Buildout with Project
AM Peak Hour	4,200	4,260
PM Peak Hour	4,309	4,433

Source: W-Trans 2016

Note: Values are vehicular trips generated by the incremental increase from existing conditions in total development in the project area, as estimated by the SCTM/10 regional travel demand model.

Circulation Changes Associated with the Specific Plan

For new and improved streets throughout the Specific Plan area, adopted City standards in place at the time of preparation of construction documents would be applied. At the time this Draft EIR was prepared, the applicable standards are outlined in the City of Santa Rosa Street Design and Construction Standards, adopted January 13, 2004. The City's standards specify roadway cross-section criteria such as the widths of travel lanes, medians, landscape buffers, bicycle lanes, on-street parking, and sidewalks. The City would make the determination of appropriate street standards, including any modifications necessary to suit existing physical constraints. One exception to application of these standards is Burbank Avenue, for which the Specific Plan establishes a separate set of criteria including single 10-foot-wide vehicular travel lanes in each direction, 6-foot-wide bicycle lanes, and no on-street parking. On the segment north of Roseland Creek, a landscape buffer would be provided as allowed within the existing right-of-way, while south of Roseland Creek vegetated swales would be established between the roadway and sidewalks. The proposed Burbank Avenue street designs are shown on **Figure 2.0-8**.

Table 2.0-2 in Section 2.0 summarizes the intersection modifications associated with the above roadway modifications and identified as being needed to support buildout of the project area.

All existing and planned bicycle facilities identified in the City's Bicycle and Pedestrian Master Plan would be maintained, and several new and/or upgraded facilities would be added. The existing and planned bicycle facilities are shown on **Figure 2.0-9** in Section 2.0. The planned pedestrian and bicycle network modifications are summarized in **Table 2.0-3** in Section 2.0.

Project Traffic Volumes

The traffic volume projections on key roadway segments throughout the project area as obtained through use of the SCTM/10 travel demand model are shown on **Figure 3.14-4** for Existing plus Project conditions and in **Figure 3.14-5** for Future plus Project buildout conditions. Volumes are shown for the weekday AM and PM peak hours and reflect total traffic volumes including traffic

generated from existing uses within the project area, traffic passing through the project area, and traffic associated with the project's added development potential.

Impacts Not Evaluated in Detail

The project area is located approximately 5.25 miles southeast of Charles M. Schulz-Sonoma County Airport. Buildout of allowed uses within the project area and implementation of the Specific Plan's policies would be expected to have no impact on air safety or operation of the airport other than providing additional potential passengers. Therefore, Standard of Significance 2 is not discussed further in this section.

PROJECT IMPACTS AND MITIGATION MEASURES

Corridor Operations (Standards of Significance 1 and 2)

Impact 3.14.1 Project traffic would not degrade corridor operations to unacceptable levels of service under Existing plus Project conditions. This impact would be **less than significant**.

Automobile roadway segment levels of service are projected to remain at LOS D or better during both the AM and PM peak hours under Existing plus Project conditions. Corridor level of service results are summarized in **Tables 3.14-12** and **3.14-13**.

TABLE 3.14-12
ROADWAY SEGMENT AM PEAK-HOUR LEVEL OF SERVICE SUMMARY

Corridor			Existing			Existing plus Project		
Direction	Class	Free-Flow Speed	Avg. Speed	% FFS	LOS	Avg. Speed	% FFS	LOS
Stony Point Road–SR 12 to Bellevue								
NB	II	40	23	58%	C	22	55%	C
SB	II	40	26	65%	C	25	63%	C
Sebastopol Road–Stony Point to Olive								
EB	III	35	23	66%	C	18	51%	C
WB	III	35	21	60%	C	19	54%	C
Dutton Avenue–SR 12 to Hearn								
NB	IV	30	22	73%	B	21	70%	B
SB	IV	30	20	67%	C	18	60%	C
Hearn Avenue–Stony Pt to Santa Rosa								
EB	III	35	25	71%	B	17	49%	D
WB	III	35	24	69%	B	19	54%	C

Source: W-Trans 2016

Notes: Avg. Speed = average corridor speed in miles per hour; % FFS = percent of free-flow speed; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound

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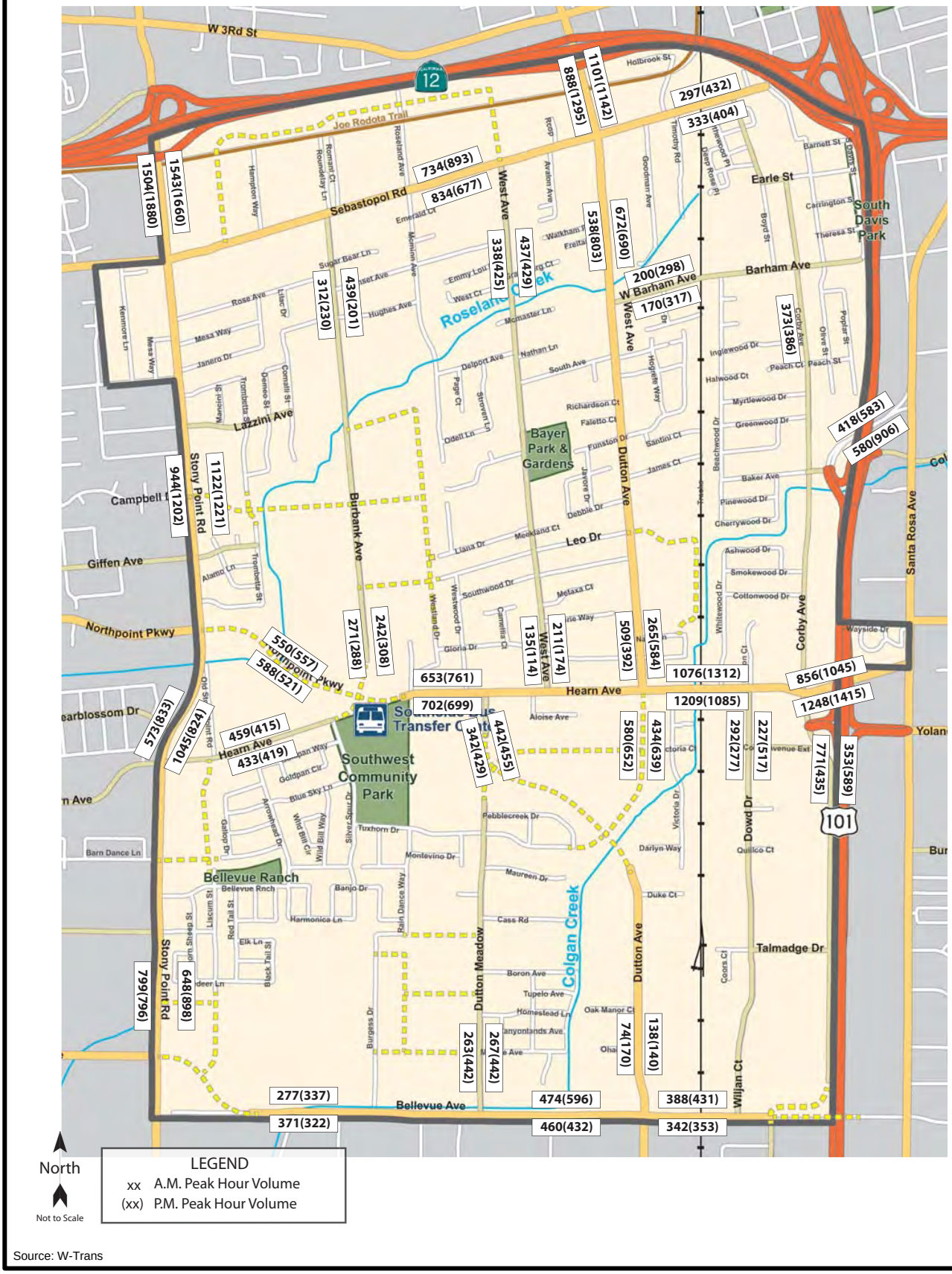

Source: W-Trans

FIGURE 3.14-4
Existing Plus Project Traffic Volumes

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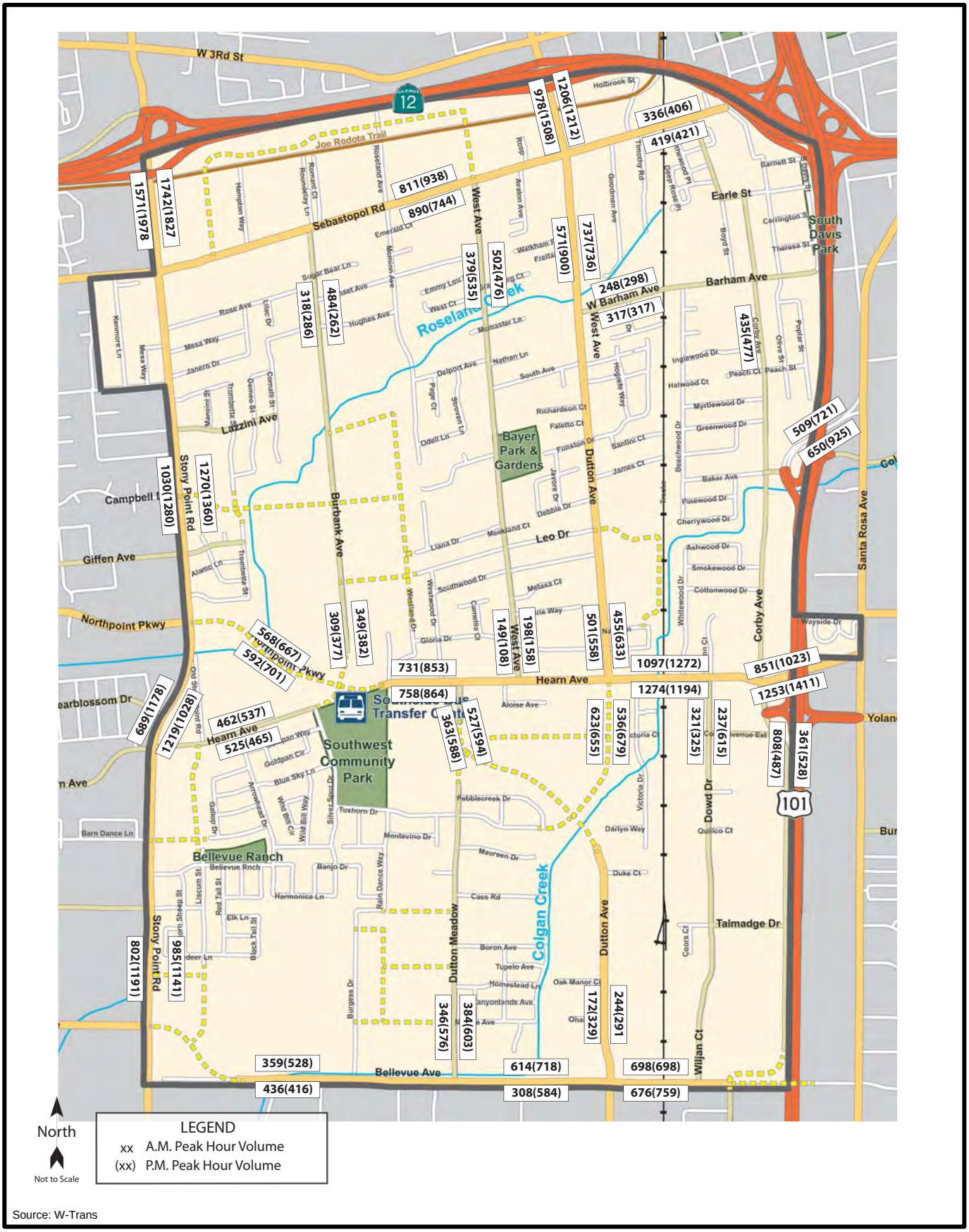

Source: W-Trans

FIGURE 3.14-5
Future Plus Project Traffic Volumes

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TABLE 3.14-13
ROADWAY SEGMENT PM PEAK-HOUR LEVEL OF SERVICE SUMMARY

Corridor			Existing			Existing plus Project		
Direction	Class	Free-Flow Speed	Avg. Speed	% FFS	LOS	Avg. Speed	% FFS	LOS
Stony Point Road–SR 12 to Bellevue								
NB	II	40	21	53%	C	19	48%	D
SB	II	40	18	45%	D	23	58%	C
Sebastopol Road–Stony Pt to Olive								
EB	III	35	21	60%	C	18	51%	C
WB	III	35	19	54%	C	16	46%	D
Dutton Avenue–SR 12 to Hearn								
NB	IV	30	24	80%	B	19	63%	C
SB	IV	30	18	60%	C	17	57%	C
Hearn Avenue–Stony Pt to Santa Rosa								
EB	III	35	24	69%	B	16	46%	D
WB	III	35	26	74%	B	19	54%	C

Source: W-Trans 2016

Notes: Avg. Speed = average corridor speed in miles per hour; % FFS = percent of free-flow speed; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound

As shown in the preceding tables, vehicular traffic on all study corridors is expected to continue operating acceptably at LOS D or better with the addition of project-generated traffic and roadway improvements identified with the proposed project. Incorporation of the roadway improvements identified in the specific plan into the City's traffic impact fee program or another appropriate long-range funding mechanism, and continued monitoring of corridor operation over time through review of traffic impact studies conducted for proposed development will ensure this impact is **less than significant**. The City will continue to work to identify funding mechanisms and monitor corridor operations over time through review and implementation of individual development projects in the project area.

Mitigation Measures

None required.

Mainline Freeway Operations (Standards of Significance 1 and 2)

Impact 3.14.2 Project traffic would have the potential to degrade mainline freeway operations to unacceptable levels of service under Existing plus Project conditions. This impact would be **potentially significant**.

The incremental changes to traffic on US 101 associated with the proposed project were added to current freeway traffic volumes to obtain Existing plus Project volumes. As shown in **Table 3.14-14**, both directions of US 101 operate below the LOS C/D threshold considered by Caltrans to be acceptable under Existing and Existing plus Project conditions during one or both peak hours. Freeway operations calculations are provided in Appendix D of **Appendix 3.14**.

TABLE 3.14-14
PEAK-HOUR FREEWAY OPERATIONS

Freeway Segment	Existing		Existing plus Project	
	AM	PM	AM	PM
US 101 North – Todd Rd to SR 12				
Density	38.4	32.5	37.3	33.5
LOS	E	D	E	D
US 101 South – SR 12 to Todd Rd				
Density	31.0	32.2	30.5	30.0
LOS	D	D	D	D
SR 12 East – Stony Point Rd to US 101				
Density	21.8	21.3	22.7	22.1
LOS	C	C	C	C
SR 12 West – US 101 to Stony Point Rd				
Density	16.3	24.9	16.9	25.4
LOS	B	C	B	C

Source: W-Trans 2016

Notes: Density is measured in passenger cars per mile per lane; LOS = level of service; ***bold*** *values = Project increases density by greater than 1% on segment operating unacceptably at LOS D or worse.*

The proposed project is considered to create a significant impact to freeway operation if it increases the density on segments operating unacceptably (below the LOS C/D threshold) by more than 1 percent. As shown in **Table 3.14-14**, this level of impact is projected to occur under Existing plus Project conditions on northbound US 101 between Todd Road and SR 12. This impact would be **significant**.

Mitigation Measures

The projected unacceptable operation on US 101 could be mitigated by widening the freeway to include additional through lanes in each direction. However, further widening of US 101 is not included in the SCTA's Comprehensive Transportation Plan, nor do any financing mechanisms currently exist to fund the improvement. Widening the freeway would require major reconstruction of multiple freeway structures, right-of-way acquisition including many homes and businesses, closure or relocation of city streets paralleling the freeway corridor, and the likely creation of additional secondary environmental impacts. As a result, such improvements to US 101 are considered infeasible.

The City of Santa Rosa, the County of Sonoma, and the Sonoma County Transportation Authority recognize that US 101 will experience congestion into the foreseeable future and that there will be no further major capacity enhancements, such as expansions or new freeways. All three jurisdictions concur in various planning and policy documents that long-range solutions to regional mobility must focus on better land use planning that supports transit and alternative transportation modes; stronger jobs-housing balance; and increased support of transportation demand measures. The proposed Specific Plan emphasizes each of these goals. Because there are no known physical improvements that would result in acceptable freeway operation in the future, however, and subsequently no means for development within the project area to contribute fair-share payments to projects such as a freeway expansion, the impact would be considered **significant and unavoidable**.

