

SOUTH SANTA ROSA SPECIFIC PLAN

EXISTING CONDITIONS REPORT



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INTRODUCTION



Mural at The Hattery of Sonoma Country, 1240 Petaluma Hill Road, Santa Rosa

Background

For several decades, land within the South Santa Rosa Specific Plan Area (**Figure 1**) has been developed without the benefit of a comprehensive effort to plan for multimodal circulation, land use, infrastructure, or the location of community facilities such as parks, schools, and libraries. In accordance with Action 2-1.9 of the Draft City of Santa Rosa General Plan 2050, the South Santa Rosa Specific Plan (hereafter referred to as either the 'SSRSP' or 'Specific Plan') is needed to identify and accommodate City needs before considering annexation of this area. The objective of the Specific Plan is to develop a vision for land use, circulation and infrastructure, including development and public realm standards, community and health/equity policies, and capital improvements, coupled with necessary implementation actions and investment priorities.

The Plan Area contains two separate Priority Development Areas (PDAs). PDAs are specific areas identified within regional planning frameworks, such as the Metropolitan Transportation Commission's (MTC) Plan Bay Area 2050, designated to support growth that is compact, walkable, and oriented around public transit. PDAs are typically located near major transit hubs and are intended to encourage development that reduces reliance on cars, promotes accessibility, and aligns with sustainability goals. The Mendocino Avenue/Santa Rosa Avenue PDA extends beyond the northern edge of the Plan Area at Santa Rosa Avenue and Highway 12 and is immediately abutted by the County of Sonoma Santa Rosa Avenue PDA which extends south to the City of Rohnert Park's northern boundary (**Figure 2**). The primary portions of the Plan Area not covered by PDAs are west of Highway 101, including portions of the greater Moorland and Bellevue neighborhoods (**Figure 3**).

Overview

A specific plan is a planning document that implements the goals and policies of the City's General Plan. Specific Plans guide the development of a particular geographic area of the city. The SSRSP will guide the future development of a 1,900-acre area in southern Santa Rosa, identifying land use and transportation improvements to serve people who live, work, and play in the area. The plan covers parts of the community around Santa Rosa Avenue within the City of Santa Rosa and unincorporated Sonoma County, as well as the unincorporated County area on the west side of Hwy 101, including the Moorland and industrial neighborhoods. The SSRSP seeks community input to guide the development of facilities, ensure equitable outreach to diverse groups, prepare an anti-displacement strategy for affordable housing, and support existing transit services. A policy framework will be created to support community health, balanced neighborhoods, transportation, affordable housing, economic resilience, and equity.

The SSRSP will play a foundational role in regulating land use in the Plan Area; it will be a high-level planning document that provides direction for all zoning regulations, ordinances, and guidelines. The goals and policies throughout the SSRSP will be interrelated and should be considered together when making decisions related to land use, mobility, growth, and development.

EXISTING CONDITIONS REPORT | INTRODUCTION

An Existing Conditions Report (ECR) is a comprehensive document analyzing the current state of a geographic area. This ECR serves as the foundation for the SSRSP and describes economic conditions, demographic composition, urban form, land use, circulation, public services, infrastructure, and climate adaptation. The ECR will also describe the regulatory framework that applies to each of these topic areas. The report presents the existing conditions, challenges, and opportunities in the project area and is crucial for making informed decisions during the planning process. Ultimately, this report will help to shape the strategies and policies of the SSRSP to align with the existing context and community needs.

Some terms used throughout the SSRSP Existing Conditions Report include:

- **Density:** The number of dwelling units (du) within a defined area, commonly measured as dwelling units per acre (du/acre).
- **Dwelling Unit:** A structure designed for people to live in, such as a house, apartment, or other independent living space. It is the basic residential structure where individuals or families reside and is also often referred to as a housing unit.
- **Floor Area Ratio:** Floor Area Ratio (FAR) is the measurement of a building's floor area in relation to the size of the lot/parcel.
- **General Plan:** A general plan is a city or county's blueprint or constitution for development, required by California state law.
- **Land Use Designation:** A land use designation identifies the general type of use (e.g., residential, commercial, industrial) and the intensity of the use allowed on a property, set by a General Plan. For residential uses, intensity is typically measured in dwelling units per acre. For non-residential uses (e.g., stores and warehouses), intensity is regulated through zoning standards such as maximum building heights, lot coverage limits, setback requirements, and parking standards. These regulations collectively control the size and scale of non-residential buildings, ensuring they are compatible with surrounding uses and align with the City's planning objectives.
- **Metropolitan Transportation Commission (MTC):** The Metropolitan Transportation Commission (MTC) is the transportation planning, financing and coordinating agency for the nine-county San Francisco Bay Area. MTC was created by the California Legislature in 1970 to plan, finance, and coordinate the Bay Area's transportation system.
- **Mixed-Use Development:** The arrangement or construction of a piece of land, building, or structure that combines two or more different purposes. These purposes can include, but are not limited to, places for living, offices, stores, and public spaces.
- **Transit Oriented Development (TOD):** A way of planning neighborhoods and cities that center around public transportation, like trains or buses. The term describes the idea of building homes, offices, and stores close to these transit spots, so that it is easy for people to live, work, shop, and play without needing a car. Transit-oriented development is also referred to as transit-oriented communities and transit-oriented neighborhoods.
- **Zoning:** The process of dividing a city into different districts or "zones", each with a specific set of rules. Zoning helps control the type of buildings and activities permitted in different areas.
- **Greenhouse gas (GHG):** Greenhouse gases are gases that trap heat in the atmosphere.

The following three figures provide an overview of the jurisdictional boundaries, existing

public services, MTC's designated Priority Development Areas, and approximate locations of neighborhoods in the Plan Area.

Figure 1. South Santa Rosa Specific Plan Area

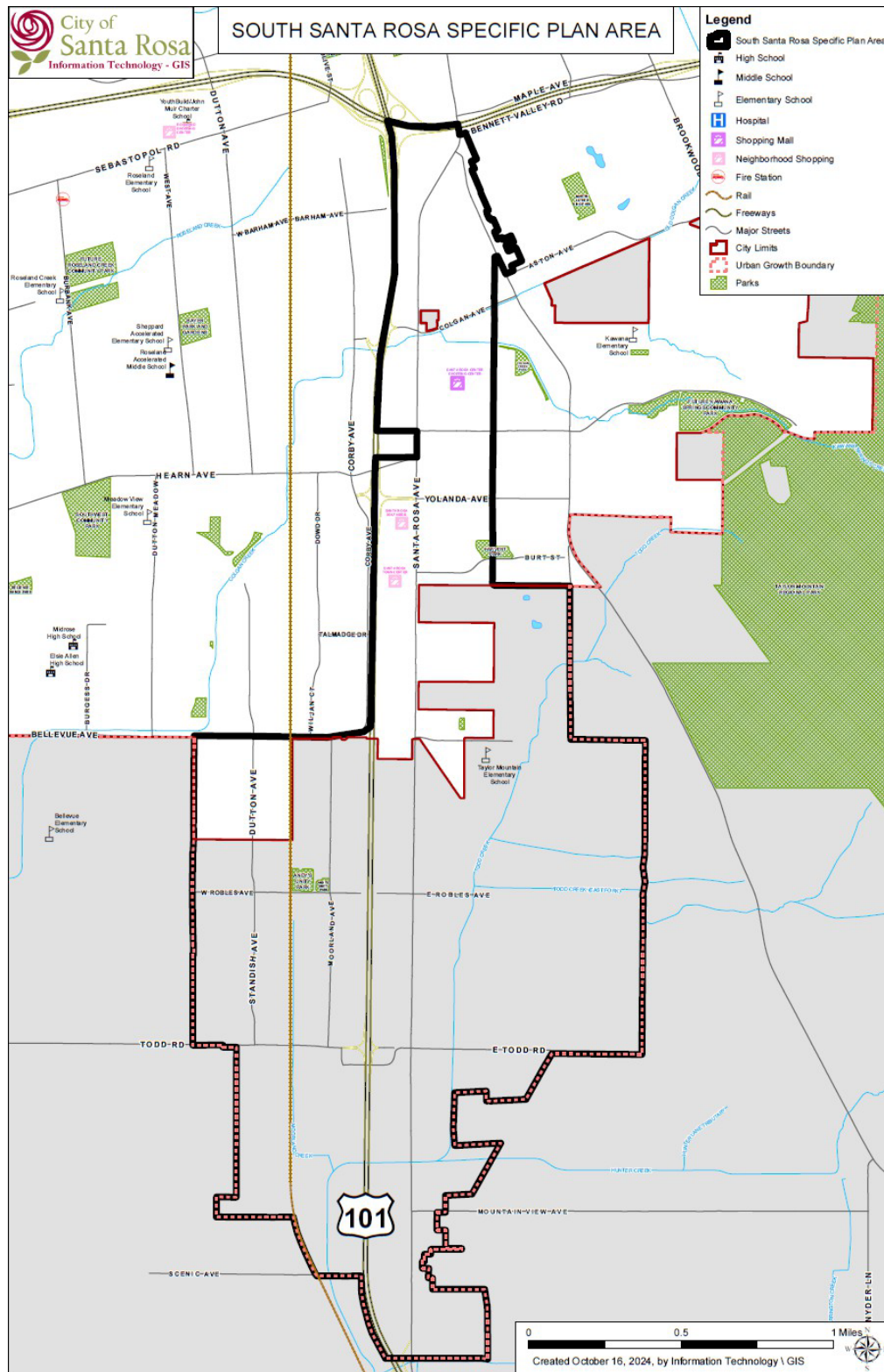


Figure 2. Designated PDAs within Plan Area

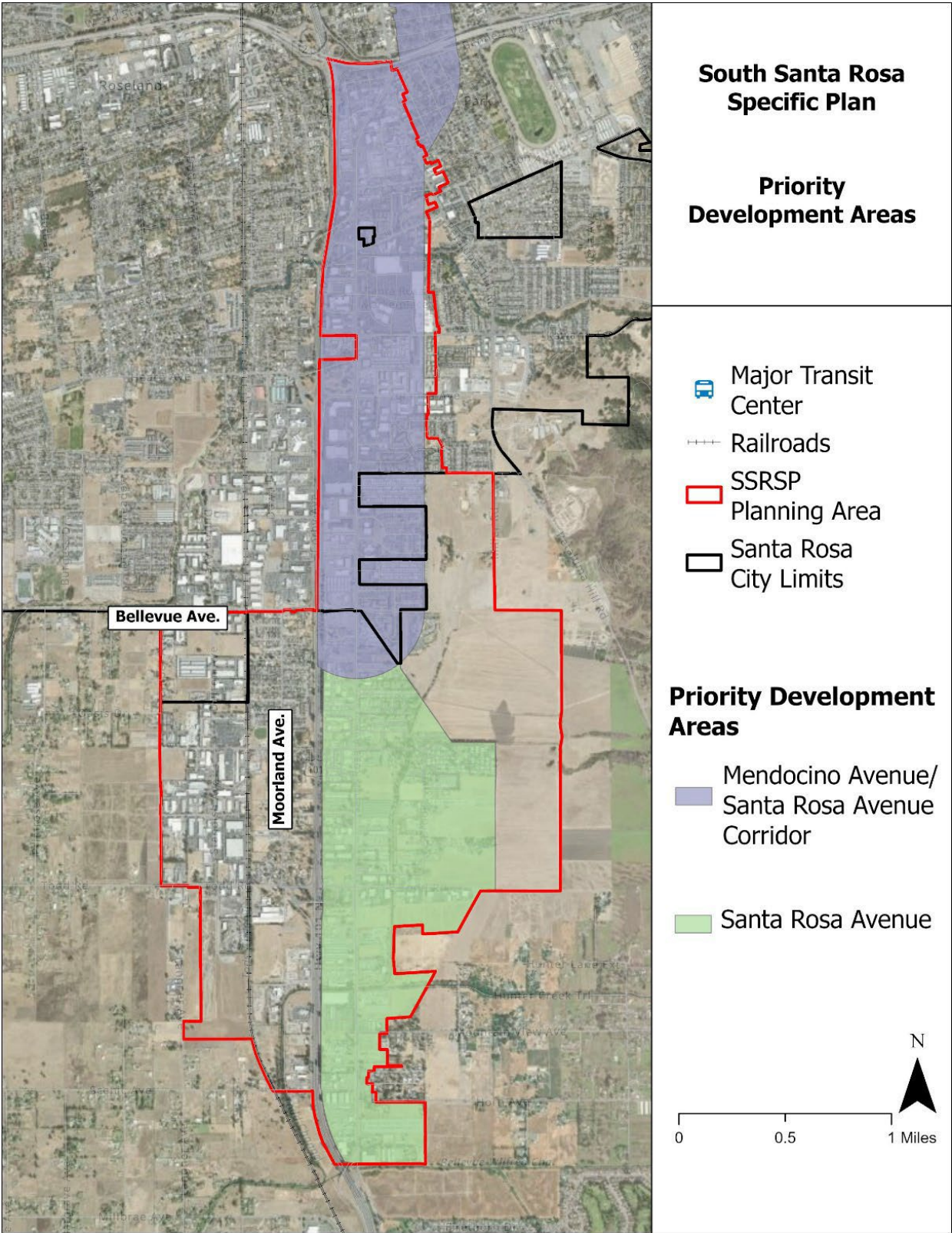
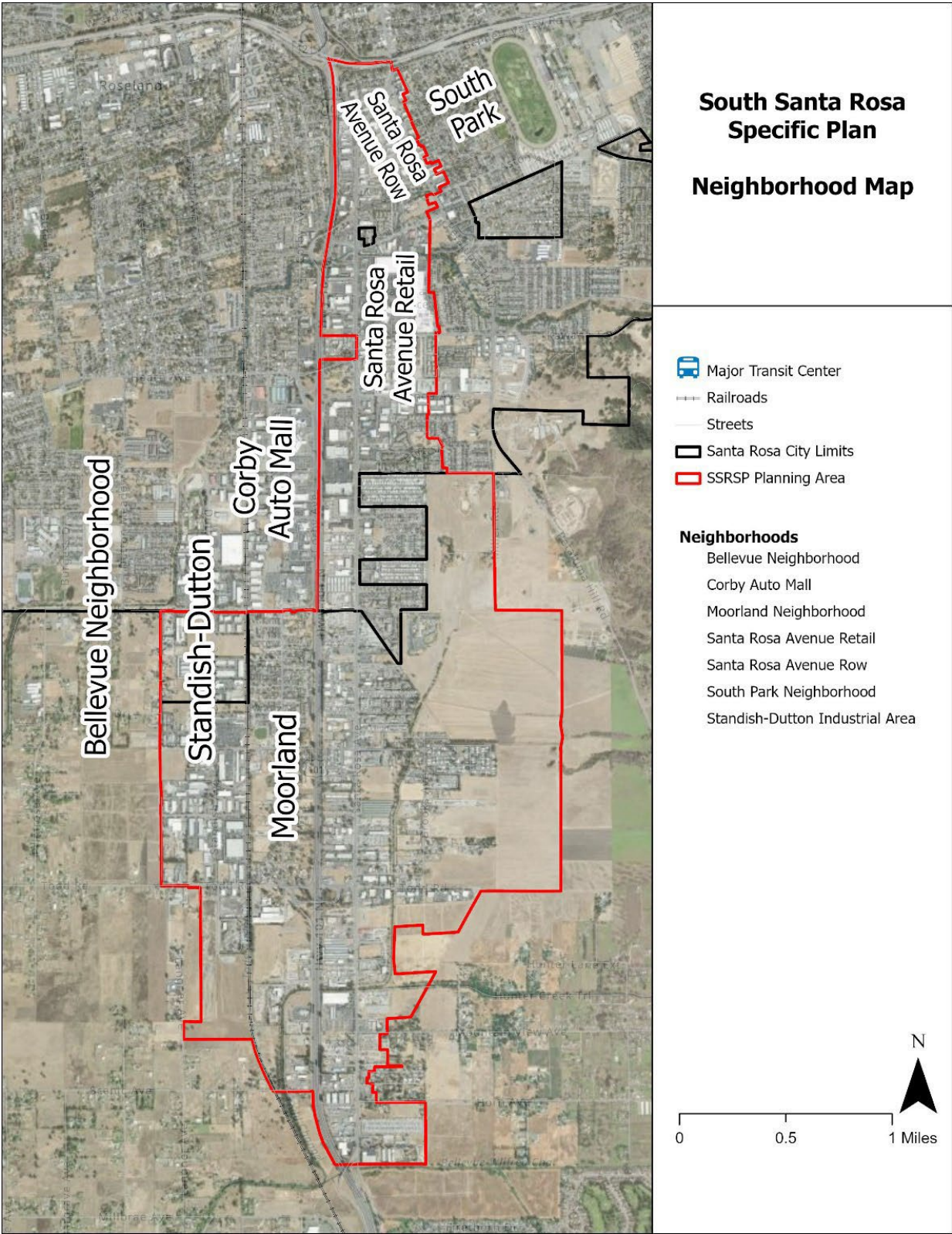


Figure 3. Neighborhood Map



Format and Contents

The Existing Conditions Report provides an overview of the baseline (year 2025) and contains eight sections organized by topic area. The information contained in each section is summarized below.

1. **Introduction** - This section provides a description of the current Plan Area, a summary of the history of the Plan Area, why the plan is needed, a summary of the topics covered in this Existing Conditions report, and a definition of terms used commonly throughout the report.
2. **Demographic & Economic Overview** - This section provides an overview of the demographic, housing, and economic profile of the Plan Area. This includes characteristics of the area's population such as age, sex, race, and disability status. It also includes information about environmental hazards, housing, and employment such as employment rates and major employers in the area.
3. **Urban Form & Land Use** - This section describes and analyzes existing land use in the Plan area. This includes land use designations set in Santa Rosa General Plan and Sonoma County General Plan 2020, and zoning designations per City and County ordinances. It also describes the character of the existing urban developments based on density, design, and other qualities.
4. **Circulation** - This section describes the existing circulation network within the Plan Area, including the existing street, bicycle, pedestrian, and transit network. You will also find information about major roadways, traffic levels and safety, major transit providers, and data on how people in the Plan Area travel.
5. **Public Services and Infrastructure** - This section provides information about key assets and existing services in and around the Plan Area such as schools, libraries, firefighting facilities, and community spaces or businesses that are important to residents in the Plan Area. This section also includes information about vital services and infrastructure such as water, wastewater, solid waste, stormwater, and broadband.
6. **Resilience & Climate Adaptation** - This section outlines the environmental conditions and hazards in the Plan Area such as major fault lines, wildfire hazard zones, flood risk, climate adaptation, and noise levels.
7. **Regulatory Framework** - This section provides an overview of planning documents, ordinances, and other regulations that affect land use and urban development in the Plan Area, including a summary of applicable policies in the Santa Rosa General Plan and Sonoma County General Plan 2020.
8. **Conclusion** - This section provides a recap of the information provided within this Existing Conditions Report.