Degrade Freeway Ramp Operations (Standards of Significance 1 and 2)

Impact 3.14.3 Project traffic would have the potential to degrade freeway ramp operations to an unacceptable level of service at the southbound US 101 freeway off-ramp at Hearn Avenue under Existing plus Project conditions. This impact would be **potentially significant**.

Freeway ramp operations were analyzed at the eastbound and westbound ramps of SR 12 at Stony Point Road and Dutton Avenue and at the northbound and southbound US 101 ramps at Hearn Avenue and Baker Avenue. Under Existing plus Project conditions, all eight ramp terminal intersections are projected to operate acceptably at LOS C or better with changes in traffic patterns associated with buildout of the project area. The freeway ramp data for AM and PM scenarios is included in **Appendix 3.14**. The PM represented the worst case and the only time frame where impacts occurred, so the analysis below is focused on PM peak-hour conditions.

As shown in **Table 3.14-15**, under Existing plus Project, vehicle queues on seven of eight freeway off-ramps under PM peak-hour conditions are projected to remain within the available storage. On southbound US 101 at Hearn Avenue, off-ramp queues are projected to extend onto the mainline freeway. These queues are the result of spillback from upstream signals and capacity constraints created by the existing two-lane Hearn Avenue freeway overpass. The City of Santa Rosa is currently in the environmental phase of Caltrans project approval (Project Approval/Environmental Document [PA/ED]) for the Hearn Avenue overpass widening project, which would ultimately alleviate adverse queuing conditions. Because the project would not be complete under Existing plus Project conditions, the proposed project's impacts would be considered significant in the near term. A summary of the Existing plus Project freeway ramp levels of service and queuing projections is contained in Table 22 and calculations are provided in Appendices C and E of **Appendix 3.14**. This impact would be **significant**.

TABLE 3.14-15
EXISTING PLUS PROJECT PM PEAK-HOUR FREEWAY RAMP OPERATIONS

Freeway Interchange	Intersection Operations		Off-Ramp Queuing		
	Existing Delay/LOS	Plus Project Delay/LOS	Available Storage	Existing Max. Queue	Plus Project Max. Queue
SR 12/Stony Point Road					
Westbound	30.1/C	29.0/C	930	466	332
Eastbound	10.6/B	15.8/B	710	243	229
SR 12/Dutton Avenue					
Westbound	23.1/C	31.2/C	990	409	909
Eastbound	14.1/B	16.6/B	770	126	148
US 101/Baker Avenue					
Northbound	31.4/C	30.6/C	810	152	144
Southbound	9.9/A	18.0/B	340	163	132
US 101/Hearn Avenue					
Northbound	33.0/C	33.7/C	960	183	190
Southbound	16.7/B	22.3/C	620	495	**1059**

Source: W-Trans 2016

Notes: Delay is measured in seconds; LOS = level of service; Max Queue is the averaged maximum queue observed in 10 SimTraffic model runs measured in feet; ***bold*** *= queuing exceeds available storage*

Mitigation Measures

The City of Santa Rosa is working collaboratively with Caltrans to approve and fund construction of a widened Hearn Avenue freeway overpass and associated intersection improvements. This project is identified in the City's General Plan and is projected to alleviate both congestion and adverse queuing onto the freeway in the future. However, because the widening project would not be complete under Existing plus Project near-term conditions, the adverse queuing conditions would remain and the impact would be **significant and unavoidable**. Note that under Future plus Project conditions (see Impact 3.14.12), the Hearn Avenue overpass widening and interchange project would be completed and the impact would be reduced to a level of less than significant.

Design Features (Standard of Significance 3)

Impact 3.14.4 The proposed project includes various roadway improvements that would be designed and constructed according to City-approved design standards to ensure safety. This impact would be **less than significant**.

Improvements to the transportation and circulation system within and surrounding the project area would be implemented over time. Any such improvements would be designed and constructed to local, regional, and federal standards, and as such, would not be expected to introduce any hazardous design features. New development allowed within the project area would include new streets, access points, pathways, and other circulation improvements that would be checked for compliance with these standards as part of the entitlement process conducted by the City of Santa Rosa. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

Emergency Access (Standard of Significance 4)

Impact 3.14.5 Implementation of the proposed project would not interfere with emergency access within the project area. This impact would be **less than significant**.

The proposed Specific Plan includes new streets that would improve connectivity within the project area, creating new routes for all users, including emergency responders. Roadway improvements included as part of the proposed project have been conceived to balance the mobility needs of all users, maintaining the flow of traffic at regulated speeds through core activity areas. Lower vehicle speeds in major activity areas translate to less severe collisions, when collisions do occur. Plans submitted for individual developments to be constructed in the project area would be reviewed for compliance with emergency access requirements by public safety officials as part of the City's entitlement process. Overall, implementation of the proposed project would be expected to have a beneficial impact on emergency access.

Mitigation Measures

None required.

Consistency with Alternative Transportation Policies and Plans (Standards of Significance 5a and 5b)

Impact 3.14.6 Implementation of the proposed project would not conflict with any alternative transportation policies or plans. This impact would be **less than significant**.

The proposed project has been developed to both support and expand upon current policies regarding alternative transportation. It meets the goals of the SCTA Comprehensive Transportation Plan through policies designed to increase transit use through intensification of development around transit hubs, improve accessibility for pedestrians around activity centers, and support completion of the planned facilities outlined in the Countywide Bicycle and Pedestrian Master Plan. The Specific Plan also supports and/or strengthens the alternative transportation policies set forth in the City's General Plan and incorporates new alternative transportation facilities designated in the City's Bicycle and Pedestrian Master Plan. The proposed annexations would not result in any improvements to roadways or alternative transportation facilities and would not conflict with any alternative transportation policies or plans. This impact would be **less than significant.**

Mitigation Measures

None required.

Pedestrian and Bicycle Circulation (Standard of Significance 5c)

Impact 3.14.7 Implementation of the proposed project would result in improvements to pedestrian and bicycle circulation in the project area that would enhance connectivity and safety. This impact would be **less than significant**.

Implementation of the proposed project would result in a beneficial impact to pedestrian and bicycle circulation. The proposed project includes new street and pathway connections that improve east–west circulation, enhance connectivity to and within neighborhoods, and integrate the future multi-use paths along Roseland and Colgan creeks as well as the SMART corridor. The proposed mix of land uses, combined with current uses, also creates a diverse environment with a concentration of housing, jobs, and shopping all within walking and bicycling distance of one another. As shown in **Table 3.14-16**, multimodal levels of service for pedestrian and bicycle modes improve on at least a portion of every corridor analyzed with implementation of the project, and in many cases along the entire corridor.

Based on analysis of the pedestrian, bicycle, and transit conditions for the study corridors upon buildout of the project, including implementation of proposed Specific Plan policies, each of the modes was assigned a level of service using the applied criteria and methods. Results comparing existing conditions to project buildout conditions are summarized in Table 24 and multimodal level of service score sheets are provided in Appendix A of **Appendix 3.14**.

TABLE 3.14-16
EXISTING PLUS PROJECT MULTIMODAL LEVELS OF SERVICE

Corridor Segment	Pedestrian		Bicycle		Transit	
	Existing	Plus Project	Existing	Plus Project	Existing	Plus Project
1. Stony Point Road						
SR 12 to Sebastopol Rd	E	D	C	C	C	B
Sebastopol Rd to Hearn Ave	F	D	F	D	C	B
Hearn Ave to Bellevue Ave	F	D	F	D	E	C
2. Sebastopol Road						
Stony Point Rd to Burbank Ave	F	C	C	B	C	A
Burbank Ave to Dutton Ave	C	A	E	B	C	A
Dutton Ave to Olive St	E	A	F	B	C	A
3. Dutton Avenue						
SR 12 to Sebastopol Rd	E	D	E	B	—	—
Sebastopol Rd to Barham Ave	D	B	F	C	—	—
Barham Ave to Hearn Ave	D	B	F	C	—	—
4. Hearn Avenue						
Stony Point Rd to Dutton Meadow	E	D	D	C	C	C
Dutton Meadow to Dowd Dr	E	D	D	C	C	B
Dowd Dr to Santa Rosa Ave	F	E	F	C	C	B
5. Olive Street-Corby Avenue						
Sebastopol Rd to Barham Ave	D	B	F	C	—	—
Barham Ave to Baker Ave	D	C	F	D	D	C
Baker Ave to Hearn Ave	D	C	F	D	D	C
Hearn Ave to Bellevue Ave	F	E	F	F	E	D
6. West Avenue						
Sebastopol Rd to South Ave	C	C	F	C	—	—
South Ave to Hearn Ave	C	C	F	C	D	C
7. Dutton Meadow						
Hearn Ave to Bellevue Ave	E	C	F	C	E	C
8. Bellevue Avenue						
Stony Point Rd to Dutton Meadow	E	C	F	B	E	C
Dutton Meadow to Corby Ave	F	C	F	D	—	—
9. Burbank Avenue						
Sebastopol Rd to Roseland Cr	D	B	D	B	—	—
Roseland Creek to Hearn Ave	E	A	E	A	—	—
10. Barham Avenue						
Dutton Ave to S Davis St	E	B	F	C	—	—

Source: W-Trans 2016

Notes: Mode does not exist on segments denoted with a dash. Because Multimodal LOS is not time dependent, the LOS will be the same for all "plus project" scenarios and a separate future analysis is not required.

As shown in **Table 3.14-16**, on almost every roadway segment analyzed, pedestrian, bicycle, and transit levels of service are expected to improve compared to existing conditions. Pedestrian circulation would be enhanced by upgrades such as constructing new sidewalks and filling sidewalk gaps, enhancing and increasing the visibility of pedestrian crossings, activating corridors through building frontages with "eyes on the street" and pedestrian-scale street lighting, and providing buffers (parking or landscaping) between moving traffic and sidewalks on major streets. Bicycle circulation would be enhanced by such upgrades as new bicycle lanes, routes, and paths, as well as increased connectivity among bike routes, including directional signage. While transit routes and service frequencies would adapt over time to meet demand and are under current study by CityBus, overall, the proposed project would help to enhance transit modes through increases in pedestrian accessibility to stops, adding transit shelters and lighting at stops where none currently exist, and adding bike parking at transit stops.

The proposed project includes new pedestrian and bicycle connections, supporting and expanding upon the improvements identified in the City's Bicycle and Pedestrian Master Plan. The transit-oriented development pattern creates a diverse mix of land uses, resulting in a concentration of housing, jobs, and shopping all within walking and bicycling distance of one another. The plan emphasizes multimodal circulation, accommodating vehicular through traffic but at a slower pace that substantially improves safety for pedestrians and cyclists compared to traditional higher-speed roadway systems. Pedestrian and bicycle activity is likely to increase proportionately to increases in traffic volumes in the project area. Primary pedestrian street crossings on major streets would occur at controlled intersections (i.e., signalized), which include specific provisions to minimize conflicts between vehicular traffic and non-motorized transportation users.

All planned new streets in the project area would include full sidewalk facilities at buildout, supplemented by a network of off-street mixed-use pedestrian and bicycle paths. Completion of the SMART multi-use pathway and extensions of the Roseland Creek and Colgan Creek paths, as well as several shorter off-street path linkages identified in the Specific Plan, would also significantly enhance pedestrian and bicycle circulation throughout the project area even though they are not directly reflected in the multimodal level of service results. Similarly, crossing enhancements on the Joe Rodota Trail and increased "eyes on the street" created by future development along the trail would enhance both pedestrian and bicycle circulation in the northern project area. The SMART multi-use path would also provide a key connection to the downtown Santa Rosa station. SMART trains are being designed to accommodate bicycles on board, so the existing and proposed network of bicycle facilities would allow for the "last-mile" connection between the train and a rider's origin or destination.

Mitigation Measures

None required.

Transit Operations (Standard of Significance 5d)

Impact 3.14.8 Implementation of the proposed project would have a beneficial impact on bus transit by concentrating uses in a transit-oriented development pattern and by increasing connectivity to transit facilities. This impact would be **less than significant**.

By concentrating jobs, housing, and shopping in a transit-oriented development pattern along Sebastopol Road and near the Southside Bus Transfer Center, the project is by design intended to increase transit ridership and reduce dependence on private automobile travel. The plan also emphasizes improvements to pedestrian and bicycle connectivity to transit, further increasing the

convenience and utility of using transit. Santa Rosa CityBus is in the midst of a comprehensive planning project called "Reimagining Santa Rosa CityBus," which, through an extensive community outreach process, seeks to reassess the entire transit system at the network level, leading to potential route and service modifications intended to boost ridership and improve ease of using transit. A key component of this plan will be to increase transit accessibility to areas where transit usage and dependence are highest, such as the Roseland area. The project also calls for transit-related improvements including bus shelters and lighting at transit stops, as well as pedestrian network enhancements near bus stops and along transit corridors. As shown in **Table 3.14-16**, at buildout the proposed project would also improve transit-related multimodal levels of service on all corridors analyzed.

Mitigation Measures

None required.

Construction Impacts (Standard of Significance 1)

Impact 3.14.9 Construction activities associated with project implementation may temporarily affect vehicular, pedestrian, bicycle, and transit circulation. This impact would be **potentially significant**.

Construction projects generate truck traffic for a variety of purposes throughout the construction schedule, including material and equipment deliveries, earthwork, etc. The construction workforce also generates auto commute trips, though most such trips occur during non-peak traffic hours. Construction projects may periodically require traffic detours to allow heavy equipment movements or to facilitate construction activities directly adjacent to the street, or during upgrades of the utilities infrastructure needed to support growth in the project area. The detours may temporarily affect traffic circulation, as well as redirect pedestrian and bicycle traffic. Therefore, construction of new development and infrastructure resulting from the proposed project could potentially adversely affect traffic flows and accessibility. This impact would be **significant**.

Mitigation Measures

MM 3.14.9 Prior to construction activities, applicants seeking to construct projects in the project area shall submit a construction traffic control plan to the City of Santa Rosa for review and approval. The plan shall identify the timing and routing of all major construction-related traffic to avoid potential congestion and delays on the local street network. Any temporary road or sidewalk closures shall be identified along with detour plans for rerouting pedestrian and bicycle traffic for rerouting pedestrian and bicycle traffic. The plan shall also identify locations where transit service would be temporarily rerouted or transit stops moved, and these changes must be approved by the Santa Rosa CityBus and Sonoma County Transit before the plan is finalized. If necessary, movement of major construction equipment and materials shall be limited to off-peak hours to avoid conflicts with local traffic circulation.

Timing/Implementation: *Prior to construction activities*

Enforcement/Monitoring: *City of Santa Rosa Transportation and Public Works Department and Planning and Economic Development Department.*

With implementation of this mitigation, the impact would be reduced to **less than significant.**

3.14.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Future (No Project) Conditions

Future Traffic Projections

The modeling for the proposed project was completed using the Sonoma County Transportation Authority's SCTM/10 travel demand model. Special runs of the model were completed for the Future (No Project) scenario in which regional buildout was assumed to occur but land uses within the project area would remain unchanged from current conditions. It is important to note that while this "No Project" scenario assumes no change to existing development levels in the project area, in reality the City's currently adopted General Plan land use designations would allow future development to occur at intensities the same as or similar to the proposed project (see **Table 2.0-6** in Chapter 2.0, Project Description, for a comparison between development levels under General plan designations and the proposed project). Therefore, if the proposed project is not approved, the area would continue to experience growth as allowed under the City's current General Plan. However, comparison of this No Project scenario and a plus Project scenario provides an assessment of the project's potential impacts compared to the existing conditions in the project area.

The SCTA year 2040 buildout network includes many regional improvements throughout the county, including two major roadway projects on the periphery of the project area that are assumed to be in place under future (buildout) conditions either with or without the project. The first is the widening of the Hearn Avenue overpass and interchange improvements, based on draft interchange layouts dated October 2015. The second is a new Bellevue Avenue overpass of US 101. These two projects will influence traffic patterns in both the immediate and extended areas, increasing volumes in some locations and decreasing them in others.