History of the Plan Area

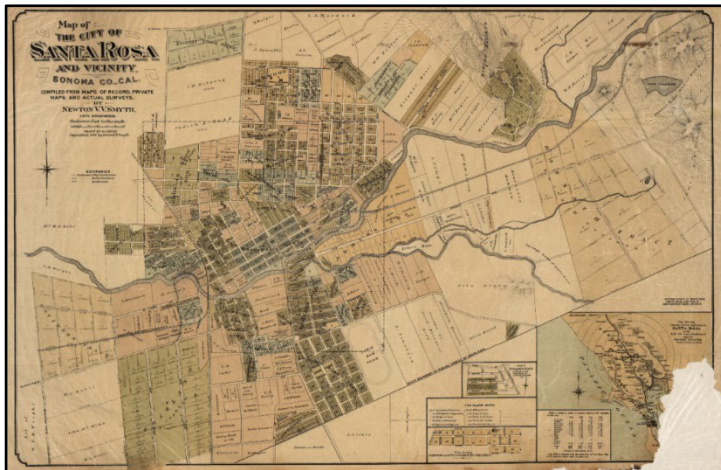
The SSRSP area encompasses approximately 1,900 acres, including about 1,400 acres of unincorporated County land. The Northern boundary of the Plan Area extends to the U.S. Highway 101 and State Highway 12 interchange. The Northwestern boundary of the Plan Area runs along Highway 101, and the Southwestern portion of the Plan Area extends as far West as Juniper Avenue. The Eastern boundary of the Plan Area does not border any major roadways, but it loosely follows Petaluma Hill Road. The Plan area extends as far South as the Santa Rosa Avenue and Roberts Lake Road intersection.

Santa Rosa, which translates to "Saint Rose" in Spanish, was established in 1833 and incorporated in 1867. Prior to the influx of European settlers, the Santa Rosa Plain was inhabited by the Bitakomtara, a tribelet of Southern Pomo natives.



*1876 Bridge Dedication
Source: Healdsburg Museum*

The first bridge over Santa Rosa Creek was built in 1859 which facilitated early development south beyond the historic downtown. The bridge was rebuilt several times in the late 1800s (including one of the first wrought iron bridges on the West Coast, completed in 1876), and incorporation raised the question of whether the County or City was responsible for payment. A California



*Map of the City of Santa Rosa and Vicinity
Source: Dave Rumsey Collection*

Supreme Court case in 1875 determined that the City was responsible for construction costs, and the case may constitute the first official use of the phrases "Santa Rosa Avenue," and "South Santa Rosa" to refer to area south of Santa Rosa Creek. Chief Justice William Wallace's findings further declared that area north of the creek "the business portion" of the City, and South Santa Rosa was "occupied by businessmen for residences."¹

¹ Compiled from multiple sources including the Press Democrat article available at <https://www.pressdemocrat.com/article/news/photos-el-rancho-tropicana-was-the-spot-for-rallies-conventions-and-sport/> and historic bridge information from <http://santarosahistory.com/wordpress/2020/11/a-city-of-bridges/>

Following the establishment of railroad service in 1870, the population in Santa Rosa began to grow and development in the northeastern sector of the Plan Area had begun by 1896.

Over the next several decades, the area continued to develop. Freeway approvals for Highways 101 and 12 were initiated in the early 1950s and divided the City into quadrants upon construction.

The Santa Rosa Avenue corridor continued to develop over the second half of the 20th century, with popular motor lodges and resorts catering to a wide clientele.



Santa Rosa in 1965

Source: Sonoma County Library Special Collections



1955 Postcard for El Rancho Tropicana

Source: Press Democrat, 2023,

Notably, El Rancho Tropicana (1949- 1993) on the site of the current Santa Rosa Marketplace grew from a 25-room motel to the City's largest resort and convention center.¹ The Tropicana was known as the summer training facilities for the Oakland Raiders for over two decades, the home of large *Star Trek* conventions attended by William Shatner, and the site of a rally by former President Gerald Ford.²

Most major shopping centers within the area were established within the 1990s and early 2000s, shifting the Avenue from one punctuated by motels, bars and nightclubs to more of a retail-oriented corridor reflected into the present day.

² Compiled from multiple sources including the Press Democrat article available at <https://www.pressdemocrat.com/article/news/photos-el-rancho-tropicana-was-the-spot-for-rallies-conventions-and-sport/> and historic bridge information from <http://santarosahistory.com/wordpress/2020/11/a-city-of-bridges/>

DEMOGRAPHIC & ECONOMIC OVERVIEW



Hearn Avenue at Highway 101

Population Characteristics

The Plan Area contains a population of approximately 11,500 residents across 3,900 households. The area has a generally youthful demographic with a median age of 31.1 years, significantly lower than both the City (39.6 years) and County (42.4 years). The Plan Area is home to a vibrant and diverse community, with 53.5% identifying as Hispanic or Latino, 48.2% speaking a language other than English, and 28.1% of residents having immigrated from outside the U.S., primarily from Latin America.³

The median household income in the Plan Area is \$60,700, lower than both the City's median income of \$92,604 and the County's median of \$99,266. The percentage of the Plan Area's population living below the poverty level stands at 14.45%, higher than that of the City's 9.5% and County's 9% rate.

Additionally, 7.4% of Plan Area residents received food stamp/SNAP benefits in the past 12 months, which aligns with City's overall rate and is slightly higher than the County's rate of 6%. This income and economic assistance data is indicative of the socio-economic challenges faced by the community.

Health Equity

Pollution Burden

The pollution burden percentile refers to the ranking of a specific area or community based on the level of pollution and environmental burdens it experiences compared to other areas in California. A higher percentile indicates a greater relative burden. As shown in **Table 1**, a percentile of 78 for the eastern portion of the Plan Area signifies that this area experiences more significant pollution and environmental burdens than 78% of other areas in California. In contrast, a lower percentile, like 58 for the western portion, indicates a comparatively lower but still notable pollution burden relative to other regions.

These values are derived from various metrics that assess air quality, water quality, exposure to hazardous chemicals, and other environmental stressors that may impact public health. The percentile scores provide insight into areas that may require prioritized interventions to mitigate environmental impacts and promote health equity. This information is valuable for helping policymakers to prioritize resources and interventions to address environmental injustices and promote equity. It considers factors such as air and water quality, exposure to toxic releases, demographics, socioeconomic status, and proximity to polluting sources to identify areas most in need of attention and support due to the burden of greater exposure to environmental hazards.

³ Data for the Plan Area was derived from the following sources: U.S. Census, American Community Survey, Association of Bay Area Governments, City and County housing records, ESRI (2021), and the UC Berkeley Urban Displacement Project. GIS was used to delineate a shapefile of the Plan Area. The American Community Survey (ACS) Census data for that discrete area was collected and analyzed for this report. Population and household estimates specifically for the Plan Area were supplemented by ESRI's 2021 data, which uses census block allocations to estimate custom geographies like the Plan Area.

**Table 1: Pollution Burden Percentile Scores
for the Plan Area**

Location	Pollution Burden Percentile
Plan Area (West of Highway 101)	58
Plan Area (East of Highway 101)	78

Source: CalEnviroScreen 4.0, California Office of Environmental Health Hazard Assessment. Available at: <https://oehha.ca.gov/calenviroscreen>.

Asthma

CalEnviroScreen 4.0, developed by the California Office of Environmental Health Hazard Assessment (OEHHA), is a tool designed to identify communities disproportionately affected by pollution and population vulnerabilities. According to this tool, between 2015 and 2017, an estimated 47 per 10,000 residents in census tract 1514.02—which includes the Plan Area east of U.S. Highway 101—visited the emergency department for asthma. The asthma percentile for this census tract is 51, meaning the asthma rate is higher than 51% of the census tracts in California. Asthma rates in the Plan Area located to the west of U.S. Highway 101 (census tract 1532) are higher, with an estimated 72 people per 10,000 in this census tract having visited the emergency department for asthma and an asthma percentile of 80, meaning the asthma rate is higher than 80% of the census tracts in California.⁴

Low Birth Weight

Studies suggest that environmental exposures to lead, air pollution, toxic air contaminants, traffic pollution, among others, can impact the prevalence of low birth weight in babies.

Infants born weighing less than approximately five and a half pounds are classified as having low birth weight, a condition associated with increased risks of health problems later in life and higher infant mortality rates. In the Plan Area, about 4.3% of births are low birth weight, ranking it among the higher rates in the state. In comparison, northern Santa Rosa has a significantly lower rate of 1.84% low birth weight births, positioning it among the lowest rates in the state.

Cardiovascular Disease

The Plan Area has some of the highest cardiovascular disease indicators in the City of Santa Rosa, particularly in its western section. In Census Tract 1532, approximately 20.47 people per 10,000 visited the emergency department for heart attacks, placing it among the top 12% of areas in California for high rates of such visits. In Census Tract 1514.02, around 13.31 individuals per 10,000 sought emergency care for heart attacks, which ranks it in the top 45% of areas in the state. In contrast, select areas in northern Santa Rosa have a lower rate, with about 9.76 people

⁴ CalEnviroScreen 4.0 Report, 2010. Method: PM2.5 annual mean monitoring data were extracted from all monitoring sites in California from CARB's air monitoring network database for the years 2015-2017. Available at: <https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen4o-report2021.pdf>

per 10,000 visiting the emergency department for heart attacks, ranking them in the top 28% of areas for lower rates.