Existing plus Project and Future plus Project runs include the roadway extensions/realignments depicted in the project area as well as the development (and traffic generating) potential of the plan's proposed land uses. For all scenarios, segment volumes from the model were translated to turning movement volumes at intersections throughout the study area using existing traffic counts and the "Furness" procedure. This procedure is an iterative process that employs existing turn movement data, model-obtained baseline link volumes, and model-obtained future link volumes to project likely turning future movement volumes at intersections.

The projected AM and PM peak-hour volumes on key roadway segments throughout the project area under Future (No Project) conditions are shown on **Figure 3.14-6**.

Planned Roadway Improvements

The following roadway improvements are included in the long-range future modeling conducted for buildout conditions both with and without the project.

Capital Improvement Program (CIP) Project

Stony Point Road Widening – This CIP project is currently under construction and will widen Stony Point Road to four lanes between Sebastopol Road and Hearn Avenue. The project will include on-street bicycle lanes, curb, gutter, sidewalks, and turn pockets. The widening project is

anticipated to significantly improve multimodal circulation along the western boundary of the project area and is projected to be completed in 2017.

Long-Range Circulation Projects and Plans

Hearn Avenue Interchange Reconstruction – Preparation of a Caltrans Project Approval and Environmental Document (PA&ED) to replace and widen the Hearn Avenue overcrossing at US 101, along with associated intersection and ramp improvements, is currently under way. Caltrans' acceptance of this document is one of several steps required in the planning and pursuit of funding to complete the project. Ultimately, the new overpass is anticipated to include four lanes plus turn pockets, bicycle lanes, sidewalks, and signal upgrades. The project is needed to address existing congestion issues including queues on the southbound off-ramp that extend onto the mainline freeway and will also result in significantly improved east–west pedestrian and bicycle circulation over the freeway.

Bellevue Avenue Improvements at US 101 – Figure 5-1 of the City's General Plan 2035 depicts a potential freeway interchange at US 101 and Bellevue Avenue. Because the separation between the Hearn Avenue and Bellevue Avenue interchanges would be noncompliant with Caltrans mandates, Caltrans has determined that a future Bellevue Avenue overcrossing without freeway ramps to and from US 101 (in other words, without an interchange) is the appropriate long-range vision to maintain. This type of configuration would still improve vehicular, pedestrian, bicycle, and transit connectivity between east and west Santa Rosa.

Comprehensive Transportation Plan

The SCTA's 2009 Comprehensive Transportation Plan for Sonoma County includes several projects adjacent to the project area that are likely to affect traffic flow characteristics. The plan is a long-range planning document used to program transportation improvements over the coming 25 years, and these improvements are assumed to be complete only under future (buildout) conditions.

- Hearn Avenue – US 101 interchange reconstruction
- Fulton Road – new interchange and widening at SR 12
- Stony Point Road – widening between Santa Rosa and Petaluma
- Bellevue Avenue – extension to Santa Rosa Avenue via US 101 freeway overpass and interchange (as noted above, the City no longer intends to pursue a full interchange with ramps to and from US 101)
- US 101 – completion of high-occupancy vehicle (HOV) lanes between Santa Rosa and Marin County

Corridor Operational Analysis

The automobile corridor level of service results for future conditions without added development in the project area are summarized in **Table 3.14-17**. With regional growth in the remainder of the city, county, and region, in addition to nearby projects including the Hearn Avenue interchange widening and Bellevue Avenue overcrossing, corridor level of service is projected to remain at LOS D or better. Copies of the corridor level of service calculations, as well as LOS calculations for individual signalized intersections along the corridors, are included in Appendix B of **Appendix 3.14**.

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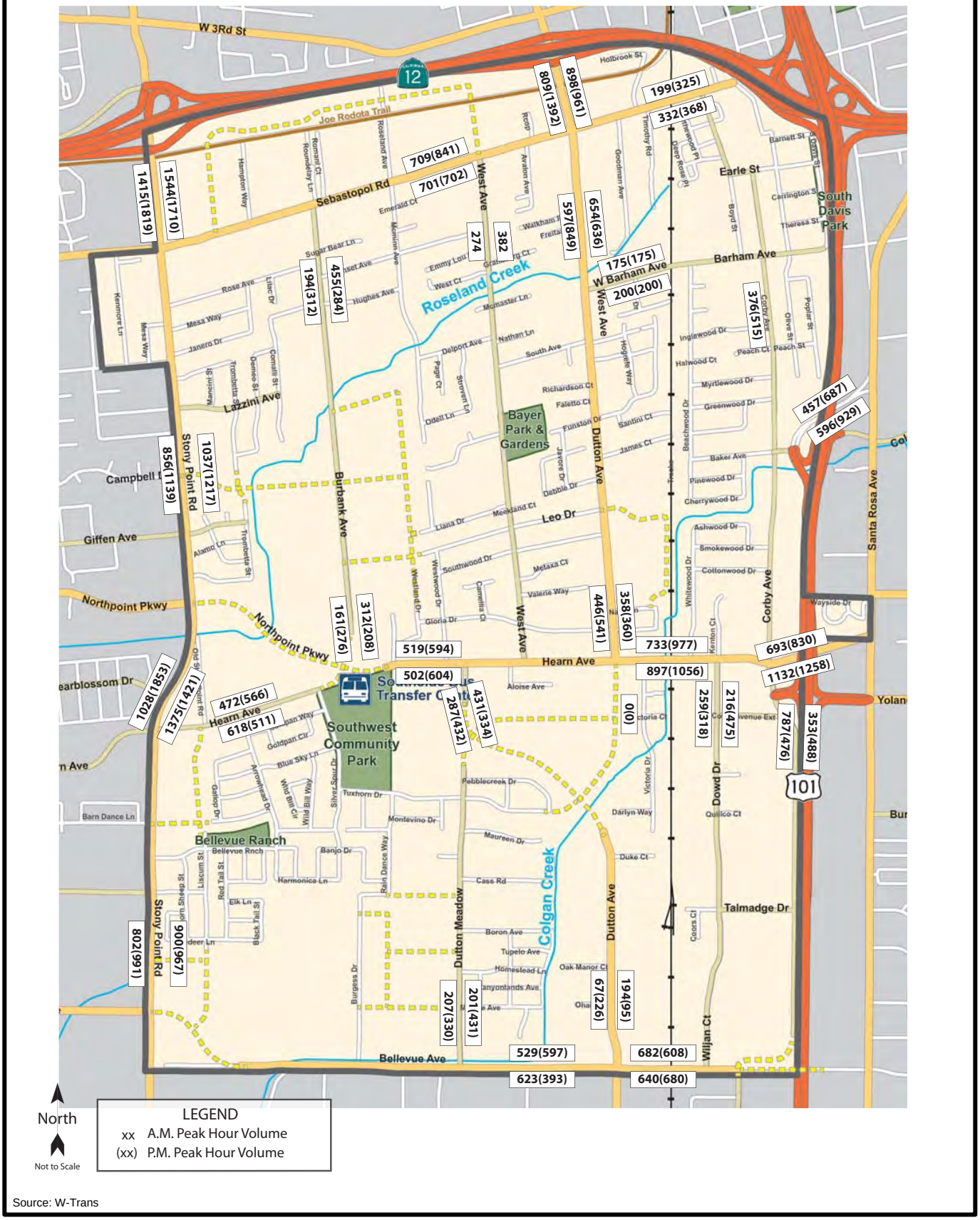

Source: W-Trans

FIGURE 3.14-6
Future No Project Traffic Volumes

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TABLE 3.14-17
ROADWAY SEGMENT FUTURE (NO PROJECT) PEAK-HOUR LEVEL OF SERVICE SUMMARY

Corridor			Future AM Peak Hour			Future PM Peak Hour		
Direction	**Class**	**Free-Flow Speed**	**Avg. Speed**	**% FFS**	**LOS**	**Avg. Speed**	**% FFS**	**LOS**
Stony Point Road–SR 12 to Bellevue								
NB	II	40	22	55%	C	18	45%	D
SB	II	40	25	63%	C	21	53%	C
Sebastopol Road–Stony Point to Olive								
EB	III	35	20	57%	C	19	54%	C
WB	III	35	19	54%	C	17	49%	D
Dutton Avenue–SR 12 to Hearn								
NB	IV	30	23	77%	B	21	70%	B
SB	IV	30	19	63%	C	18	60%	C
Hearn Avenue–Stony Pt to Santa Rosa								
EB	III	35	28	80%	B	25	71%	B
WB	III	35	25	71%	C	22	63%	C

Source: W-Trans 2016

Notes: Avg. Speed = average corridor speed in miles per hour; % FFS = percent of free-flow speed; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound

Future Freeway Operation

Mainline Operation

The incremental growth of traffic on US 101 between existing and future (no project) conditions was obtained from the SCTM/10 model and added to existing freeway traffic volumes. It is projected that all study freeway segments would operate unacceptably at LOS D or worse in at least one direction during peak hours. Freeway operations are summarized in **Table 3.14-18,** and calculations are provided in Appendix D of **Appendix 3.14**.

TABLE 3.14-18
FUTURE (NO PROJECT) PEAK-HOUR FREEWAY OPERATIONS

Freeway Segment	AM Peak Hour	PM Peak Hour
US 101 North – Todd Rd to SR 12		
Density	49.0	41.8
LOS	F	E
US 101 South – SR 12 to Todd Rd		
Density	32.8	36.2
LOS	D	E
SR 12 East – Stony Point Rd to US 101		
Density	35.2	29.6
LOS	E	D

Freeway Segment	AM Peak Hour	PM Peak Hour
SR 12 West – US 101 to Stony Point Rd		
Density	20.2	28.8
LOS	C	D

Source: W-Trans 2016

Notes: Density is measured in passenger cars per mile per lane; LOS = level of service

Ramp Operation

The study area freeway ramp intersections are expected to operate acceptably at LOS D or better. Vehicle queues at the off-ramps are projected to remain within available storage. The future freeway ramp level of service and queuing projections are summarized in **Table 3.14-19**, and calculations are provided in Appendices C and E of **Appendix 3.14**.

TABLE 3.14-19
FUTURE PM PEAK-HOUR FREEWAY RAMP OPERATIONS

Freeway Interchange	Intersection Operations		Off-Ramp Queuing	
	Delay	LOS	Available Storage	Maximum Queue
SR 12/Stony Point Road				
Westbound	30.0	C	930	325
Eastbound	12.8	B	710	422
SR 12/Dutton Avenue				
Westbound	24.5	C	990	478
Eastbound	16.7	B	770	250
US 101/Baker Avenue				
Northbound	35.4	D	810	254
Southbound	13.8	B	340	164
US 101/Hearn Avenue				
Northbound	36.5	D	960	205
Southbound	11.9	B	620	157

Source: W-Trans 2016

Notes: Delay is measured in seconds; LOS = level of service; Maximum Queue is the averaged maximum queue observed in 10 SimTraffic model runs measured in feet

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Corridor Operations (Standards of Significance 1 and 2)

Impact 3.14.10 Project traffic, when considered together with other past, present, and future development, would have the potential to degrade corridor operations to unacceptable levels of service (Future plus Project or cumulative condition). This impact would be **less than cumulatively considerable**.

Several improvements to roadways and key intersections throughout the project area (listed in Tables 13 and 14 in **Appendix 3.14**) have been incorporated into the project in order to achieve acceptable corridor operation at buildout. Automobile roadway segment levels of service are projected to remain at LOS D or better during both the AM and PM peak hours under Future plus Project conditions. Corridor level of service results are summarized in **Tables 3.14-20** and **3.14-21**.

TABLE 3.14-20
FUTURE PLUS PROJECT ROADWAY SEGMENT AM PEAK-HOUR LEVEL OF SERVICE SUMMARY

Corridor			Future (No Project)			Future plus Project		
Direction	Class	Free-Flow Speed	Avg. Speed	% FFS	LOS	Avg. Speed	% FFS	LOS
Stony Point Road–SR 12 to Bellevue								
NB	II	40	22	55%	C	18	45%	D
SB	II	40	25	63%	C	25	63%	C
Sebastopol Road–Stony Point to Olive								
EB	III	35	20	57%	C	16	46%	C
WB	III	35	19	54%	C	17	49%	C
Dutton Avenue–SR 12 to Hearn								
NB	IV	30	23	77%	B	18	60%	C
SB	IV	30	19	63%	C	19	63%	C
Hearn Avenue–Stony Pt to Santa Rosa								
EB	III	35	28	80%	B	17	49%	D
WB	III	35	25	71%	C	21	60%	C

Source: W-Trans 2016

Notes: Avg. Speed = average corridor speed in miles per hour; % FFS = percent of free-flow speed; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound

TABLE 3.14-21
FUTURE PLUS PROJECT ROADWAY SEGMENT PM PEAK-HOUR LEVEL OF SERVICE SUMMARY

Corridor			Future (No Project)			Future plus Project		
Direction	Class	Free-Flow Speed	Avg. Speed	% FFS	LOS	Avg. Speed	% FFS	LOS
Stony Point Road–SR 12 to Bellevue								
NB	II	40	18	45%	D	18	45%	D
SB	II	40	21	53%	C	21	53%	C
Sebastopol Road–Stony Pt to Olive								
EB	III	35	19	54%	C	18	51%	C
WB	III	35	17	49%	C	15	43%	D
Dutton Avenue–SR 12 to Hearn								
NB	IV	30	21	70%	B	18	60%	C

Corridor			Future (No Project)			Future plus Project		
Direction	Class	Free-Flow Speed	Avg. Speed	% FFS	LOS	Avg. Speed	% FFS	LOS
SB	IV	30	18	60%	C	18	60%	C
Hearn Avenue–Stony Pt to Santa Rosa								
EB	III	35	25	71%	B	18	51%	C
WB	III	35	22	63%	C	18	51%	C

Source: W-Trans 2016

Notes: Avg. Speed = average corridor speed in miles per hour; % FFS = percent of free-flow speed; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound

As shown in the preceding tables, vehicular traffic on all study corridors is expected to continue operating acceptably at LOS D or better with the addition of project-generated traffic and roadway improvements identified as part of the project. Incorporation of the roadway improvements identified in the specific plan into the City's traffic impact fee program or another appropriate long-range funding mechanism, and continued monitoring of corridor operation over time through review of traffic impact studies conducted for proposed development will ensure this impact is **less than significant**.

Mitigation Measures

None required.

Mainline Freeway Operations (Standards of Significance 1 and 2)

Impact 3.14.11 Project traffic, when considered together with other past, present, and future development, would have the potential to degrade mainline freeway operations to unacceptable levels of service (Future plus Project or "cumulative" conditions). This impact would be **potentially cumulatively considerable**.

The incremental changes to traffic on US 101 associated with implementation of the proposed project were added to current and projected freeway traffic volumes to obtain Future plus Project volumes. As shown in **Table 3.14-22**, under Future and Future plus Project conditions, both US 101 and SR 12 are projected to have segments operating below the LOS C/D threshold during one or both peak hours. Freeway operations calculations are provided in Appendix D of **Appendix 3.14**.

TABLE 3.14-22
FUTURE PLUS PROJECT PEAK-HOUR FREEWAY OPERATIONS

Freeway Segment	Future		Future plus Project	
	AM	PM	AM	PM
US 101 North – Todd Rd to SR 12				
Density	49.0	41.8	49.3	**42.3**
LOS	F	E	F	**E**
US 101 South – SR 12 to Todd Rd				
Density	32.8	36.2	32.8	36.1
LOS	D	E	D	E

Freeway Segment	Future		Future plus Project	
	AM	PM	AM	PM
SR 12 East – Stony Point Rd to US 101				
Density	35.2	29.6	**42.0**	**31.1**
LOS	E	D	**E**	**D**
SR 12 West – US 101 to Stony Point Rd				
Density	20.2	28.8	20.5	**29.4**
LOS	C	D	C	**D**

Source: W-Trans 2016

*Notes: Density is measured in passenger cars per mile per lane; LOS = level of service; **bold** values = Plan increases density by greater than 1% on segment operating unacceptably at LOS D or worse.*

The proposed project is considered to create a significant impact on freeway operations if it increases the density on segments operating unacceptably (below the LOS C/D threshold) by more than 1 percent. This level of impact is projected to occur under Future plus Project conditions on northbound US 101, eastbound SR 12, and westbound SR 12.

The freeway study segments of US 101 and SR 12 are expected to operate unacceptably both without and with traffic changes associated with the proposed project. The increases in freeway density that are attributable to the project would exceed 1 percent on northbound US 101, eastbound SR 12, and westbound SR 12, and would be considered cumulatively considerable.