Life Expectancy

The average life expectancy of residents in the Plan Area is 78 years. This is lower than the City of Santa Rosa as a whole, which has a life expectancy of 80.9 years. Residents of Sonoma County have a slightly higher life expectancy of 81.6 years, which is on par with the statewide life expectancy of 81.3 years.

Access to Health Insurance

With approximately 12.4% of residents lacking health insurance coverage, double the rate within both the City (6.9%) and County (5.6%), the community faces heightened vulnerability. The *Portrait of Sonoma* report provides a detailed analysis of disparities across health, education, and income within the County, and highlights that the South Santa Rosa Specific Plan Area has one of the lowest Human Development Indices (HDI) in Sonoma County, significantly below County and State averages.⁵ The HDI measures life expectancy, education, and income, offering a broad view of community well-being.

This context, combined with CalEnviroScreen scores that reflect pollution and socioeconomic challenges, suggests that the Plan Area may benefit from targeted efforts to improve health access and equity. By examining these local trends within state and regional frameworks, the planning process can better address specific needs and support the community's development, including cultural infrastructure like schools and community centers that reflect and serve the population.

Equity Priority Communities (EPCs)

Equity Priority Communities (EPCs) are census tracts defined by the Association of Bay Area Governments (ABAG) that have a significant concentration of underserved populations, such as households with low incomes and people of color. The Equity Priority Communities⁶ framework helps ABAG make decisions on investments that meaningfully reverse the disparities in access to transportation, housing and other community services.

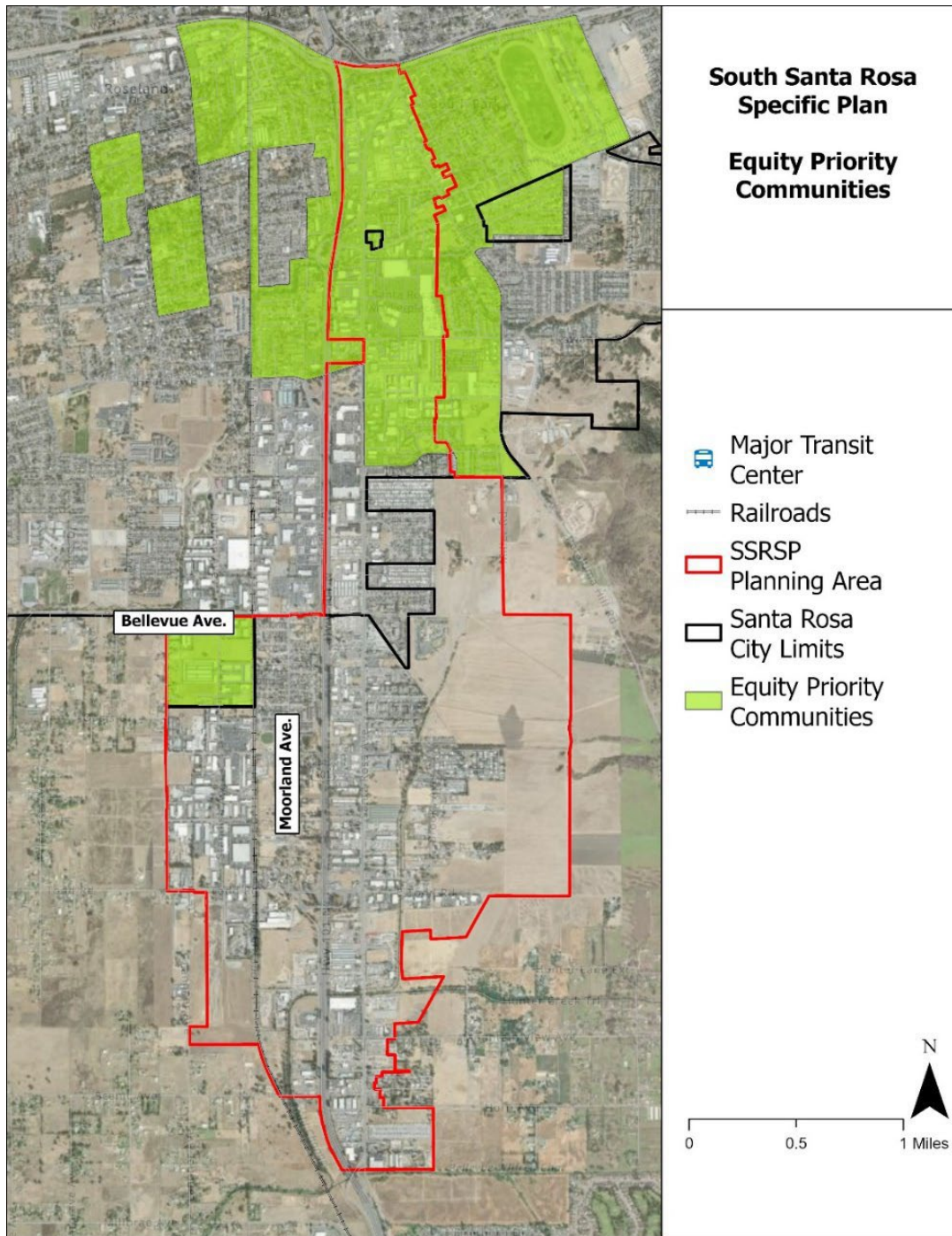
As shown in **Figure 4**, two EPCs exist in the Plan Area. One covers about 490 acres in Census Tract 151406, which contains the majority of the northern portion of the Plan Area south of Highway 12, east of Highway 101, and west of Petaluma Hill Road. This EPC is home to 9,917 residents in 3,516 households. Five thousand residents, about half of the EPC population, are considered low-income.

⁵ Measure of America, *A Portrait of Sonoma County: 2021 Update* (County of Sonoma Department of Health Services, 2022), <https://sonomacounty.ca.gov/health-and-human-services/health-services/about-us/portrait-of-sonoma-county>.

⁶ Association of Bay Area Governments, "Equity Priority Communities," <https://abag.ca.gov/our-work/equity-priority-communities>

A second, much smaller EPC area covering approximately 106 acres is situated within the City limits, just south of the intersection of Bellevue Ave. and Dutton Ave. Approximately 80 acres of this area is zoned for Industrial use, and 26 acres zoned for multi-family residential use. One parcel (APN: 043-133-013) of approximately 5.94 acres is included in the City's General Plan Housing Element Site Inventory and is anticipated to serve moderate-income households.

Figure 4. Equity Priority Communities

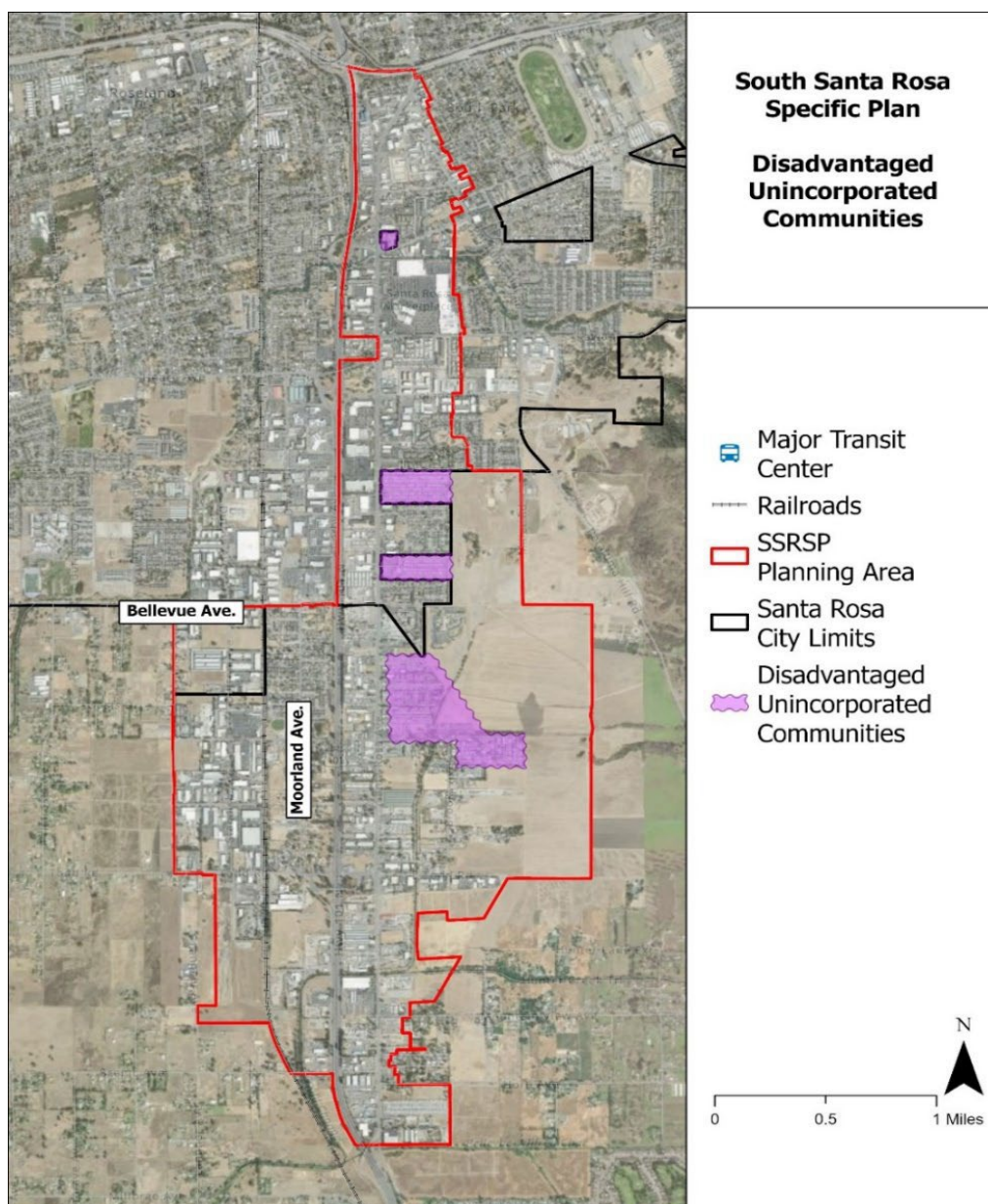


Source: City of Santa Rosa 2023

Disadvantaged Unincorporated Communities (DUCs)