Mitigation Measures

As described previously, the projected unacceptable operation on US 101 could be mitigated by widening the freeway to include additional through lanes in each direction. However, further widening of US 101 is not included in the SCTA's Comprehensive Transportation Plan, nor do any financing mechanisms currently exist to fund the improvement. Widening the freeway would require major reconstruction of multiple freeway structures, right-of-way acquisition including many homes and businesses, closure or relocation of city streets paralleling the freeway corridor, and the likely creation of additional secondary environmental impacts. The projected unacceptable operation on SR 12 is largely attributable to the freeway ramp spacing and tight merge operations between Dutton Avenue and US 101, and would require ramp closures or reconstruction of the US 101/SR 12 freeway interchange to alleviate the congestion. Closure of the Dutton Avenue interchange is considered infeasible due to local access impacts and inability to increase the capacity of adjacent intersections and streets to accommodate the resulting shifts in traffic. Reconstruction of the US 101/SR 12 freeway interchange would likely require implementation of multilevel freeway structures in order to create a "braided" ramp system, requiring significant right-of-way acquisition and likely creating secondary environmental impacts. As a result, the environmental, social, and financial impacts of making such improvements to US 101 and SR 12 are considered infeasible.

The City of Santa Rosa, the County of Sonoma, and the Sonoma County Transportation Authority recognize that US 101 will experience congestion into the foreseeable future and that there will be no further major capacity enhancements such as expansions or new freeways. All three jurisdictions concur in various planning and policy documents that long-range solutions to regional mobility must focus on better land use planning that supports transit and alternative transportation modes; stronger jobs-housing balance; and increased support of transportation demand measures. The proposed Specific Plan emphasizes each of these goals. Because there are no known physical improvements that would result in acceptable freeway operation in the future,

however, and subsequently no means for development within the project area to contribute fair-share payments to projects such as a freeway expansion, this impact would be **cumulatively considerable** and **significant and unavoidable**.

Freeway Ramp Operations (Standards of Significance 1 and 2)

Impact 3.14.12 Project traffic, when considered together with other past, present, and future development, would have the potential to degrade freeway ramp operations to an unacceptable level of service at the westbound SR 12 freeway off-ramp at Dutton Avenue (Future plus Project or cumulative conditions). This impact would be **potentially cumulatively considerable**.

As shown in **Table 3.14-23**, under Future plus Project conditions, all eight ramp terminal intersections are projected to operate at acceptable levels of service. Freeway off-ramp queues are projected to remain within available storage on seven of the eight ramps, but would exceed storage and extend onto mainline SR 12 at the Dutton Avenue off-ramp. This adverse queuing could be alleviated by widening the off-ramp to extend the right turn lane to a length of at least 550 feet. With this widening, queues are projected to remain within the available storage at all locations. Note that the queuing impact at the southbound US 101 Hearn Avenue off-ramp identified under Existing plus Project conditions (see Impact 3.14.3) is no longer shown to be an impact since the planned overpass widening would be in place under buildout conditions. A summary of the Future plus Project freeway ramp levels of service and queuing projections is contained in Table 23, and calculations are provided in Appendices C and E of **Appendix 3.14**.

TABLE 3.14-23
FUTURE PLUS PROJECT PM PEAK-HOUR FREEWAY RAMP OPERATIONS

Freeway Interchange	Intersection Operations		Off-Ramp Queuing		
	Future Delay/LOS	Plus Project Delay/LOS	Available Storage	Future Max Queue	Plus Project Max Queue
SR 12/Stony Point Road					
Westbound	30.0/C	30.5/C	930	325	361
Eastbound	12.8/B	19.6/B	710	422	318
SR 12/Dutton Avenue					
Westbound	24.5/C	30.0/C	990	478	**1,037**
Mitigated[1]			*990*		*689*
Eastbound	16.7/B	17.7/B	770	250	431
US 101/Baker Avenue					
Northbound	35.4/D	38.6/D	810	254	185
Southbound	13.8/B	17.2/B	340	164	239
US 101/Hearn Avenue					
Northbound	36.5/D	36.1/D	960	205	210
Southbound	11.9/B	12.2/B	620	157	174

Source: W-Trans 2016

Notes: [1] Off-ramp widening lengthens right turn lane storage to 550 feet.

*Delay is measured in seconds; LOS = level of service; Max Queue is the averaged maximum queue observed in 10 SimTraffic model runs measured in feet; **bold** = queuing exceeds available storage*

Mitigation Measures

MM 3.14.12 The City shall widen the Dutton Avenue westbound off-ramp to extend the right turn pocket to a minimum length of 550 feet to alleviate the adverse queuing onto the mainline freeway. The City shall monitor queuing conditions on the ramp through field observations and review of development traffic impact studies and add the widening project to the Capital Improvement Program once it is determined that queues are likely to exceed storage within a five-year time frame. The City shall collaborate with Caltrans in obtaining approvals to complete the widening project.

Timing/Implementation: *Prior to adverse queuing onto the mainline freeway*

Enforcement/Monitoring: *City of Santa Rosa Transportation and Public Works Department*

With widening of the off-ramp as required by mitigation measure **MM 3.14.12**, queues are projected to remain within the available storage, lessening this cumulative impact to **less than cumulatively considerable**.

REFERENCES

OPR (Governor's Office of Planning and Research). 2016. *Updating the Analysis of Transportation Impacts under CEQA*. Accessed February 26. https://www.opr.ca.gov/s_sb743.php.

Transportation Research Board. 2000. *Highway Capacity Manual*.

———. 2010. *Highway Capacity Manual 2010*.

W-Trans. 2016. *Traffic Impact Study for the Roseland Area/Sebastopol Road Specific Plan and Annexation.*

3.15 Public Utilities

3.15.1 WATER

3.15.1.1 EXISTING SETTING

The project area includes several unincorporated areas that would be incorporated into the city as a result of the proposed project. Although these areas are not currently a part of Santa Rosa, they are within the City's water service area and are currently provided municipal water service by the City.

WATER SUPPLIES

Surface Water Supply

The City of Santa Rosa receives the majority of its potable water supply from water stored in Lake Sonoma and Lake Mendocino. Water is conveyed into and through the Russian River system where it is extracted from subsurface Ranney well collectors owned and operated by the Sonoma County Water Agency (SCWA). From its headwaters in central Mendocino County, the Russian River drains a 1,485-square-mile area.

Principal tributaries of the Russian River are the East Fork of the Russian River, Big Sulphur Creek, Mark West Creek, Maacama Creek, and Dry Creek. Two major reservoir projects located in the Russian River watershed (Lake Mendocino on the East Fork of the Russian River, and Lake Sonoma on Dry Creek) provide water supply storage. A third reservoir project, Lake Pillsbury, indirectly contributes to the water supply through releases into the Eel River, a portion of which are diverted into the East Fork of the Russian River, through the Potter Valley project.

The SCWA collects water from the Russian River from two intake sites at Wohler and Mirabel located near Forestville. Infiltration ponds surround the SCWA river collectors, and an inflatable dam on the Russian River assists in raising the water level during periods of low flow. The dam serves to divert water from the river into the infiltration ponds and also raises water levels upstream that supply the intake sites (Santa Rosa 2009b).

Groundwater Supply

Santa Rosa is located in the Santa Rosa Plain Subbasin of the Santa Rosa Valley Groundwater Basin, located at the confluence of the Santa Rosa, Bennett, and Rincon valleys.

The City's groundwater supply is derived exclusively from the Santa Rosa Plain Subbasin. The City maintains a total of six municipal groundwater wells in the subbasin, two of which are production wells permitted for regular production of up to 2,300 acre-feet per year (AFY) of potable supply. Three of the City's remaining wells provide emergency stand-by supply and one provides a minor amount of landscape irrigation water supply. The SCWA also has three groundwater wells in the subbasin. Although there are no legal constraints to the SCWA's ability to use groundwater supplies, the amount of groundwater expected to be pumped by the agency is projected to remain stable until 2035, at 2,300 acre-feet annually.

Since the mid-1990s, Santa Rosa has had an adopted Capital Improvement Program for the development of the City's groundwater resources to provide an additional 12.0 million gallons per day (mgd) emergency groundwater supply suitable for potable use by the City (Santa Rosa 2015).

Wholesale Water Rights and Supply

The City currently receives the majority of its potable water supply from the SCWA under the provisions of the Restructured Agreement for Water Supply (Restructured Agreement) dated June 2006. The remaining potable water supply is provided by the City's own groundwater wells. The City's contractual entitlement under the Restructured Agreement is 29,100 acre-feet annually. Should the SCWA at any time not be able to provide the City its full entitlement, shortage provisions are outlined in Section 3.5 of the Restructured Agreement and the SCWA's adopted Water Shortage Allocation Methodology (adopted per the requirements of Section 3.5 of the Restructured Agreement). Based on the City's aggressive water conservation implementation, under the Water Shortage Allocation Methodology, it is anticipated that the City's allocation would be 29,100 AFY, the full entitlement in the Restructured Agreement (Santa Rosa 2011).

Historical and Projected Water Use

The increase in Santa Rosa's water use has been relatively slow and can be attributed to various factors, including aggressive conservation practices implemented by the City and above-normal and wet rain years through the latter part of the 1990s. In August 2014, the City enacted mandatory water restrictions to comply with the State's drought emergency regulations and manage reduction in water supplies to achieve a 20 percent citywide reduction in water use (Santa Rosa 2016). Under the Restructured Agreement, the City's monthly water entitlement from the SCWA is an average-day peak month supply of 56.6 mgd and its supply is limited to a total of 29,100 AFY (Santa Rosa 2009b).

In 2010, the City had 43,494 single-family accounts, 3,129 multi-family accounts, 2,573 commercial, industrial, and institutional accounts combined, and 1,695 landscape irrigation accounts. The metered projections for 2035 without implementation of the proposed project are 12,244 AFY single-family residential, 4,273 AFY multi-family, 4,521 AFY commercial, industrial, and institutional, 3,913 AFY landscape, and 5,932 AFY new single-family, totaling 30,883 AFY. The City anticipates an additional 3,735 AFY of water required by year 2035 to account for system water losses and recycled water use, bringing the total water demand to 33,518 AFY (Santa Rosa 2011).

Existing Infrastructure

The City's primary water supply source (approximately 95 percent) is purchased treated water from the SCWA. SCWA supplies potable water to the city via turnouts off of two aqueducts: the Kawana Pipeline (West Santa Rosa Pipeline) and the Petaluma Aqueduct. The project area lies entirely within one pressure zone and is gravity-fed from the SCWA aqueduct systems. The City has five potable groundwater wells, two of which can supplement supply from SCWA and three of which are used for emergency purposes only. The City currently owns, operates, and maintains all of the water infrastructure distribution network within the city limits and the unincorporated areas of the project area. The majority of the pipelines in the project area are constructed of PVC, asbestos cement, cast iron, or steel (Michael Baker International 2016).

WATER TREATMENT

Groundwater underlying the City's service area generally meets primary and secondary drinking water standards for municipal use. The City's two production wells have historically exhibited slightly elevated concentrations of both iron and manganese, exceeding secondary drinking water standards. A treatment system for iron and manganese removal has been constructed at the site of the City's production wells to treat groundwater before it enters the City's distribution system (Santa Rosa 2011).

3.15.1.2 REGULATORY FRAMEWORK

FEDERAL

Environmental Protection Agency

The US Environmental Protection Agency (EPA) is the federal agency assigned to maintain safe air and water throughout the country. Santa Rosa is in EPA Region 9, which includes Arizona, California, Hawaii, Nevada, the Pacific Islands, and over 140 Tribal Nations. The State Water Resources Control Board (SWRCB) works with the EPA to control and reduce pollutants from entering drinking water sources.

STATE

Urban Water Management Planning Act

The Urban Water Management Planning Act (Water Code Sections 10610–10656) requires every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 connections to assess the reliability of its water sources over a 20-year planning horizon considering normal, dry, and multiple dry years. This assessment is to be included in an Urban Water Management Plan (UWMP); these plans are required to be prepared every five years and submitted to the Department of Water Resources (DWR 2012).

Senate Bill 610 and Senate Bill 221

Senate Bill (SB) 610 and SB 221 (Water Code Section 10910(c)(2)) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 seek to promote more collaborative planning between local water suppliers and cities and counties by requiring that detailed information regarding water availability be provided to decision-makers prior to approval of specified large development projects. SB 610 requires that detailed information be included in a water supply assessment (WSA), which is then included in the administrative record that serves as the evidentiary basis for an approval action by a city or county. SB 221 requires that the detailed information be included in a verification of water supply.

Under SB 610, WSAs must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code Section 10912(a)) subject to the California Environmental Quality Act (CEQA). A WSA was adopted for the Santa Rosa General Plan that addresses the current and planned future water demand of the water supplier, the projected demand of the proposed project area, and the projected water supply of the water supplier, and makes a determination of the sufficiency of its water supplies for the project, in addition to existing and planned future uses.

LOCAL

Santa Rosa 2010 Urban Water Management Plan

The City's 2010 Urban Water Management Plan was prepared according to the requirements of the Urban Water Management Planning Act and includes details about Santa Rosa's projected water supply and demand through 2035 during an average water year, a single dry year, and multiple dry years; current and projected recycled water use; water conservation program details;

and detailed information about regional water supply. The City's 2010 UWMP also includes an update to the City's Urban Water Shortage Contingency Plan. The City is currently in the process of developing the 2015 UWMP.

Santa Rosa Water-Efficient Landscape Ordinance

The City adopted a Water-Efficient Landscape Ordinance (Ordinance No. 3925; City Code Chapter 14-30) in 2010. It applies to all of the following new and rehabilitated landscape projects that require a building or grading permit, plan check, design review or utilities certificate: commercial, industrial and institutional landscaping, park and greenbelt landscaping, multi-family residential, and single-family residential landscaping. The City amended the ordinance, effective December 1, 2015, to comply with the state's updated water efficiency requirements.

Santa Rosa Fire Flow Requirements

City standards provide a guide to fire flow requirements for development within the Urban Growth Boundary. In general, single- and two-family residential lots require 1,500 gallons per minute (gpm) of flow. Schools, commercial, industrial, and multi-family residential (three or more units) typically require 2,500 gpm from two hydrants to conform to the City Fire Code. Mid-rise and high-rise structures require higher flows. All fire flows mentioned above must maintain a residual of 20 pounds per square inch while providing the required flow. Compliance with fire flow requirements noted above is ultimately under the jurisdiction of the Santa Rosa Fire Department.

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the project in regard to water supply.

Public Services and Facilities Element

Goal PSF-F: **Ensure that an adequate supply of water is available to serve existing and future needs of the city.**

Policy PSF-F-1: Utilize high quality water from the Sonoma County Water Agency (SCWA) aqueduct system as the primary water supply.

Policy PSF-F-2: Ensure that water supply capacity and infrastructure are in place prior to occupancy of new development.

Policy PSF-F-3: Develop available groundwater resources for the purpose of providing a supplemental source of water in the event of an emergency.

Policy PSF-F-4: Maintain existing levels of water service by preserving and improving infrastructure, replacing water mains as necessary, and improving water transmission lines.

Policy PSF-F-5: Decline requests for extension of water beyond the Urban Growth Boundary, except in cases of existing documented health hazards and in areas where the city has agreements to provide services.

Policy PSF-F-6: Evaluate the city's long-term water supply strategies, including development of new sources of water supply, improved water conservation and re-use, and implementation of appropriate growth control measures if necessary.

3.15.1.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. An impact to public utilities is considered significant if the project would:

1) Have insufficient water supplies available to serve the project from existing entitlements and resources, thus requiring new or expanded entitlements.

2) Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

METHODOLOGY

The following evaluation of potential water service impacts for the proposed project was based on a review of the following documents:

- City of Santa Rosa General Plan 2035 and associated environmental impact report and water supply assessment
- City of Santa Rosa 2014 Water Master Plan Update
- City of Santa Rosa 2010 Urban Water Management Plan
- Infrastructure Report prepared for the project area (see **Appendix 2.0**)
- Technical memorandum re: Proposed Roseland Specific Plan Annexation: Water System Evaluation for Areas of Change (West Yost Associates 2015)

PROJECT IMPACTS AND MITIGATION MEASURES

Require New or Expanded Water Entitlements (Standard of Significance 1)

Impact 3.15.1.1 The proposed project would not exceed the City's projected water demand identified in the 2010 Urban Water Management Plan. Thus, no new or expanded water entitlements would be required and this impact would be **less than significant**.

Implementation of the proposed project would result in substantial new development within the project area compared to existing conditions. As shown in **Table 2.0-5** in Section 2.0, Project Description, the project would add 3,702 residential units and 913,814 square feet of nonresidential uses.

The proposed project's water demand above existing conditions was estimated using residential equivalency factors (REFs) consistent with the project and Zoning Code land use classifications for retail, office, industrial, and public/institutional uses. These REFs translate nonresidential square footages into equivalent residential use in detached buildings (see **Table 3.15-1**).

TABLE 3.15-1
WATER DEMAND GENERATED BY THE PROPOSED PROJECT ABOVE EXISTING DEMAND

Land Use	Area per REF (sf)	Development Potential of Proposed Project (sf)	Residential Dwelling Units	Residential Equivalency Factors
Residential Detached	n/a	n/a	2,449	2,449
Residential Attached	n/a	n/a	1,253	1,253
Retail/Commercial	1,000	569,703	n/a	570
Office	500	3,097	n/a	6
Light/General Industrial	1,300	321,014	n/a	247
Institutional	500	20,000	n/a	40
Total REFs				**4,565**

Source: Santa Rosa 2012, p. 42

The projected residential water use is 100,000 gallons per detached residential unit per year, based on the average of the last 10 years of annual single-family residential water use. Water use for attached residential units includes minimal landscape irrigation and averages two-thirds of the water use for detached residential units. This conclusion is based on an analysis of the past 10 years of actual water use in detached and attached residential units. The REFs for the nonresidential use categories are based on land use categories and equivalent water use per California Water Code Section 10912(a).

Therefore, the annual water demand associated with the proposed project's development potential in the project area is 100,000 gallons per REF multiplied by 4,565 REFs for the project, or a total of 456.5 million gallons per year (4,565 x 100,000 gallons), or approximately 1,401 AFY.

Because development of the project area was already considered in terms of generating demand for potable water in the City's General Plan, 2010 Urban Water Management Plan, and 2014 Water Master Plan Update, this analysis considers the change in demand based on the changed land uses in the project area described in Chapter 2.0, Project Description. Based on this assumption, the water supply analysis technical memorandum prepared for the proposed project (West Yost Associates 2015) determined that the proposed project's water demand would be approximately 0.02 million gallons per day (mgd) or 22.4 acre-feet per year (AFY) less than that projected in the City's 2014 Water Master Plan Update. Thus, the project would not meet the criteria for requiring preparation of a water supply assessment per SB 610.

The project area would be served by the City of Santa Rosa's water system, and the City receives its water primarily from the SCWA as well as from local groundwater supplies. The source of SCWA water is the Russian River, which is a component of the Russian River Project. The source of local groundwater supplies is the Santa Rosa Plain subbasin of the Santa Rosa Valley Groundwater Basin.

According to the City's 2010 UWMP, 34,878 AFY of water would be available to the City in the year 2035 (Santa Rosa 2011, p. 4-2). The UWMP projected total demand at 33,518 AFY in 2035. Given that the City anticipates having surplus water supply in year 2035 and the proposed project would reduce water demand compared to that assumed in the City's long-range water planning documents, there would be adequate supply to meet existing demands and planned future demands, and no new or expanded water entitlements would be required. Since the proposed water demand in the project area would decrease as a result of the proposed project relative to

the demand assumed in the UWMP, no new system improvements are required. This impact would be **less than significant**.

Mitigation Measures

None required.

Require New or Expanded Water Treatment Facilities (Standard of Significance 2)

Impact 3.15.1.2 Implementation of the proposed project would not require any new or expanded water treatment facilities. There would be **no impact**.

As described previously, groundwater pumped from the City's two production wells requires treatment to remove iron and manganese before the water enters the City's distribution system. As discussed in Impact 3.15.1.1, the project would not require the expansion of existing water supplies. Therefore, no expansion of the City's groundwater treatment facilities would be required and there would be **no impact**.

Mitigation Measures

None required.

3.15.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative water supply setting consists of the SCWA water service area, which includes a majority of Sonoma County as well as the northern portion of Marin County. The cumulative setting includes the full buildout of the project area, which for this analysis is assumed to occur by 2035, as well as all existing, planned, proposed, approved, and reasonably foreseeable development within the SCWA service area that currently places demand on these water supplies or is expected to place demand on them in the future.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Water Impacts

Impact 3.15.1.3 The proposed project, in combination with other reasonably foreseeable development in the Sonoma County Water Agency service area, would result in **less than cumulatively considerable** water supply impacts.

According to the SCWA's 2010 Urban Water Management Plan, the agency would have sufficient water to meet projected demand through 2035 during normal water years. Under both single dry year and multiple dry year conditions, the SCWA projects that demand would exceed supply, but anticipates that implementation of water conservation measures would reduce demand sufficiently to eliminate shortages (SCWA 2011). Therefore, with cumulative growth in the region, including buildout of Santa Rosa General Plan 2035, sufficient water supplies would be available and this cumulative impact would be less than cumulatively considerable.

As discussed in Impact 3.15.1.1, the proposed project would result in an overall reduction of water demand within the project area compared to the water demand anticipated from buildout of the General Plan. Furthermore, as discussed in Impact 3.15.1.2, the proposed project would not contribute to the need for new or expanded water supply or treatment infrastructure. Therefore, with implementation of the proposed project, this cumulative impact would remain **less than cumulatively considerable**.

Mitigation Measures

None required.

3.15.2 WASTEWATER

3.15.2.1 EXISTING SETTING

EXISTING WASTEWATER CONVEYANCE AND TREATMENT FACILITIES

The wastewater collection system in the project area is a gravity flow system owned and operated by either the City of Santa Rosa or the County of Sonoma. The County-owned system is known as the South Park County Sanitation District (SPCSD). The City has an agreement to maintain SPCSD (County-owned) wastewater pipes (Michael Baker International 2016).

Sewage generated from residential, commercial, and industrial uses in Santa Rosa is collected and transported to the Laguna Wastewater Treatment Plant (WTP), located southwest of the city on Llano Road. The Laguna WTP, managed by the City of Santa Rosa, provides wastewater treatment and disposal services for the city as well as for Rohnert Park, Cotati, Sebastopol, and the South Park Sanitation District. Wastewater is tertiary treated and, depending on the amount of rainfall received in any given year, between 90 and 100 percent is recycled for urban and agricultural irrigation and for the Geysers Recharge Project. Six thousand acres of crops are irrigated with recycled water to grow hay, pasture, vegetables, and wine grapes and for landscaped areas (Santa Rosa 2009b).

The Laguna WTP is a tertiary-level treatment facility that has an average daily dry weather flow of 15.5 mgd and is permitted for 21.34 mgd average daily dry weather flow. Projects under Santa Rosa's Subregional Water Reuse System Incremental Recycled Water Program, which was originally undertaken in 2001, will be implemented as growth occurs, eventually increasing the plant's capacity to 25.79 mgd, 18.25 mgd of which would be allocated to Santa Rosa. This expanded capacity will be sufficient to meet the city's wastewater needs up to 2020 (Santa Rosa 2009b). Over 500 miles of underground pipes bring wastewater to the treatment plant, where water goes through three stages of treatment prior to disinfection, storage, and reuse. The water is treated to the highest level recognized in state water recycling regulations (Title 22). The current and projected volume of collected and treated wastewater and the amount that meets the recycled water standard from the Laguna WTP are shown in **Table 3.15-2**. Santa Rosa contributes approximately 75 percent of these wastewater quantities (Santa Rosa 2011).

TABLE 3.15-2
RECYCLED WATER — WASTEWATER COLLECTION AND TREATMENT

Type of Wastewater	2005	2010	2015	2020	2025	2030	2035
Wastewater collected & treated in service area (AFY)	24,858	23,047	24,882	26,718	28,553	30,388	32,223

Source: Santa Rosa 2011

Existing Wastewater Collection Facilities within the Project Area

The City owns and operates a wastewater collection system that consists of approximately 590 miles of sanitary sewer lines, ranging in size from 6 to 66 inches in diameter, and includes 18 lift stations. Wastewater flow is generally routed from northeast to southwest and delivered to the Laguna WTP. According to the City's 2014 Sewer System Master Plan Update, the project area does not include any lift stations. All wastewater flow generated within the project area is collected and conveyed in a gravity sewer system and delivered to the Laguna WTP. Within the project area, the City of Santa Rosa operates and maintains approximately 158,000 linear feet (30 miles) of gravity sanitary sewer lines, ranging in diameter from 6 to 24 inches, as well as 837 manholes. The County's SPCSD owns approximately 59,000 linear feet (11 miles) of gravity sewer main in the project area, ranging in diameter from 6 inches to 12 inches (Michael Baker International 2016).

3.15.2.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the CWA, the EPA has implemented pollution control programs such as setting wastewater standards for industry and water quality standards for all contaminants in surface waters.

The CWA made it unlawful to discharge any pollutant from a point source (direct discharge) into navigable waters. The EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls direct and non-point discharges through the North Coast Regional Water Quality Control Board (EPA 2016).

STATE

Porter-Cologne Water Quality Control Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The act established the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the North Coast RWQCB to establish water quality principles and guidelines and permits for long-range resource planning including groundwater and surface water management programs and control and use of recycled water (USDOE 2016).

State Water Resources Control Board

The SWRCB is responsible for implementing the Clean Water Act and the Porter-Cologne Water Quality Control Act. The SWRCB allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine

RWQCBs located in the major watersheds of the state. The SWRCB also issues NPDES permits to cities and counties through the Regional Water Quality Control Boards (SWRCB 2016a).

Waste Discharge Requirements Program

State regulations pertaining to the treatment, storage, processing, or disposal of solid waste are found in Title 27, California Code of Regulations, Section 20005 et seq. In general, the waste discharge requirements (sometimes referred to as the Non Chapter 15 (Non 15) Program) regulate point discharges that are exempt pursuant to Title 27 Subsection 20090 and not subject to the federal Clean Water Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater) that meet, and continue to meet, the preconditions listed for each specific exemption. The program's scope also includes the discharge of wastes classified as inert, pursuant to Section 20230 of Title 27. Several SWRCB programs are administered under the waste discharge requirements program, including the Sanitary Sewer Order and recycled water programs (SWRCB 2016b).

If the operation or discharges from a property or business affect California's surface waters, coastal waters, or groundwater, the discharger is required to obtain a permit from the appropriate RWQCB to discharge waste. For those discharging or proposing to discharge pollutants into surface waters, a federal NPDES permit must be obtained. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land), a Report of Waste Discharge must be filed with the appropriate Regional Water Quality Control Board.

Sanitary Sewer Overflow Program

A sanitary sewer overflow (SSO) is any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease and can pollute surface waters and groundwater, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. To provide a consistent, statewide regulatory approach to address sanitary sewer overflows, the SWRCB adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all sanitary sewer overflows to the SWRCB's online SSO database. All public agencies that own or operate a sanitary sewer system that comprises more than 1 mile of pipes or sewer lines which convey wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Order (SWRCB 2016c).

LOCAL

North Coast Regional Water Quality Control Board

The North Coast Regional Water Quality Control Board (North Coast RWQCB) is the regional governing agency for water quality. The North Coast RWQCB is a state department that provides a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in the north coast region. The RWQCB issues National Pollutant Discharge Elimination System (NPDES) permits.

Santa Rosa Sanitary Sewer System Master Plan

The purpose of the Sanitary Sewer System Master Plan is to evaluate the adequacy of the City's sewer collection system, identify system deficiencies both present and future, and develop prioritized lists of improvement projects that will be needed to meet the City's collection system needs based on General Plan buildout projections.

Stormwater Requirements

The EPA mandate of the federal Clean Water Act 1987 amendment brought the City of Santa Rosa, the County of Sonoma, and the SCWA together in 1997 to jointly obtain a Phase I municipal separate storm sewer system (MS4) NPDES permit from the North Coast RWQCB.

As part of the MS4 permit requirements, the County and the City joined efforts to publish stormwater management guidelines. The Storm Water Low Impact Development Technical Design Manual (LID Manual) provides technical guidance for project designs that require the implementation of permanent stormwater best management practices (BMPs). This manual supersedes the 2005 Standard Urban Stormwater Mitigation Plan Guidelines. The manual's goal of is to reduce pollution and runoff for all new and redevelopment capital improvement programs and development projects meeting certain defined criteria.

As new developments are planned, measures for treatment of erosion and stormwater are addressed at the source. As sites are developed, each site must establish acceptable source control methods.

Development in the project area will need to comply with the LID Manual to control runoff quality and quantity. These requirements will need to be handled on an area-wide integrated basis or individually on each parcel as development or redevelopment occurs. Low impact development practices consist of such measures as green roofs, tree canopies, vegetated swales and buffer strips, permeable paving, and rain gardens.

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the project in regard to wastewater.

Public Services and Facilities Element

Goal PSF-G: **Ensure that adequate sewer capacity is available to serve existing and future needs of the city.**

Policy PSF-G-1: Continue to explore and develop new uses for treated wastewater, including expanding existing programs such as urban and agricultural irrigation, consistent with objectives adopted by the Board of Public Utilities and the City Council. Examples of urban reuse include park and landscaping irrigation.

Policy PSF-G-3: Decline requests for extension of sewer services beyond the Urban Growth Boundary, except in cases of existing documented health hazards and in areas where the city has agreements to provide services.

3.15.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. An impact to public utilities is considered significant if the project would:

1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

2) Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

METHODOLOGY

The following impact analysis is based on a review of the infrastructure report prepared for the proposed project by Michael Baker International dated May 2016 (see **Appendix 2.0**) and the City of Santa Rosa General Plan 2035 and associated environmental impact report, as well as the water supply analysis included above.

The infrastructure report was based in part on a Sewer System Master Plan (SSMPU) completed for the City in 2014 by Arcadis, which analyzed the overall capacity of the existing and future sewer collection systems. The SSMPU included a hydraulic model analysis of the collection system. The City contracted with Arcadis to perform hydraulic model updates and a hydraulic model analysis of the wastewater collection system in the project area to determine if the existing system has adequate capacity to serve the proposed land use changes. Section 3 of the infrastructure report includes a summary of the wastewater collection system analysis and results and discusses whether the proposed land use changes require additional system improvements in order to provide adequate wastewater service.

PROJECT IMPACTS AND MITIGATION MEASURES

Wastewater Conveyance and Treatment (Standards of Significance 1, 2, and 3)

Impact 3.15.2.1 Wastewater flows generated as a result of the proposed project would not exceed existing capacity at the Laguna Wastewater Treatment Plant or in existing conveyance facilities. No improvements would be required; therefore, this impact would be **less than significant**.

The City of Santa Rosa is responsible for the operation, maintenance, and regulatory compliance of the Laguna Wastewater Treatment Plant. Discharges to the Russian River and other water bodies from the Laguna WTP are required to comply with North Coast RWQCB permitting requirements. It is assumed that as long as the plant is adequately maintained and development does not occur at a rate that exceeds the plant's capacity, the WTP will continue to comply with permitting requirements.

As shown in **Table 2.0-5** in Section 2.0, Project Description, of this Draft EIR, the proposed project would result in substantial new development compared to existing conditions. Specifically, the project would result in an increase of 3,702 residential units. Based on a rate of 2.61 persons per household (DOF 2015), these additional units would provide housing for an estimated 9,662 people. In addition, the project would result in an increase of 913,814 square feet of nonresidential uses compared to existing conditions. Based on the permitted densities/intensities provided in Table 2-1 of the General Plan, the additional 913,814 square feet of nonresidential uses would generate approximately 2,782 new employees.

According to the City's (2014a) Sanitary Sewer System Master Plan Update, wastewater would be generated at an approximate rate of 50 gallons per capita per day (gpcd) for residential uses and 30 gpcd for nonresidential uses. As shown in **Table 3.15-3**, based on these assumptions, the proposed project's planned development compared to existing conditions would generate an additional 566,560 gpd (0.57 mgd) of wastewater.

As described previously, the Laguna WTP has an average daily dry weather flow of 15.5 mgd and is permitted for 21.34 mgd average daily dry weather flow. Therefore, the WTP has excess capacity of approximately 5.84 mgd. The proposed project's anticipated wastewater volume compared to existing conditions would represent less than 10 percent of this excess capacity.