DUCs are designated in accordance with Senate Bill 244 to begin to address the complex legal, financial, and political barriers that contribute to regional inequity and infrastructure deficits within disadvantaged unincorporated communities. According to legislative findings in SB 244, hundreds of unincorporated communities in California lack access to basic community infrastructure such as sidewalks and safe drinking water. These communities range from remote settlements throughout the state to neighborhoods that have been largely surrounded by cities but have not been incorporated into them. This lack of investment threatens residents' health and safety and fosters economic, social, and education inequality. Moreover, when this lack of attention and resources becomes standard practice, it can create a matrix of barriers that is difficult to overcome. There are four (4) DUCs in the Plan Area, as shown in **Figure 5** below.

Figure 5. Disadvantaged Unincorporated Communities



Housing Profile

Throughout the twentieth century, housing in the Plan Area developed at a steady pace with 37% of the overall units built between 1940 and 1989. As shown in **Table 2** below, that pace increased dramatically in 1990 and continued through 2009, resulting in the majority (51%) of the housing stock. After 2009, construction slowed substantially with less than 7% of the area's housing units built during this period. While much of the Plan Area housing is single family (54.4%), larger multi-family developments of 10 to 20+ units comprise 15.7% of housing, and mobile homes represent 17.5% of housing. Mobile home housing represents a much higher percentage in the Plan Area than in the City of Santa Rosa as a whole (17.5% versus 3.8%).

Table 2: Age of Housing Structures

Year Structure Built	Percentage
Built after 2014	3.2%
Built 2010 through 2013	3.3%
Built 2000 through 2009	23.0%
Built 1990 through 1999	28.3%
Built 1980 through 1989	9.6%
Built 1970 through 1979	9.8%
Built 1960 through 1969	8.4%
Built 1950 through 1959	5.2%
Built 1940 through 1949	4.0%
Built 1939 or earlier	5.2%

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates

Over half of the Plan Area's housing units are renter-occupied (54%). This represents a higher percentage than in Santa Rosa, where just 44% of housing units are renter-occupied. While the Plan Area offers more rental housing units, Census data indicates that the amount of income being spent on housing exceeds affordability standards. More than 60% of Plan Area residents spend over 30% of their income on housing, an indicator of housing cost burden. Additionally, over 28% of the residents spend 50% or more of their income on housing; these households are severely cost-burdened.

Employment Characteristics

Employment Trends by Sector

As shown in **Table 3**, the workforce of the Plan Area is employed in a variety of industries. Significant percentages are employed in educational services, healthcare, and social assistance (17.0%), as well as retail trade (14.2%) and manufacturing industries (11.1%). The construction (9.6%) and professional, scientific, and management services (9.6%) industries also employ notable portions of the workforce.

Table 3: Employment in the Plan Area

Industry	Percentage of Workforce Employed in Industry
Construction	9.6%
Professional, scientific, and management, and administrative and waste management services	9.6%
Other services, except public administration	9.3%
Agriculture, forestry, fishing and hunting, and mining	4.5%
Wholesale trade	3.2%
Transportation and warehousing, and utilities	3.0%
Finance and insurance, and real estate and rental and leasing	2.9%
Public administration	2.9%
Educational services, and health care and social assistance	17.0%
Retail trade	14.2%
Manufacturing	11.1%
Arts, entertainment, and recreation, and accommodation and food services	11.0%
Information	1.9%

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates

The following tables summarize major employers within the Specific Plan Area (**Table 4**) and those located nearby (**Table 5**). These employers play a critical role in supporting the local economy and providing job opportunities for residents in and around the Plan Area.

Table 4: Major Employers in the Plan Area

Employer Name	Location	Type of Business/Service	Employees
 Target	Santa Rosa Avenue	Retail	200+
 Costco Wholesale	Santa Rosa Avenue	Wholesale/Retail	350+
 Trader Joe's	Santa Rosa Avenue	Grocery Store	50-100
 Safeway	Santa Rosa Avenue	Grocery Store	50-100
 Ghilotti Construction	Ghilotti Avenue	Construction	300+
 Friedman's Home Improvement	Santa Rosa Avenue	Retail	100-200
 Best Buy	Santa Rosa Avenue	Retail	1,000+
 American Refrigeration Supplies, Inc.	Sutton Place	Retail	200+
 Argonaut Constructors	Sutton Place	Construction	150+
 Child Parent Institute	Standish Avenue	Education / Healthcare	200+

Source: California Employment Development Department (EDD), "Major Employers by County, Sonoma County," 2023; local business directories; and direct communications with businesses.

Table 5: Major Employers Near the Plan Area

Employer Name	Location	Type of Business/Service	Employees
 Kaiser Permanente	Multiple Locations	Healthcare	3,000+
 Santa Rosa Junior College	Mendocino Avenue	Higher Education	3,600+
 Sonoma State University	Petaluma Hill Road	Higher Education	1,600+
 Keysight Technologies	Fountaingrove Parkway	Technology/Engineering	1,200+
 Medtronic	Northpoint Parkway	Medical Technology	400+
 Oliver's Market	Montecito Boulevard	Grocery Store	200+
 County of Sonoma	Multiple Locations	Government	4,800
 Santa Rosa City Schools	Multiple Locations	Education	1,650

Source: California Employment Development Department (EDD), "Major Employers by County, Sonoma County," 2023; local business directories; and direct communications with businesses.

Market Analysis

The Plan Area possesses a variety of physical and socioeconomic assets that support its potential for strategic growth and development. With its central location within Sonoma County near key tourism destinations, proximity to U.S. Highway 101 and the San Francisco Bay Area, growing housing stock, abundant development opportunities, and wealth of natural and recreational amenities, the area is well-positioned to attract and sustain economic growth. These factors offer promising opportunities for development that can be leveraged in the SSRSP Plan Area.

Baseline economic and market trends outlined in the Market Demand Analysis prepared by Economic & Planning Systems, Inc. (2024) provide essential insights on the current trajectory of the Plan Area, including projections under “business-as-usual” conditions.

Baseline economic and market trends provide important information on where the Plan Area is headed under “business-as-usual” conditions. This analysis ensures that land use alternatives considered in the South Santa Rosa Specific Plan are both feasible and beneficial from an economic standpoint. The Market Demand Analysis is a key reference document in guiding planning decisions, addressing questions such as:

- **Economic Development:** What economic sectors have the potential to contribute to the type of economic development sought by the City, including addressing the needs of underserved populations and fostering growth in targeted industries?
- **Land Use (Re-) Development Feasibility:** What are the market prospects facing various real estate development and investment projects, particularly in locations that might be targeted for growth and/or change (as identified in subsequent phases of the Specific Plan process)?
- **Economic and Fiscal Impacts of Land Use Policy:** What are the economic and fiscal implications of various policies or land use regulations being considered as part of the Specific Plan process?

Socioeconomics

The Plan Area accounts for about 6 percent of the City of Santa Rosa’s total population, while its jobs represent about 10 percent of the City total. In other words, the Plan Area stands out as a jobs center, as further evidenced by its high ratio of jobs to housing units. The Plan Area is also outpacing Santa Rosa, Sonoma County, and California in population and employment growth. Jobs and population in the Plan Area have grown at ten-year rates of 16 and 10 percent, respectively. As detailed in subsequent sections of this report, the Plan Area has an abundance of available land, which has attracted strong interest from residential developers, and is a regional retail market, with large anchor tenants such as Costco, Target, and Best Buy. Both of these factors have largely driven the Plan Area's growth over the last decade.

The Plan Area is a relatively low-income community compared to surrounding regions and has not equally benefitted from the economic growth of the broader Bay Area during the 2010s. The median household income in the Plan Area is much lower than the City, County, and state at \$60,700 in 2022. Moreover, the median household income declined in real (inflation-adjusted) terms by 8 percent from 2011 to 2021, meaning that the incomes of at least half of Plan Area households have not kept up with inflation, and many more households have likely seen very little growth in earnings. This could suggest that resident workers are primarily engaged in lower-paid

service-related and goods-producing work, where earnings are generally slow to increase over time. It is important to note that income growth in the Plan Area may have been negatively impacted by the economic effects of the COVID-19 pandemic, which disproportionately disrupted lower-paid work.

Local Housing Market Trends

Single-Family Market Performance

The median sale price of a home in the Plan Area was approximately \$140,000 less than in Santa Rosa and \$260,000 less than in Sonoma County, mirroring the income disparities prevalent between the Plan Area and surrounding communities. Similarly, the median size of a home in the Plan Area is comparatively less at 1,270 square feet compared to 1,627 square feet and 1,742 square feet for Santa Rosa and



Single-family Neighborhood in Plan Area

Sonoma County, respectively. Importantly, the sale price per square foot increases with home size across the three locations (all things equal, value per square foot usually declines with size). This trend can be attributable to a variety of inter-related factors, including local market preferences, a premium for larger homes in Sonoma County, and/or lower quality housing in the Plan Area (e.g., older, poorly maintained, or inferior construction).

The demand for detached housing in Santa Rosa and the Plan Area remains strong. Median prices for homes sold in Santa Rosa overall and those sold in the 95407 ZIP code⁷ have grown faster than



Multifamily Complex in Plan Area

Sonoma County (80 percent and 99 percent, respectively) over the past decade compared to 77 percent for the County overall. This trend likely reflects tightening housing shortages in the County (and California overall) over this period, particularly for lower cost entry level housing.

Multi-Family Market Performance

The multifamily market in the Plan Area has performed on par or better than in Santa Rosa and Sonoma County over the past decade. For example, the current average monthly rent per unit in the Plan Area is slightly greater than in Santa

Rosa as a whole and slightly less than in Sonoma County. Further, the multifamily rental vacancy rate in the Plan Area is only one percentage point above Santa Rosa and Sonoma County, most

⁷ The 95407 ZIP code includes the vast majority of the Plan Area, as well as a large portion of City and Unincorporated County land.

likely due to the ongoing lease-up of recent apartment deliveries. Lastly, 404 units have been delivered in the Plan Area over the last decade, increasing its multifamily stock by 18 percent, a slightly faster growth rate than experienced by Santa Rosa (12 percent), or Sonoma County (13 percent). A large proportion of the Plan Area deliveries, almost 40 percent, were deed-restricted as affordable units.

Projected Growth

Santa Rosa is undergoing significant residential development, including within its southeastern sector near the designated Plan Area, and local planning activity suggests this trend will continue. The housing market in and around the Plan Area has been strong for both single-family and multifamily development. There are 202 units of multi-family development approved inside of the Plan Area. Nearly 650 units are in the approved development pipeline in the Southeastern portion of the City (where most of the Plan Area is located). The first- and second-largest projects in the development pipeline—at 154 and 147 units, respectively—are Santa Rosa Avenue Apartments, a 5-story 100 percent affordable rental project with surface parking located inside the Plan Area; and Mosaic Apartments, a proposed market-rate development just outside of Plan Area boundaries at the intersection of Colgan Avenue and Petaluma Hill Road.

Commercial Real Estate Conditions and Trends

Industrial and Flex Market

The Industrial and Flex market, which includes warehouses, comprises the Plan Area’s single most abundant commercial land use at 2.7 million square feet of inventory. Flex space refers to a type of industrial property that combines warehouse and office space, offering adaptability for various uses such as light manufacturing, showrooms, and other commercial activities. About two-thirds



Single-storied Industrial Space

of Industrial and Flex space in the Plan Area is within unincorporated Sonoma County. The area is comprised mainly of warehouse space but also includes a mix of food processing, manufacturing, showrooms, and auto service-related facilities (e.g., window tinting, brake and wheel services). Warehousing properties appear heavily tenanted by suppliers of wholesaling and retailing building/home improvement materials (e.g., roofing, lumber, garden and landscape, kitchen). Local tenant listings from CoStar Group also indicate the presence of construction contractors.

The Plan Area is also home to several industrial business parks, including regional facilities such as the Industry West Business Park and Todd Road Industrial Park in the unincorporated Plan Area and the Oak Manor Industrial Area in Santa Rosa. Additional information from CoStar Group

indicates that more than half of Industrial and Flex properties in the Plan Area support multiple tenancy, as do half of warehouse properties.

Eighty-nine percent of Industrial and Flex properties in the Plan Area were built before 1990, with most new properties consisting of warehouses. The abundance of older Industrial and Flex properties in the Plan Area may limit its attractiveness/suitability for modern and specialized industrial uses (e.g., fulfillment and cold storage facilities). That said, facilities supporting light- to moderately intensive industrial uses, including warehousing (particularly of dry goods), wholesaling, and light manufacturing, are typically highly sought-after regardless of age or improvements as many tenants do not require modern improvements or amenities.



Industrial/Flex Uses on Todd Road



Auto Sales on Santa Rosa Avenue

Retail

Retail is the second-most abundant commercial land use in the Plan Area, with 2.1 million square feet of inventory. The Plan Area's retail market has performed well over the last decade, with strong growth and an orientation that serves the daily shopping and dining needs of Santa Rosa residents. Current retail market lease rates in the Plan Area are \$26.83 per square foot annually and are on par

with the County but below Santa Rosa, consistent with more premium retail establishments in its Downtown which includes a regional mall. Meanwhile, the Plan Area has added about 187,000 net square feet of retail space over the last decade, growing by more than double the pace of the City and County.



Retail Uses within the Santa Rosa Marketplace

Other Land Uses

Other commercial land uses in the area

include lodging, such as motels and hotels; offices for various businesses; and specialty and health facilities, including nursing facilities and self-storage. These uses make up nearly a fifth (17 percent) of commercial real estate space in the Plan Area.

The Specialty land use is the third most abundant in the Plan Area and reflects a mix of properties made up mostly of self-storage facilities in terms of sheer square footage. Other major uses in the area include waste management and recycling facilities. Recology, a major waste management company in the Bay Area and Pacific Northwest, has a collection site within the Plan Area. Information from CoStar Group indicates that no new Specialty facilities have been constructed



Lodging on Santa Rosa Avenue

over the last fifteen years. Most of the Plan Area's Specialty land uses are in unincorporated Sonoma County. Lodging is the Plan Area's fourth-most abundant land use, with 246,000 square feet of inventory. Lodging is nearly evenly split between Santa Rosa and unincorporated Sonoma County. Properties in the Plan Area are mostly economy hotels or motels geared primarily toward business and family travel through Sonoma County. The Plan

Area's Office market represents the least abundant commercial land use with roughly 92,000 square feet of inventory. Information from CoStar Group indicates that the stock of Office space in the Plan Area comprises a mix of office-using tenants, primarily engaged in construction management, wholesaling, and equipment rental and dealing. It is likely that the Office market is connected to the Plan Area's Industrial and Flex market and has an ancillary role. That said, the slight presence and the lack of newly constructed inventory suggests a lack of demand for traditional professional service office use in the Plan Area and faces competition from nearby professional service centers elsewhere in Santa Rosa, Petaluma, and San Rafael.



Newer Lodging on Commercial Court

Key Findings

- 1. While the Plan Area is a relatively fast-growing jobs center and residential community, it is also less affluent than the City and County as a whole.**

The Plan Area, a nearly 1,920-acre area spanning southern Santa Rosa and unincorporated Sonoma County, is both a regional job center and residential community. The flow of residents and workers to and from the Plan Area is mostly contained within Sonoma County: roughly 60 percent of the jobs are held by County in-commuters while a similar portion of its employed residents commute out to other county jurisdictions. The Plan Area's job and population growth rate has outpaced Santa Rosa, Sonoma County, and California over the past decade. But the Plan Area's median household income is roughly 60 percent of the City's and County's and has not kept up with inflation over the last decade, indicating that residents are not equally benefiting from broader Bay Area economic growth.

- 2. In response to regional housing shortages, the southern portion of Santa Rosa that includes the Plan Area has delivered numerous residential projects over the past decade, both**

market rate and deed-restricted affordable, and is well positioned to continue this growth trajectory.

The residential real estate market in and near the Plan Area has delivered substantial market rate and affordable housing development, foreshadowing an increasingly diverse demographic mix. The product types include a diverse mix of entry-level and “trade-up” single-family attached and detached for-sale homes as well as garden-style “walk-up” and 100 percent deed-restricted affordable rental apartments of varying densities. Additionally, the City is currently processing roughly 650 units of pipeline residential projects of all types in southeastern Santa Rosa near the Plan Area, further emphasizing the effect of regional housing shortages in the local market. The Plan Area appears well positioned to respond to growth pressures given its relative abundance of undeveloped and underutilized land that is likely more cost-effective than surrounding areas.

3. While Industrial and Flex building space represents the predominant non-residential land use in the Plan Area and exhibits strong market demand indicators, growth in supply appears to have been limited by land, infrastructure, and other development constraints.

The Industrial and Flex market accounts for about 47 percent of the nonresidential space in the Plan Area, with about two-thirds of the building space located in unincorporated areas of the County. While Plan Area lease and occupancy rates suggest strong demand, the building stock is relatively old and there has been minimal new development despite significant growth elsewhere in the City and County. While a variety of factors have likely hampered expansion of these uses in the Plan Area, a lack of appropriately zoned land as well as infrastructure constraints are likely leading contributors. The Specific Plan process presents an opportunity to further assess and optimize the economic role of these uses in the Plan Area going forward, as well as delineate and address constraints to further investment.

4. The Plan Area retail market has experienced strong supply growth over the last decade, but current occupancy and rent indicators suggest the sector is more likely to benefit from the re-positioning of existing centers and clusters rather than a substantial increase in development.