TABLE 3.15-3
WASTEWATER GENERATION – PROPOSED PROJECT COMPARED TO EXISTING CONDITIONS

	Units/Square Feet	Population Generated	Wastewater Generation Rate (gpcd)	Projected Wastewater Volume (gpd)
Residential Development	3,702	9,662	50	483,100
Nonresidential Development	913,814	2,782	30	83,460
				566,560

However, development of the project area has already been considered in terms of generating wastewater in the City's General Plan 2035 and 2014 Sanitary Sewer System Master Plan Update. The proposed project's actual change in wastewater generation is based on the changed land uses in the project area described in Chapter 2.0, Project Description. Based on this assumption, the proposed project is projected to generate approximately 8,910 gpd (0.009 mgd) more wastewater than assumed in the General Plan EIR, as shown in **Table 3.15-4**.

TABLE 3.15-4
WASTEWATER GENERATION – PROPOSED PROJECT COMPARED TO GENERAL PLAN BUILDOUT

	Units/Square Feet	Population Generated	Wastewater Generation Rate (gpcd)	Projected Wastewater Volume (gpd)
Residential Development	108	282	50	14,100
Nonresidential Development	-51,756	-173	30	-5,190
				8,910

The City's modeling of the anticipated wastewater flows in the project area indicates that the proposed project would not worsen existing capacity issues in the City's conveyance system and would not require any pipe upsizing or other improvements beyond those previously identified in

the City's 2014 Sanitary Sewer System Master Plan Update. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

3.15.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for wastewater conveyance and treatment services is the service area of the Laguna Wastewater Treatment Plant.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Wastewater Conveyance and Treatment Impacts

Impact 3.15.2.2 Existing, planned, and reasonably foreseeable development in the cumulative setting, when considered together with the proposed project, would result in a cumulative increase in demand for wastewater conveyance and treatment services requiring system improvements. This cumulative impact would be **less than cumulatively considerable**.

The General Plan 2035 EIR determined that, with implementation of the City's Incremental Water Reuse Program and the policies contained in the General Plan 2035, the Laguna WTP would have sufficient treatment capacity to serve anticipated growth in the region, including buildout of the General Plan 2035, and the cumulative impact would be less than significant. As discussed in Impact 3.15.2.1, the proposed project would result in a negligible increase in wastewater compared to the growth identified in the General Plan and would not exceed the capacity of the Laguna WTP. Furthermore, wastewater modeling conducted by the City indicates that the proposed project would not contribute to existing conveyance system capacity issues and would not require any system improvements beyond those previously identified in the City's 2014 Sanitary Sewer System Master Plan Update. Therefore, the cumulative impact would be **less than cumulatively considerable**.

Mitigation Measures

None required.

3.15.3 STORMWATER DRAINAGE

3.15.3.1 EXISTING SETTING

EXISTING STORMWATER FACILITIES

The Santa Rosa Transportation and Public Works Department maintains over 338 miles of underground stormwater pipes and over 18,000 stormwater structures in the city. The public storm drain system in the project area consists of a series of pipes, culverts, creeks, and surface drainage features that are owned and operated by one of three public agencies: the City of Santa Rosa, County of Sonoma, or the Sonoma County Water Agency.

The existing storm drain network in the project area is primarily owned, operated, and maintained by the City. These facilities constitute approximately 22.9 miles of pipe or 76 percent of the overall system in the project area. Approximately 2,500 feet of the City-maintained pipes are of unknown diameter.

The County maintains approximately 6.2 miles of pipe or 21 percent of the overall system in the project area, of which 6 miles are located within the Specific Plan area and 1,328 linear feet are located outside the Specific Plan area. The County keeps maintenance records on most of its pipe inventory, and most of the pipes in the project area have been serviced within two years of the date of this writing.

SCWA owns and operates approximately 1.2 miles of pipe or 4 percent of the overall system in the project area, ranging from 15 to 48 inches in diameter.

The City's stormwater Phase 1 MS4 National Pollutant Discharge Elimination System (NPDES) permit with the North Coast Regional Water Quality Control Board regulates both stormwater and non-stormwater discharges out of the Santa Rosa storm drain system with the intent to reduce stormwater pollution, protect the water quality of creeks and waterways, and promote infiltration (Santa Rosa 2012a).

3.15.3.2 REGULATORY FRAMEWORK

LOCAL

Stormwater Requirements

The EPA mandate of the federal Clean Water Act 1987 amendment brought the City of Santa Rosa, the County of Sonoma, and the Sonoma County Water Agency (SCWA) together in 1997 to jointly obtain a Phase I MS4 NPDES permit from the North Coast RWQCB.

The Storm Water Low Impact Development Technical Design Manual (LID Manual), developed by the County and the City, provides technical guidance for project designs that require the implementation of permanent stormwater BMPs to reduce pollution and runoff for all new and redevelopment capital improvement programs and development projects meeting certain defined criteria. As sites are developed, each site must establish acceptable source control methods. Development in the project area will need to comply with the LID Manual to control runoff quality and quantity for small frequent rain events. Low impact development practices consist of such measures as green roofs, tree canopies, vegetated swales and buffer strips, permeable paving, and rain gardens.

Sonoma County Water Agency Flood Control Design Criteria

The SCWA works cooperatively with incorporated cities, unincorporated communities, and the state and federal governments to oversee flood control channel modifications and flood control revenue collection in the six active zones. Santa Rosa is located in Flood Zone 1A-Laguna de Santa Rosa-Mark West Creek Watershed.

Storm drainage infrastructure in unincorporated Sonoma County is designed using the SCWA Flood Control Design Criteria. In compliance with the criteria, all culverts and drainage systems must be designed to accommodate the runoff from a 25-year recurrence interval storm event and protect finished floors from the 100-year recurrence interval storm. The SCWA reviews project

plans for proposed drainage improvements. In addition, the agency is in the process of revising and updating the Flood Control Design Criteria.

Storm Water Low Impact Development Technical Design Manual

The LID Manual, adopted by the City of Santa Rosa in October 2011 and implemented in 2012, applies to both privately sponsored projects and municipal capital improvement projects. The manual requires applicable projects to design and implement post-development measures to reduce stormwater pollution. Per the LID Manual, applicable projects are required to design and implement post-development measures for the management of stormwater quality and stormwater volume for the entire development site. The manual emphasizes managing stormwater runoff through landscape-based treatment methods to reduce potential impacts to local drainage systems.

The goal of the manual is to reduce pollution and runoff flows to the best practicable extent for all new capital improvement programs and development projects meeting the following criteria:

- Development that creates or replaces a combined total of 1 acre or more of new impervious surface.
- Street, road, highway, or freeway construction or reconstruction, creating or replacing 10,000 square feet or more of impervious surface.
- All development that includes four or more dwelling units.
- Industrial parks, commercial strip malls, retail gasoline outlets, restaurants, or automotive service facilities creating or replacing 10,000 square feet or more of impervious surface. Parking lots with 25 or more spaces or 10,000 square feet not associated with other projects.
- Parking lots with 25 or more spaces or 10,000 square feet not associated with other projects.

As new developments are planned, measures for treatment of erosion and stormwater are addressed at the source. As sites are developed, each site must establish acceptable source control methods. Varied methods can be employed to satisfy the requirements set forth by the LID Manual. The City of Santa Rosa works in conjunction with the County of Sonoma and the SCWA to ensure the requirements are met.

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the proposed project in regard to storm water drainage.

Public Services and Facilities Element

Goal PSF-1: **Manage, maintain, and improve stormwater drainage and capacity.**

Policy PSF-I-1: Require dedication, improvement, and maintenance of stormwater flow and retention areas as a condition of approval.

Policy PSF-I-2: Require developers to cover the costs of drainage facilities needed for surface runoff generated as a result of new development.

Policy PSF-I-3: Require erosion and sedimentation control measures to maintain an operational drainage system, preserve drainage capacity, and protect water quality.

Policy PSF-I-4: Require measures to maintain and improve the storm drainage system, consistent with goals of the Santa Rosa Citywide Creek Master Plan, to preserve natural conditions of waterways and minimize paving of creek channels.

Policy PSF-I-5: Cooperate with the Sonoma County Water Agency and the Northern California Regional Water Quality Control Board to conduct regular assessment of stormwater drainage facilities, to ensure that adequate drainage capacity is maintained throughout the system to accommodate increases in residential and commercial development.

Policy PSF-I-6: Require implementation of Best Management Practices to reduce drainage system discharge of non-point source pollutants originating from streets, parking lots, residential areas, businesses, industrial operations, and those open space areas involved with pesticide application.

Policy PSF-I-7: Prepare and distribute information to increase awareness of businesses and residents about the need to reduce drainage system discharge of non-pollutants.

Policy PSF-I-8: Implement the Standard Urban Storm Water Mitigation Plan (SUSMP) in order to reduce pollutants and runoff s flows from new development and significant redevelopment projects.

Policy PSF-I-9: Consider installation of creekside pathways, consistent with the Citywide Creek Master Plan and Bicycle and Pedestrian Master Plan, when possible as part of stormwater improvement projects along the city's creek corridors.

City of Santa Rosa City Code

Chapter 17-12, Stormwater, of the City Code regulates modifications to the natural flow of storm waters, as well as discharges to the City's stormwater system in compliance with applicable NPDES stormwater discharge permits.

3.15.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. An impact related to stormwater facilities is considered significant if the project would:

1) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

METHODOLOGY

The following impact analysis is based on a review the infrastructure report prepared for the proposed project by Michael Baker International dated May 2016 (see **Appendix 2.0**), as well as the City of Santa Rosa 2035 General Plan and associated environmental impact report.

PROJECT IMPACTS AND MITIGATION MEASURES

Require New and Expanded Stormwater Drainage Facilities (Standard of Significance 1)

Impact 3.15.3.1 Implementation of the proposed project would require the extension of existing stormwater drainage facilities to serve new development. This impact would be **less than significant**.

As discussed in Section 3.9, Hydrology and Water Quality, areas of potential development in the project area are primarily vacant and underutilized parcels surrounded by existing development. Thus, major stormwater drainage infrastructure already exists in the vicinity. Pursuant to the City's Storm Water Low Impact Development (LID) Technical Design Manual and City Code Chapter 17-12, the City would require future individual development and redevelopment projects to mitigate the stormwater runoff generated by the project so that no net increase in runoff for the 85th percentile 24-hour rain event would occur. Thus, localized effects related to storm drain facilities would be included with any future development projects, and future development projects would require minor on-site improvements to tie into existing storm drainage facilities. Compliance with General Plan Policy PSF-I-1 would ensure that such improvements are completed prior to occupancy of future development. The infrastructure report prepared for the proposed project concluded that the proposed project would not require any improvements to existing infrastructure outside the project area (Michael Baker International 2016; see **Appendix 2.0**).

Impacts associated with construction of improvements within the project area, which are identified in Section 4, Storm Drainage System, in **Appendix 2.0**, are assumed as part of the project and are addressed in the technical analysis sections of this EIR (Sections 3.1 through 3.15). Potential impacts include disturbance of biological and/or cultural resource, temporary air emissions, soil erosion and water quality degradation, handling of hazardous materials, temporary construction noise, and temporary construction traffic. Where necessary, mitigation measures are provided to reduce impacts to less than significant levels. Therefore, no further mitigation is necessary and this impact would be **less than significant**.

Mitigation Measures

None required.

3.15.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for stormwater drainage services is Santa Rosa and the City's Urban Growth Boundary, including buildout under the General Plan 2035.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Stormwater Impacts

Impact 3.15.3.2 Cumulative growth in the city would increase the volume of stormwater entering the City's drainage system. This cumulative impact would be **less than cumulatively considerable**.

Development in the city has the potential to result in a cumulative impact related to stormwater. However, the General Plan 2035 EIR identified that, with implementation of the goals and policies included in the General Plan, impacts to stormwater services would be less than significant. Thus, the cumulative impact related to storm drainage would be less than significant.

As discussed above, the proposed project would result in development types and intensities that are similar to those assumed in the General Plan. Thus, storm drain impacts would not substantially differ from those assumed in the General Plan EIR. Upon approval of the proposed annexations, the entire project area would be subject to the goals and policies of the General Plan 2035. Furthermore, as discussed in Impact 3.15.3.1, the proposed project is not anticipated to result in a net increase in stormwater volumes in the project area and would not require any major improvements to the City's drainage system. Therefore, compliance with the City's General Plan goals and policies as well as the City's required low impact development requirements would result in a **less than cumulatively considerable** impact.

Mitigation Measures

None required.

3.15.4 SOLID WASTE

3.15.4.1 EXISTING SETTING

The City of Santa Rosa contracts with the North Bay Corporation to provide solid waste collection and curbside recycling for residential and commercial uses in the city. The North Bay Corporation is the licensed hauler and recycler for the project area. For residential customers, North Bay Corporation provides recycling and green waste containers and weekly collection of these materials. The North Bay Corporation currently provides a single-stream recycling program (all recyclables in one container) (Santa Rosa 2009b).

Solid waste management in the project area is the responsibility of the City of Santa Rosa through a franchise agreement with the County of Sonoma. The County owns the Central Disposal Facility, which includes the landfill as well as the recycling and reuse facility and household toxics facility which are operated by the Sonoma County Waste Management Agency (SCWMA). The SCWMA fulfills the solid waste planning and reporting requirements for the region. Solid waste is collected and hauled to the Central Disposal Facility for appropriate disposal, with green waste hauled to a separate processing center operated by a contractor for the SCWMA and recyclable materials are taken to be processed at any of several materials recovery facilities (SCWMA 2011).

The Central Disposal Facility has a maximum permitted daily throughput for the solid waste facility of 2,500 tons per day, an estimated remaining capacity of 9,470,629 cubic yards, and no estimated closure year (CalRecycle 2016).

All businesses, including but not limited to nonprofits, strip malls, government offices, and schools, that generate four or more cubic yards of waste per week are required to recycle. The law also applies to multi-family dwellings of five units or more, regardless of the amount of waste generated. Businesses and multi-family dwellings are required to separate recyclable materials from their garbage and self-haul, subscribe to hauler service, and/or otherwise arrange for the pickup of recyclables. Sonoma County's and the City of Santa Rosa's recycling efforts target single-stream recycling where cardboard, paper, bottles, and cans are mixed together (SCWMA 2011).

3.15.4.2 REGULATORY FRAMEWORK

STATE

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939 (Public Resources Code, Section 42900–42927), required all California cities and counties to reduce the volume of waste deposited in landfills by 50 percent by the year 2000 and continue to maintain that 50 percent reduction or more each subsequent year. The act's purpose is to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible.

AB 939 requires each California city and county to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element that demonstrates how the jurisdiction will meet the Integrated Waste Management Act's mandated diversion goals. Each jurisdiction's source reduction and recycling element must include specific components, as defined in Public Resources Code Sections 41003 and 41303. In addition, the source reduction and recycling element must include a program for management of solid waste generated in the jurisdiction that is consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. Included in this hierarchy is the requirement to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste that must be disposed of by transformation and land disposal (Public Resources Code Sections 40051, 41002, and 41302).

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board (now CalRecycle) to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials in development projects. Local agencies are required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects. The intent of the act is to require development projects to include advanced planning that focuses on solid waste issues at the beginning of a project and implement an adequate recycling program for the development project.

LOCAL

Sonoma County Waste Management Agency

The SCWMA, formed in 1992, is the joint powers authority of the County of Sonoma and the nine cities in the county. The specific focus of the agency's efforts is the implementation of regional waste diversion programs as required by AB 939. As such, the agency is tasked with operating various residential and commercial recycling, hazardous waste, composting, and green building programs throughout the county.

Sonoma County Countywide Integrated Waste Management Plan

Direction for the county's solid waste management system is provided by state law (AB 939 and subsequent legislation), the Sonoma County Waste Management Agency, and regulations adopted by CalRecycle. The Countywide Integrated Waste Management Plan regulations serve as the primary tool for satisfying the county's solid waste management needs for the next 50 years in a manner that is cost-effective and is operated to follow the State of California's solid waste management hierarchy. The hierarchy consists of waste prevention (source reduction), reuse, recycling, composting, and disposal. The solid waste management system for the county protects public health, safety, and well-being; preserves the environment; and provides for the maximum feasible conservation of natural resources and energy. The plan contains four elements: Source Reduction and Recycling Element, Household Hazardous Waste Element, Siting Element, and the Non-Disposal Facility Element.