The retail market accounts for about 36 percent of the non-residential space in the Plan Area, with about 88 percent of the building space located in the City of Santa Rosa. With its convenient location and a focus on daily shopping needs, the Plan Area’s retail sector grew by 9 percent from 2013 to 2023, substantially surpassing growth in both the City and County. But lease and occupancy rates have weakened in recent years, in part due to pandemic and other related consumer trends, and it is unclear when or if market trends recover enough to justify significant expansion in space. In fact, some Plan Area retail centers or locations may be ripe for redevelopment into more vibrant mixed-use projects, potentially incorporating residential uses.

5. Ultimately, future demand for residential and commercial real estate space in the Plan Area will be driven by its ability to capture regional population and job growth, an outcome that can be heavily influenced by the vision, guidance, and policies embodied in the Specific Plan.

Santa Rosa is the population and jobs center in Sonoma County, with nearly 40 percent of the County’s jobs and 35 percent of the County’s population located within the City. The future of the

Plan Area's residential and commercial real estate markets will depend on the City's ability to capture growth. The Plan Area has a fair amount of undeveloped and underutilized land that could be potentially leveraged for future residential and/or commercial growth, given the appropriate policy alignment.

URBAN FORM & LAND USE



New 5-story Apartment Complex Adjacent to Older Mobile Homes

Urban Form

The urban form of the South Santa Rosa area reflects a diverse mix of land uses, including residential, commercial, and industrial zones. This area has developed rapidly over the past few decades, though without a comprehensive planning approach. Distinct neighborhoods within South Santa Rosa exhibit varied urban characteristics. For example, residential neighborhoods feature a mix of mobile homes, lower-density single-family homes of one and two stories, and higher-density multi-family housing complexes with from one to five stories. The highest density and highest development heights tend to be located along major corridors, with the tallest buildings in the Plan Area (3-5 stories) generally located in the northern part of the Plan Area between Santa Rosa Avenue and Petaluma Hill Road.

Commercial districts are primarily concentrated north of Bellevue Avenue along major roadways such as Santa Rosa Avenue, where strip malls, big-box retailers, and automotive-related uses dominate the landscape. This area serves regional shopping needs and has emerged as a retail hub for Sonoma County. Industrial areas, primarily located on the western edge of South Santa Rosa, provide employment opportunities and include manufacturing and warehousing facilities that contrast with adjacent residential zones.

These distinct neighborhood characteristics contribute to a built environment that is functionally diverse but lacks cohesive design integration across areas. This mix of suburban and urban elements highlights the fragmented development pattern that has resulted from decades of rapid growth without unified coordination or urban design strategy.

Activity Nodes

As discussed in the Plan Area Profile, there are several activity nodes within the Plan Area including schools, parks, places of worship, and retail centers:

- Taylor Mountain Elementary (K-6) and Amarosa Academy (7-12)
- Andy Lopez Park, Red Hawk Park, and Harvest Park
- Iglesia Christiana Ebenezer Santa Rosa, Immanuel Christian Centre, Wat Lao Saysettha, and Thien Bao Temple
- Santa Rosa Marketplace

Edges, Gateways and Landmarks

Edges are an important component of urban form because they act as clear boundaries between different areas of a city. These boundaries help people understand the structure of a place and to navigate by visually identifying where one district ends and another begins, essentially acting as a key element in forming a mental map of a city. Gateways are similar, serving as prominent entry

points to a district or area, further enhancing the legibility and sense of orientation within a cityscape.⁸

Edges within the Plan Area include Highway 12 in the north and Petaluma Hill Road (roughly) in the east. Views of Taylor Mountain and the Sonoma Mountains dominate the eastern viewshed from the Plan Area. The southerly edge of the Plan Area is defined by low-density and rural land uses, providing a gateway opportunity when entering from the south and serving as a visual separation between the cities of Santa Rosa and Rohnert Park. Highway 101 forms the Plan Area's most distinct edge, as it serves both to divide the commercial areas along Santa Rosa Avenue

from the residential and industrial areas to the west, and to provide access into and away from the Plan Area.



Bicycle Obelisk

The Plan Area contains a Gateway (-G) combining zone at the entry to the City along Santa Rosa Avenue, which is considered a minor entry along an urban arterial. City standards call for a landscape median down the center of the street in this area, along with twenty feet of landscaped setback. Within these landscaped setbacks, the County's South Santa Rosa Avenue Design Guidelines require a dual row of unified street trees.

Landmarks are not dominant within the Plan Area but are present within subareas or neighborhoods. The Bicycle Obelisk at South A Street and Santa Rosa Avenue serves as a visual landmark, as does the elevated Highway 12 at the northern edge of the Plan Area. Andy's Unity Park (Andy Lopez Park) serves as a wayfinding landmark on the west side, as do the SMART tracks and multi-user trail alongside them. On the east side, the large Santa Rosa Marketplace serves as a wayfinding landmark.



Entryway to Andy's Unity Park

⁸ Kevin Lynch, *The Image of the City*. MIT Press, 1970

Connectivity in South Santa Rosa is heavily shaped by Highway 101, which serves as a significant north-south artery and a major physical barrier between the lower density residential development on the western side and the commercial areas on the eastern side. Although the bike and pedestrian trail running north-south along the SMART track is seen as a benefit by residents, the nearly complete lack of pedestrian and bicycle infrastructure providing west-east access across the Plan Area greatly hampers connectivity across the community.

Although some urban planning initiatives have improved access to transit and introduced bike lanes along Santa Rosa Avenue, significant gaps remain in pedestrian pathways and crosswalks, making walkability challenging in certain areas. The City and County's current development plans emphasize creating more walkable, transit- oriented neighborhoods to overcome these obstacles.



Lack of Sidewalks in a Transitional Area



Lack of Sidewalks in Residential Area

Districts, Land Uses and Building Intensities

Districts describe large sections of a city that have a distinct character or identity. As described below, the Plan Area is largely lacking in areas with distinct identities, but neighborhood areas have been identified in **Figure 6**. Building scale and mass vary across the Plan Area but are generally one storied in height except for newer construction in a few areas along or near the Santa Rosa Avenue corridor (**Figure 7**).

The Plan Area has a broad mix of land uses including shopping centers, strip malls, industrial warehouses, light industrial, office, institutional, recreation, mobile home, educational, single and multi-family housing, and more (**Figure 8**). Several vacant lots identified for commercial, general industrial, low density and medium density housing and other uses are also located throughout the Plan Area. North of Todd Road, strip malls and industrial uses dominate the west side of Santa Rosa Avenue, whereas the east side contains a greater mix of single and multi-family housing and vacant residential lots. West of Highway 101, single and multi-family homes mix with vacant medium density lots. These homes are separated from industrial uses by railroad tracks located just west of Moorland Avenue. South of Todd Road is largely comprised of industrial uses. The Plan Area includes several creeks, most notably Colgan Creek, and Todd Creek and its tributaries. Sections of the creeks are undergrounded at commercial centers, residential neighborhoods and Highway 101.