City of Santa Rosa General Plan

The City's General Plan 2035 serves as the overall guiding policy document for Santa Rosa. The following is a list of applicable General Plan goals and policies most pertinent to the project related to solid waste.

Land Use and Livability Element

Goal LUL-A: **Foster a compact rather than a scattered development pattern in order to reduce travel, energy, land, and materials consumption while promoting greenhouse gas emission reductions citywide.**

Policy LUL-A-3: Require development in county areas within the Santa Rosa Urban Growth Boundary to be built to City of Santa Rosa standards to ensure consistency upon annexation.

Public Services and Facilities Element

Goal PSF-H: **Meet the city's solid waste disposal needs, while maximizing opportunities for waste reduction and recycling.**

Policy PSF-H-1: Continue contracting for garbage and recycling collection services. Expand the single-stream recycling program (all recyclables in one container) to all users.

Policy PSF-H-2: Work with Sonoma County to identify alternatives to meet the need for solid waste disposal.

Policy PSF-H-3: Expand recycling efforts in multifamily residential and commercial projects, and continue to encourage recycling by all residents.

Policy PSF-H-4: Require provision of attractive, convenient recycling bins and trash enclosures in residential and non-residential development.

Policy PSF-H-5: Continue public education programs about waste reduction, including recycling, yard waste, wood waste, and household hazardous waste.

Policy PSF-H-6: Consider development of a residential and commercial food waste composting program.

3.15.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G standards. An impact to public utilities is considered significant if the project would:

1) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

2) Fail to comply with federal, state, and local statutes and regulations related to solid waste.

METHODOLOGY

The following impact analysis is based on a review of available solid waste generation data from the California Department of Resources Recycling and Recovery (CalRecycle), as well as a review of the City of Santa Rosa General Plan and associated environmental impact report.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Solid Waste Services (Standard of Significance 1)

Impact 3.15.4.1 Future development resulting from implementation of the proposed project would increase demand for solid waste collection, recycling, and disposal services. This impact would be **less than significant**.

Implementation of the proposed project would result in increased production of solid waste generated by residential occupancy and business/retail operations. Buildout of the project area is anticipated to contribute 4.1 pounds of solid waste per capita per day, based on the most recent regional data reported to CalRecycle (Santa Rosa 2012a). As discussed in Section 3.12, Population and Housing, compared to existing conditions, the proposed project would result in a population increase of 9,662. Such an increase in population would result in the generation of approximately 39,614 pounds of solid waste per day, or 7,230 tons per year. The Central Disposal Facility has an estimated remaining capacity of 9,470,629 cubic yards and a maximum permitted daily throughput for the solid waste facility of 2,500 tons per day. The increase in solid waste anticipated to be generated by the proposed project represents approximately 1 percent of the facility's daily permitted throughput. Therefore, the proposed project would not exceed the landfill's permitted capacity or require its expansion.

Under the City of Santa Rosa General Plan, Policies PSF-H-3 and PSF-H-4 establish and actively encourage residential and nonresidential recycling programs. The California Solid Waste Reuse and Recycling Access Act requires areas to be set aside for collecting and loading recyclable materials in development projects. Furthermore, all new and redevelopment projects must comply with Santa Rosa's Construction and Demolition Debris Franchise Agreement and prepare and implement recycling plans for their construction phase. This recycling plan will address the major materials generated by a construction project and will identify the means to divert these materials away from landfill disposal. These efforts allow the City to meet the AB 939 diversion requirements and Chapter 22 of the County Code (Section 22-7A), which explicitly bans the

disposal at County disposal sites of yard debris, recyclable wood waste, scrap metal, and corrugated cardboard. Compliance with these existing regulations would further reduce operational and construction waste generated by the proposed project. Therefore, the proposed project would have a **less than significant** impact related to solid waste capacity and disposal.

Mitigation Measures

None required.

Solid Waste Regulation Conflict

Impact 3.15.4.2 Implementation of the proposed project would not be expected to result in conflicts with any federal, state, or local solid waste regulations. This impact would be **less than significant**.

The proposed project would be required to comply with federal, state, and local regulations related to the disposal of solid waste. Future development in the project area would also need to participate in recycling efforts to assist the City in complying with AB 939 diversion rate requirements. Compliance with these regulations would ensure that this impact remains **less than significant**.

Mitigation Measures

None required.

3.15.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for solid waste services consists of the SCWMA service area, which includes all of Sonoma County. Future development in the county would further increase the amount of waste disposed of at SCWMA landfills.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Solid Waste Impacts (Standards of Significance 1 and 2)

Impact 3.15.4.3 The proposed project, when considered in combination with other existing and planned development in the SCWMA service area, would increase cumulative demand for solid waste disposal services. This cumulative impact would be **less than cumulatively considerable.**

Development in Sonoma County has the potential to result in a cumulative impact related to solid waste service and disposal. The General Plan 2035 states that landfill capacity for the City may not accommodate solid waste disposal needs through buildout in 2035. Sonoma County and Santa Rosa focus increasingly on waste diversion and recycling through public education and new services and facilities. These factors help accommodate the growing need for solid waste disposal, while decreasing per capita waste disposal demand. With implementation of the policies contained in the General Plan 2035, the General Plan EIR concluded that impacts to landfills would be less than significant.

As discussed in Impact 3.15.4.1, the anticipated increase in solid waste generation resulting from the proposed project would not have a substantial effect on landfill capacity. Development of the project area has already been considered in terms of generating solid waste in the City's General Plan 2035 and associated EIR. Compared to development intensity for the project site in the General Plan, the proposed project is projected to increase the residential population of the project area by 282, who would generate approximately 1,156 pounds of solid waste per day or 211 tons per year. This increase would be offset by a net reduction in nonresidential development potential compared to that anticipated in the General Plan, as well as by current and expanded waste recycling efforts.

Furthermore, future development resulting from project implementation would be required to comply with General Plan policies regarding solid waste disposal and would be conditioned to participate in the recycling programs offered through the City's franchised waste collection company. Therefore, cumulative solid waste impacts would be **less than cumulatively considerable.**

Mitigation Measures

None required.

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4.0 ALTERNATIVES

4.1 INTRODUCTION

GENERAL CEQA REQUIREMENTS

The purpose of this section is to identify and describe alternatives to the proposed project. Project alternatives are developed to reduce or eliminate the significant or potentially significant adverse environmental effects identified as a result of the proposed project, while still meeting most if not all of the basic project objectives.

An EIR must evaluate a reasonable range of alternatives to the proposed project, or to the location of the proposed project, that could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6). An EIR need not evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project.

The primary intent of the alternatives analysis is to disclose other ways that the objectives of the Project could be attained while reducing the magnitude of, or avoiding, the environmental impacts of the proposed project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the Public Resources Code and the CEQA Guidelines direct that the EIR need "set forth only those alternatives necessary to permit a reasoned choice." The CEQA Guidelines provide a definition for "a range of reasonable alternatives" and, thus, limit the number and type of alternatives that need to be evaluated in a given EIR. An EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative" (Section 15126.6(f)(3)).

PROJECT OBJECTIVES

As described in Section 2.0, Project Description, the City has established the following objectives for the proposed project for purposes of CEQA:

- Comply with Sonoma Local Agency Formation Commission (LAFCO) policy to create a more logical City boundary and provide more effective delivery of City services by annexing all existing unincorporated islands in southwest Santa Rosa.
- Make life and the physical environment better for plan area residents and employees.
- Establish a land use and policy framework to guide future development in the area toward transit supportive land uses.
- Balance the preservation of the existing uses and the development of new uses while maintaining the cultural diversity that makes this area special and unique in Santa Rosa.
- Improve connections, particularly for bicycling and walking, to the Southside Bus Transfer Center, to the downtown SMART station, and to Sebastopol Road, the main commercial area (within the plan area and beyond).
- Enhance livability by promoting community health and equity.
- Establish the Plan Area as a place where people want to live, work, shop, and visit.

- Promote economic vitality by maintaining and expanding small businesses and local services for residents.

SUMMARY OF SIGNIFICANT EFFECTS

The analysis presented in the technical sections of this Draft EIR (Sections 3.1 through 3.15) concluded the following significant and unavoidable impacts would result from implementation of the proposed project:

Impact 3.14.2 Project traffic would have the potential to degrade mainline freeway operations to unacceptable levels of service under Existing plus Project conditions (US 101 North – Todd Rd to SR 12).

Impact 3.14.3 Project traffic would have the potential to degrade freeway ramp operations to an unacceptable level of service at the southbound US 101 freeway off-ramp at Hearn Avenue under Existing plus Project conditions.

Impact 3.14.11 Project traffic, when considered together with other past, present, and future development, would have the potential to degrade mainline freeway operations to unacceptable levels of service.

4.2 ALTERNATIVES CONSIDERED BUT REJECTED FROM FURTHER ANALYSIS

CEQA Guidelines Section 15126.6(c) states that an EIR should identify any alternatives considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (1) failure to meet most of the basic project objectives, (2) infeasibility, or (3) inability to avoid significant environmental impacts.

The land use development alternatives that were considered but rejected from further analysis in this Draft EIR consist of the following:

Alternative Site – The possibility of placing the proposed project on an alternative site within the Santa Rosa Planning Area is not feasible. No off-site alternatives were identified during the Specific Plan development stage, nor are any included in this EIR because the proposed project is specifically intend to unify and guide future redevelopment within the Roseland community. As a result, there are no other sites in the city that would be able to meet the objectives of the proposed project.

No Build Alternative – This alternative considered eliminating further development in the Specific Plan area and Annexation Areas entirely. All land uses would remain in their current state, and land uses under the General Plan would not be implemented. As development in the project areas have already been considered and approved as part of the General Plan 2035, an alternative that prevents implementation of a substantial portion of the General Plan would be infeasible. In addition, a no build alternative would prevent the project from attaining the objectives outlined for the project. For these reasons, a no build alternative was determined to be infeasible and is not addressed further.

Smaller Footprint Alternative – In determining potential alternatives to the proposed project, a smaller footprint alternative was considered. Such an alternative would develop a smaller portion of the project area, leaving portions of it undeveloped.

While a reduced footprint alternative would have fewer impacts associated with ground disturbance, such as potential biological or cultural impacts, with less developable land available for development in the project area, land elsewhere in the City or region would have to be developed in order to accommodate the growth projected to occur in the City. Development to offset the reduction in the project area would result in off-site impacts for the development that would occur elsewhere in the City. It could also result in increases in vehicle miles traveled, which would result in increases in criteria air pollutants and greenhouse gases. Depending on the location for the off-site improvements, it is possible that footprint impacts (e.g., biological resources, cultural resources, agricultural resources) could be more severe than they would be under the proposed project. Further, developing only a portion of the Specific Plan and Annexation Areas with the remainder being developed at an off-site location would limit comprehensive planning and would leave portions of the area as undeveloped "islands," which is similar to the current conditions. CEQA Guidelines Section 15126.6(b) states that the discussion of alternatives to the proposed project "shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project." Therefore, this alternative does not meet the criteria set forth in the CEQA Guidelines concerning alternatives to be analyzed in an EIR and is not considered in further detail.

4.3 ALTERNATIVES ANALYZED IN THE EIR

Two alternatives to the proposed project are analyzed in this Draft EIR and are described below. Significant impacts associated with the proposed project (as described above) were used to determine the range of these alternatives.

Alternative 1 – No Project Alternative. Under this alternative, none of the proposed annexations would be approved and no changes to the project area would occur beyond what is currently designated in the City of Santa Rosa General Plan 2035. This alternative would consist of a continuation of the General Plan 2035 policies into the future with the current land use designations in the project area remaining unchanged. This alternative would not meet the objectives of the proposed project. The analysis of the No Project Alternative is included in this Draft EIR consistent with CEQA Guidelines Section 15126.6(e)(3)(A).

Alternative 2 – Reduced Development Alternative. This alternative is intended to eliminate the impact on freeway operations on US 101 North between Todd Road and SR 12. The traffic study for the project determined that development in the project area would result in an increase in delays from existing conditions by approximately 3 percent; an increase of greater than 1 percent is considered significant. In order to reduce the impact to less than significant, this alternative assumes a reduction in development intensity in the project area to one-third of that proposed by the project. This alternative would increase development in the project area as shown in Table 4.0-1.

TABLE 4.0-1
REDUCED DEVELOPMENT ALTERNATIVE DEVELOPMENT POTENTIAL
(CHANGE FROM EXISTING CONDITIONS)

Residential Units			Non-residential Square Footage			
Single Family	Multi Family	Mobile home	Office	Retail	Institutional	Industrial
816	418	0	1,032	189,901	6,667	107,005

4.4 COMPARATIVE IMPACT ANALYSIS

For each project alternative, the significant environmental impacts are identified, as well as the impacts of the proposed project that would be avoided. If an alternative would cause one or more significant effects in addition to those that would be caused by the proposed project, the significant effects of the alternative are discussed, but in less detail than the significant effects of the proposed project (CEQA Guidelines Section 15126.6(d)). The discussion of alternatives considers potential impacts on each of the environmental issues presented in Section 3.0 of this Draft EIR. If a potential impact under an alternative is similar to that under the proposed project, the discussion will so note and no further analysis of the potential impact is conducted.

As described above, each of the alternatives would include development throughout the Specific Plan and Annexations Areas, the same as assumed for the proposed project. Consequently, the footprint-related effects of the alternatives would not differ from that disclosed for the proposed project in the technical sections of this Draft EIR. For the purposes of this analysis, because the footprint of the alternatives would not differ from the proposed project, impacts related to agricultural, biological and cultural resources, geology and soils, and hydrology and water quality would be the same as those identified for the proposed project. The following discussion considers impacts related to the type and intensity of development, rather than effects related to the location of development.

The environmental effects of each of these alternatives are identified and compared with those resulting from the proposed project. A table at the end of this section provides a summary of the comparisons and, per CEQA Guidelines Section 15126.6(e)(2), an "environmentally superior" alternative is identified.

AESTHETICS

The effects of the proposed project related to aesthetics were found to be less than significant due to the existing developed nature of the project area and because future projects would be subject to General Plan policies, the City's Design Guidelines, and Zoning Code requirements.

Alternative 1 – Similar Impact

General Plan Policy LUL-A-3 requires development in county areas within the Santa Rosa Urban Growth Boundary to be built to City of Santa Rosa standards to ensure consistency upon annexation. The No Project Alternative is assumed to allow development of the project area consistent with the existing General Plan land use diagram. As described in Chapter 2.0, Project Description, the proposed project is consistent with the existing land uses with only a few exceptions. Development in these areas identified for changes in land use would not substantially

change the character of the area compared to that assumed for the proposed project. This impact would be the same as the proposed project.

Alternative 2 – Less Severe Impact

The Reduced Development Alternative would include the same type of development as the proposed project, but at a reduced density. The reduction in density could result in smaller building footprints or shorter buildings, which could reduce the visual effects of future development. For this reason, this alternative would result in a less severe impact than the proposed project.

AIR QUALITY

Given the uncertainty of timing and extent of construction activities of future projects under the proposed project, construction-phase emissions cannot be quantified. Therefore, it was conservatively assumed that construction emissions could exceed applicable BAAQMD thresholds, which would be a potentially significant impact. However, compliance with BAAQMD construction emissions reduction measures and mitigation measure MM 3.3.3 would reduce the proposed project's contribution to emissions of criteria air pollutants for which the air basin is designated nonattainment to levels that would be less than cumulatively considerable.

Alternative 1 – Similar Impact

Alternative 1 would still allow for new development and redevelopment within the project area, and implementation of BAAQMD requirements would reduce emissions. Because the No Project Alternative would have a similar amount of development as the proposed project, this alternative's contribution to cumulative construction and operational emissions would also be less than cumulatively considerable and slightly less than the proposed project.

Alternative 2 – Less Severe Impact

This alternative would reduce the intensity of planned residential development, but it would still allow for new development and redevelopment throughout the project area. This alternative's development potential is substantially less than that of the proposed project, so it would result in a proportional decrease in emissions relative to the project. This alternative would have the same potential to exceed applicable emission thresholds during construction and these impacts would also be potentially significant, although with less development, there would be fewer construction emissions. Like the proposed project compliance with BAAQMD construction emissions reduction measures and mitigation measure MM 3.3.3 would reduce this alternative's impacts to less than significant. Similarly, compliance with BAAQMD construction emissions reduction measures and mitigation measure MM 3.3.3 would reduce this alternative's contribution to emissions of criteria air pollutants for which the air basin is designated nonattainment to levels that would be less than cumulatively considerable. Therefore, although this project would contribute substantially less operational emissions, the contribution to the cumulative impact is considered considerable.

GREENHOUSE GAS EMISSIONS

The proposed project would be generally consistent with the land uses assumed in the General Plan and, like any development in the City, would be required to comply with applicable measures in the City's Climate Action Plan (CAP) to reduce greenhouse gas emissions. For this reason, the project was found to have a less than considerable contribution to impacts related to climate change.

Alternative 1 – Similar Impact

Because the No Project Alternative would result in development consistent with land uses identified in the General Plan, this alternative would be consistent with the GHG inventory contained in the CAP and would result in greenhouse gas emissions that are similar to the proposed project.

Alternative 2 – Less Severe Impact

The Reduced Development Alternative would result in a substantial reduction in development compared to the proposed project and, therefore, a substantial in overall greenhouse gas emissions compared to the proposed project. While this alternative would generate less greenhouse gas emissions on the project site, because this reduced density alternative may not be able to take full advantage of the greenhouse gas-reducing advantages of higher-density, transit-oriented, and mixed land use development that is assumed as part of the proposed project. While this alternative may result in lower greenhouse gas emissions at the project site, the per capita emissions of greenhouse gases would likely be higher under this alternative. Nonetheless, this alternative would generate fewer emissions than the proposed project.

HAZARDOUS MATERIALS AND HUMAN HEALTH

The proposed project would encourage mixed-use development within the Plan Area including office, residential, commercial, and light industrial uses. The project would also allow for more dense residential development. As a result, it is anticipated that the transport, use and storage of hazardous materials would increase within the project area. This was determined to be a less than significant impact with implementation of existing regulations.

Alternative 1 – Less Severe Impact

The No Project Alternative would not result in any new development beyond that evaluated in the Santa Rosa General Plan 2035. Therefore, the volumes and frequency of use of hazardous materials would not be increased over that anticipated in the General Plan 2035 EIR. The No Project Alternative would not result in significant impacts related to hazards or hazardous materials. This impact would be reduced compared to the proposed project.

Alternative 2 – Similar Impact

Alternative 2 would include less development than the proposed project, so the transport, use and storage of hazardous materials within the project area would be less. Compliance with existing regulations related to the handling, storage, and disposal of hazardous materials would also ensure that impacts of this alternative would be less than significant, but because this alternative would have less development that would use hazardous materials, this impact would be less severe than the proposed project.

NOISE

Land uses for the project area under the proposed project would not result in substantial increases in noise levels in the project area or vicinity or expose residents to traffic noise or stationary sources of noise in excess of established standards. Noise and vibration impacts were found to be less than significant with compliance with applicable City Code sections and implementation of construction best management practices.

Alternative 1 – Similar Impact

The No Project Alternative would result in similar types and intensities of land uses as the proposed project. Like the proposed project, the timing and location of projects is not known, but any future development project would be required to comply with applicable regulations that are intended to reduce construction noise and vibration. Because the types of land uses under this alternative do not substantially differ from the proposed project, it is assumed operational noise would be the same. Impacts related to construction and operational noise under this alternative would be similar to the proposed project.

Alternative 2 – Less Severe Impact

The Reduced Development Alternative would result in less traffic and associated noise and fewer stationary sources with the potential to generate noise. Because there would be less development under this alternative, construction and vibration effects would be proportionately reduced. Therefore, this alternative would result in less severe noise impacts than the proposed project.

PUBLIC SERVICES

The proposed project would increase demand for fire protection, emergency medical, and law enforcement services, but there would be no significant impacts due to the construction of new or additional fire protection, emergency medical, or law enforcement facilities to serve the project area. Existing and planned schools in the project vicinity would be able to accommodate students generated by new development and payment of development fees would ensure a less than significant impact on schools. Similarly, existing and planned parks would be adequate to serve the proposed project.

Alternative 1 – Similar Impact

The No Project Alternative would result in a similar amount of development as the proposed project. Like the proposed project, the No Project Alternative would require additional fire protection, emergency medical, or law enforcement services, additional school capacity, and more developed park land. Because the level of development is very similar to that of the proposed project, the physical impacts associated with providing these services for development under the No Project Alternative such as new or altered facilities would not substantially differ from the proposed project.

Alternative 2 – Less Severe Impact

Because the Reduced Development Alternative would include approximately one third of development as the proposed project, the demand for public services would be proportionately reduced compared to the proposed project. Although new facilities may still be required for this alternative, facilities may be smaller or the reduced development under this alternative may be able to be served by existing facilities, eliminating effects of developing some facilities. For these reasons, the physical effects of providing public facilities for this alternative would be less severe than the proposed project.

TRAFFIC AND TRANSPORTATION

The traffic impact study for the proposed project determined that the proposed project would degrade mainline freeway operations to unacceptable levels of service, degrade freeway ramp operations at US 101 North from Todd Road to State Route 12, and contribute to cumulative impacts on mainline freeway operations. These impacts are considered significant and unavoidable.

Alternative 1 – Similar Impact

The No Project Alternative would result in development that is similar in intensity to the proposed project and would generate traffic at similar levels. The threshold for determining an impact on the freeway mainline is whether the project would increase cars per mile ("density") by more than 1 percent over conditions without the project. The proposed project would result in an increase in density of approximately 3 seconds. Because the traffic generated under this alternative would not substantially differ from the proposed project, it would likely result in a similar increase in density per mile. Therefore, the impact would be similar under this alternative and would also be significant and unavoidable.

Alternative 2 – Less Severe Impact

The Reduced Development Alternative is intended to reduce the development potential in the project area to reduce the amount of traffic on roadways to ensure that the automobile density would not increase by more than 1 percent. Specifically, this alternative would allow for an increase in development in the project area over existing conditions that is one third of the new development that could occur under the project as proposed. Because the reduction in development under the Reduced Development Alternative relative to the proposed project was determined specifically to reduce traffic impacts, project-specific and cumulative impacts on freeway mainlines under this alternative would be less than significant and it is likely that impacts related to freeway ramp operations would also be less than significant. Impacts on traffic operations would be less severe under this alternative than the proposed project.

PUBLIC UTILITIES

The proposed project would not result in significant impacts related to water supply and treatment, wastewater treatment, wastewater conveyance, or stormwater infrastructure. There is adequate capacity to accommodate the proposed project's solid waste generation at the landfill that currently serves the project area and the rest of the City.

Alternative 1 – Similar Impact

Because the No Project Alternative would have a similar amount of development as the proposed project, this alternative's impacts related to utilities would not substantially differ from that of the proposed project. The No Project Alternative would not result in any new development beyond that evaluated in the Santa Rosa General Plan 2035, which found effects related to utilities to be less than significant. The impact would be similar under this alternative.

Alternative 2 – Less Severe Impact

The Reduced Development Alternative would result in approximately one third of the development as the proposed project. Consequently, the demand for utilities would be proportionately reduced. Impacts on utilities would be less severe under this alternative than the proposed project.

4.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 4.0-1 provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed project.

TABLE 4.0-2
COMPARISON OF ALTERNATIVES TO THE PROPOSED SPECIFIC PLAN BY IMPACT

Impact	Proposed Project (Significance)	Alternative 1 No Project (Comparison)	Alternative 2 Reduced Development Potential (Comparison)
Aesthetics	LS	LS =	LS +
Agricultural Resources	NI	NI =	NI =
Air Quality	LS	LS =	LS +
Biological Resources	LS	LS =	LS =
Cultural Resources	LS	LS =	LS =
Greenhouse Gas	LS	LS =	LS +
Geology and Soils	LS	LS =	LS =
Hazards and Hazardous Materials	LS	LS =	LS =
Hydrology and Water Quality	LS	LS =	LS =
Land Use	LS	LS =	LS =
Noise	LS	LS =	LS +
Public Services	LS	LS =	LS +
Population and Housing	LS	LS =	LS =
Traffic and Transportation (freeway operations only, all others LS or NI)	SU	SU =	LS + +
Public Utilities	LS	LS =	LS +

Notes: Significance is identified by the following: NI: no impact, LS: less than significant, SU: significant and unavoidable.

Comparisons identified by the following:

+: improvement compared to the proposed project

+ +: improvement compared to the proposed project and avoids a significant impact

=: similar impact as proposed project

Based upon the evaluation described in this section, Alternative 2, the Reduced Development Alternative, is considered to be the environmentally superior alternative. Alternative 2 was determined to have the fewest negative impacts on the physical environment and would have less adverse environmental impacts than the proposed project. However, given the substantial reductions in development intensity required to achieve the reductions in impacts to a less than significant level, the resulting development may not achieve densities required to meet the project objectives related to transit-supportive land uses. In addition, although the reduced

densities in the project area would result in fewer impacts generated in the project area, the inability to accommodate planned growth in this portion of the City may induce growth in other areas and result in similar impacts elsewhere in the City or region. The extent to which impacts outside the project area cannot be determined at this time.

5.0 OTHER CEQA ANALYSIS

This section discusses additional topics statutorily required by the California Environmental Quality Act (CEQA), including significant impacts that cannot be avoided if the proposed project is implemented, growth-inducing impacts, significant irreversible environmental effects. CEQA also requires evaluation of cumulative impacts. The cumulative impacts of the proposed project are evaluated in each of the technical sections of this Draft EIR (Sections 3.1 through 3.15). This section also addresses CEQA Guidelines Appendix F (Energy Conservation).

5.1 SIGNIFICANT EFFECTS THAT CANNOT BE AVOIDED

The analysis presented in the technical sections of this Draft EIR (Sections 3.1 through 3.15) concluded the following significant and unavoidable impacts would result from implementation of the proposed project:

Impact 3.14.2 Project traffic would have the potential to degrade mainline freeway operations to unacceptable levels of service under Existing plus Project conditions (US 101 North – Todd Rd to SR 12).

Impact 3.14.3 Project traffic would have the potential to degrade freeway ramp operations to an unacceptable level of service at the southbound US 101 freeway off-ramp at Hearn Avenue under Existing plus Project conditions.

Impact 3.14.11 Project traffic, when considered together with other past, present, and future development, would have the potential to degrade mainline freeway operations to unacceptable levels of service.

5.2 GROWTH-INDUCING IMPACTS

INTRODUCTION

CEQA Guidelines Section 15126.2(d) requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

> *The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth. It is not assumed that growth in an area is* necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth-inducement potential. For example, direct growth inducement potential would result if a project involved construction of new housing. A project would have indirect growth-inducement potential if it established substantial new permanent employment opportunities or if it involved a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand.

Similarly, a project would indirectly induce growth if it removed an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth

include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with, or accommodated by, the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a community are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

GROWTH EFFECTS OF THE PROJECT

The proposed project would guide future development in the project area. While the project does not, in itself, mandate or propose any specific development, future development would be required to meet the design, land use, and other requirements of the Specific Plan. By utilizing the allowed land uses and densities delineated in the General Plan and proposed Specific Plan, an assumed amount of development that would likely occur in the project area has been formulated (see **Tables 2.0-5** and **2.0-6**).

Population Growth

Buildout of the project area would allow for a net increase of 108 residential units housing approximately 282 more people compared to what is currently planned for the project area under the General Plan 2035. This development represents direct growth in the project area and in the city as a whole but would be offset by the net reduction in non-residential development anticipated under the proposed project. The direct growth inducement of the project is described below. The associated secondary effects of this growth are discussed in the various technical sections of this Draft EIR (Sections 3.1 through 3.15). The reader is also referred to Section 3.12, Population and Housing, of this Draft EIR for further discussion of the project's population growth affects.

Growth Effects Associated with Annexation

The project would result in the annexation of several unincorporated islands. Annexation of unincorporated land into a city's boundaries could promote growth by providing city serves to a previously underserved area. These areas were considered in the General Plan 2035 and planned land uses within these areas would remain largely unchanged. Therefore, annexation of these areas would not extend public serves to underserved areas or result in land use changes which could result in substantial new development.

Growth Effects Associated with Infrastructure Improvements

The potential to indirectly induce growth is assumed to exist if a project would remove an obstacle to additional growth and development, such as removing a constraint on a required public service or if construction of additional infrastructure or resources resulted in excess capacity that would allow additional growth to occur. In the case of the proposed project, all infrastructure and utilities are located immediately adjacent to or within the project area. Land uses in the project area would utilize existing capacity for all services and utilities and would connect to existing networks. In addition, the project area was considered for development in the General plan 2035 at levels that are generally consistent with the development intensity proposed for the project. As no excess capacity would be created by the project, indirect growth effects are not anticipated.

ENVIRONMENTAL EFFECTS OF GROWTH

As described previously, the intent of the proposed project is to accommodate anticipated growth through compact, walkable, infill, transit-oriented, and mixed-use development. The City's General Plan provides for this anticipated growth, as does planning by service and utility providers. Thus, growth accommodated under the proposed project would be confined to the immediate project area and would avoid growth effects on parcels adjacent to the project area. The environmental effects of buildout of the project area, both direct and cumulative, are addressed in Sections 3.1 through 3.15 of this Draft EIR.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines Sections 21100(b)(2) and 21100.1(a) require that EIRs prepared for the adoption of a plan, policy, or ordinance of a public agency must include a discussion of significant irreversible environmental changes that would result from project implementation. In addition, CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes in the following manner:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Implementation of the proposed Specific Plan would result in the conversion of a small portion of undeveloped and/or underutilized properties zoned for low and medium density residential and mixed residential and retail uses to medium low and high density residential, public/institutional, parks and recreation and a mixed residential and public institutional uses. Subsequent development under the Specific Plan would constitute a long-term commitment to these uses.

Development of the Specific Plan area would irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure. Renewable, nonrenewable, and limited resources that would likely be consumed as part of the development of the proposed Specific Plan would include, but are not limited to, oil, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar materials. In addition, implementation of the project would result in increased demand on public services and utilities (see Section 3.13, Public Services, and 3.15, Public Utilities).

5.4 ENERGY CONSERVATION

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F of the CEQA Guidelines.

CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy and therefore would not create a significant impact on energy resources.

The Santa Rosa General Plan 2035 Environmental Impact Report (EIR; SCH# 2008092114) disclosed that growth under the General Plan 2035 would increase energy use in the city by nearly 40 percent, while population would increase by 30 percent in the same time period. However, the EIR found existing city code, the green building requirements of Resolution 27001, as well as several objectives and policies in the General Plan 2035 would support energy efficiency in new and retrofit construction. These policies exceed common energy conservation policies, and can be expected to result in at least a 5 percent reduction in energy use in existing residential structures, and a 10 percent reduction in existing non-residential uses. For these reasons, the EIR determined implementation of the policies in the General Plan 2035 would reduce energy consumption and emphasize the efficient use of energy sources, resulting in a less than significant impact related to energy consumption and inefficient use of energy.

With respect to increased reliance on natural gas and oil, the EIR found that implementation of objectives and policies in the General Plan 2035 would support energy efficiency by reducing non-renewable energy use, thus reducing reliance on natural gas and oil. This was also found to be a less than significant impact. The EIR also found that although transportation energy usage would continue to increase overall as population increases, General Plan 2035 policies would reduce per capita transportation energy consumption, achieving a roughly five percent decrease in per capita energy use. For this reason, the EIR determined General Plan 2035 policies would reduce energy consumption to a less than significant level.

As described in Chapter 2.0, Project Description, of this Draft EIR, the proposed project would result in similar development intensities in the project area as analyzed in the General Plan 2035 EIR. Table 2.0-6 shows that while the proposed project would result in a net increase of 99 residential units in the project area, the non-residential square footage in the project area would decrease by over 80,000 square feet. Development in the project area would be required to comply with all General Plan 2035 objectives and policies assumed for energy reduction in the General Plan 2035 EIR. Because the level of development in the proposed project is similar to that assumed in the General Plan 2035 EIR and the proposed project would be subject to the energy conserving policies identified in the General Plan 2035 EIR, the proposed project would not result in inefficient, wasteful, and unnecessary consumption of energy or substantially increase energy consumption compared to that assumed in the General Plan 2035 EIR.

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