Figure 6. Neighborhood Areas

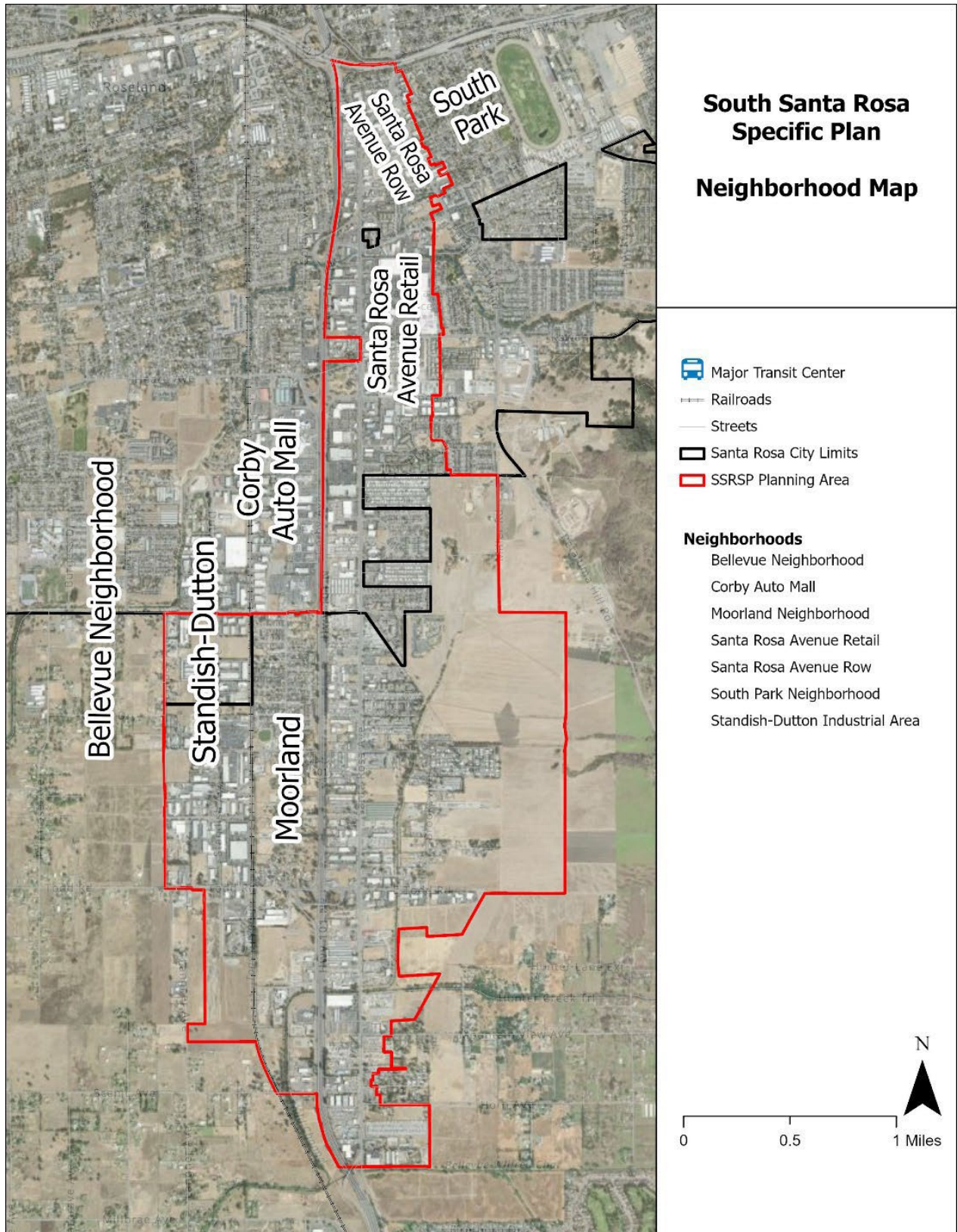


Figure 7. Building Heights

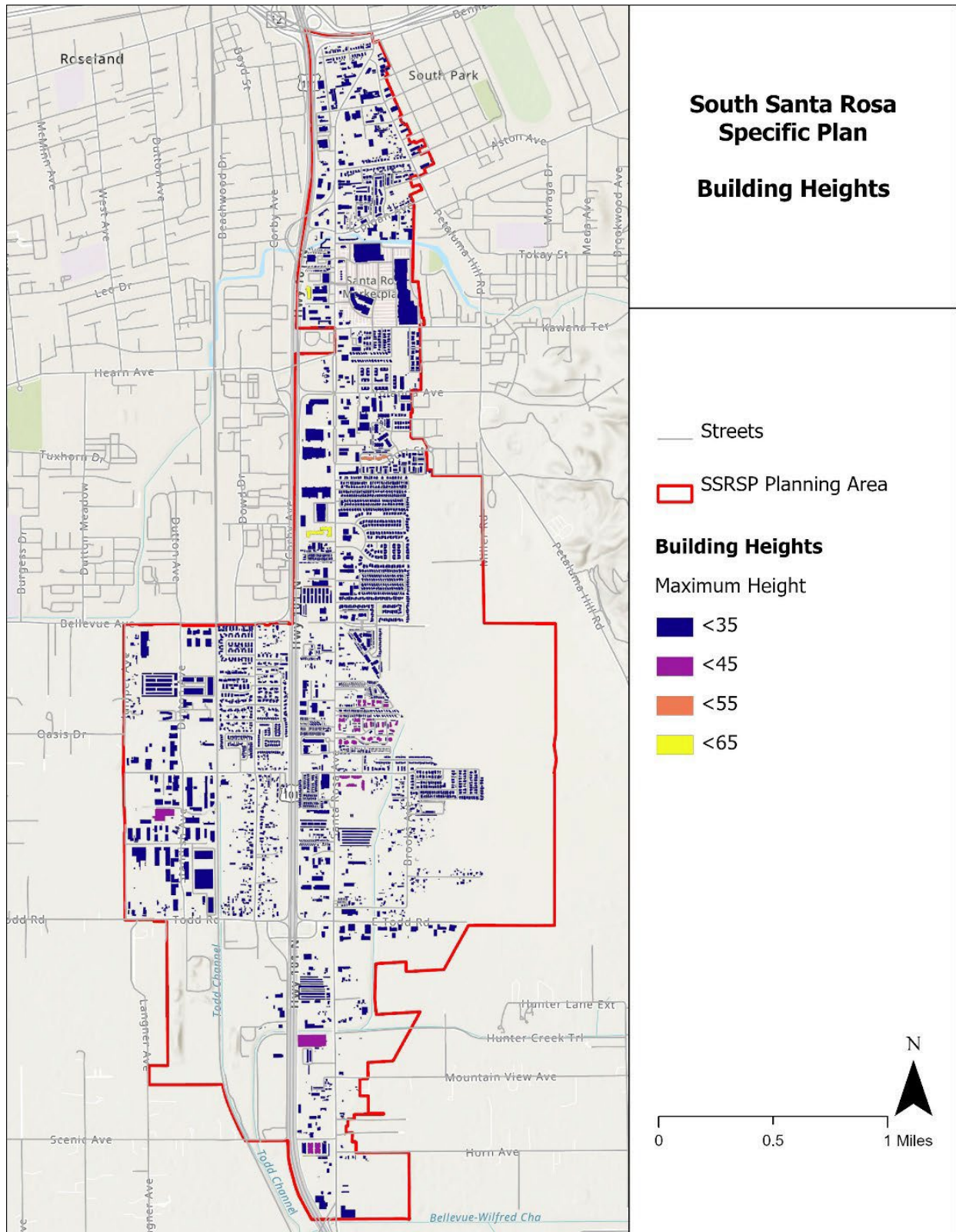
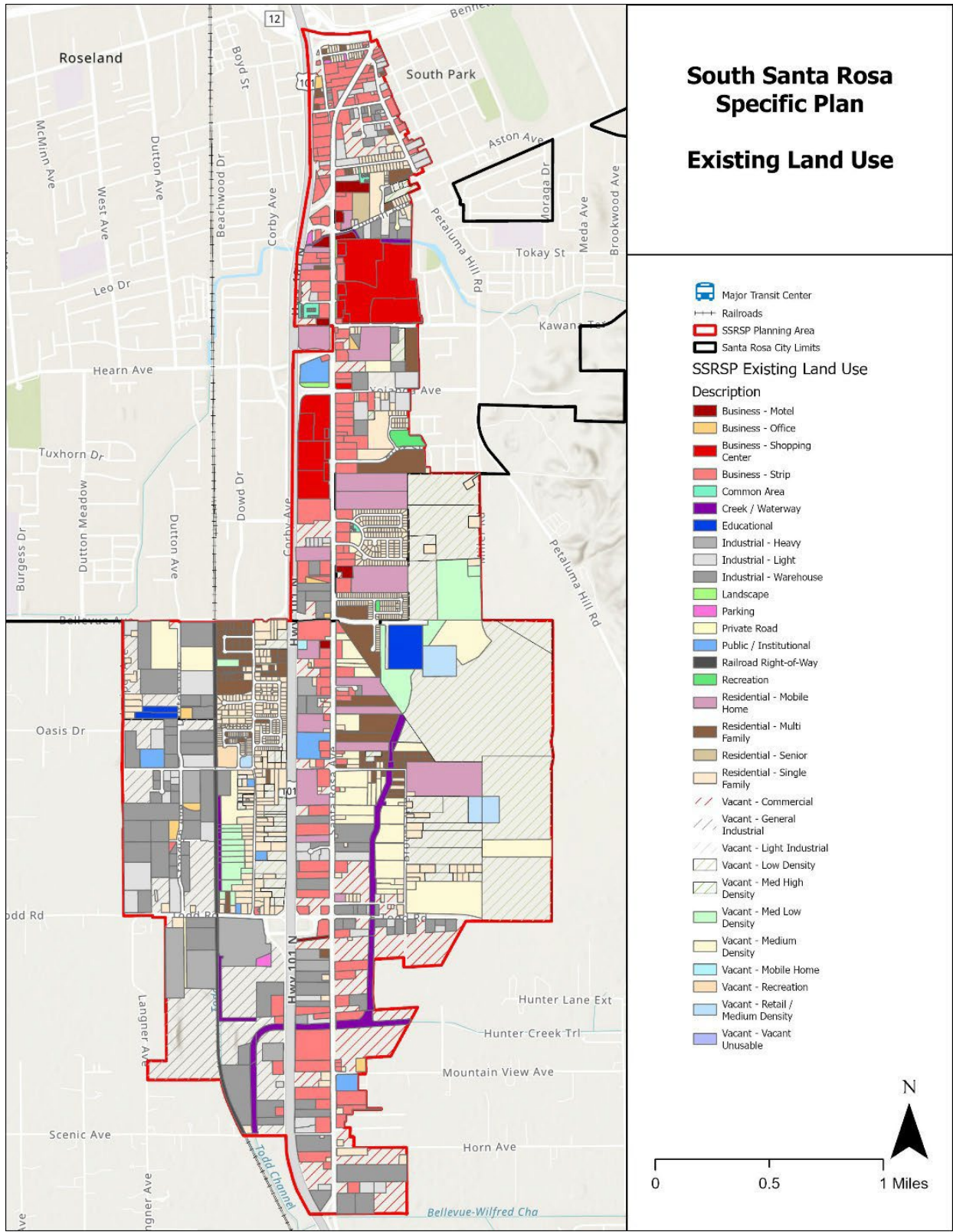


Figure 8. Existing Land Use



Residential Uses

There are a total of 6,329 housing units in the Plan Area, 46% of which are single-family detached homes. The second most common housing type in the Plan Area are mobile homes (17.5%), followed by multi-family complexes of 20 or more units (8.1%), and three- to four-unit multifamily structures. The majority of the housing stock was built between 1990 to 2009 (51.3%). An additional 27.8% of the housing stock was built between 1960 and 1989.



Homes within a Mobile Home Park



Two-storied Multifamily Apartments

Open Space

There are several parks located in the Plan Area or within one mile. Additionally, hiking and trail-related activities are available in many of the mountainous areas to the east of the Plan Area including Sonoma County's Taylor Mountain Regional Park and North Sonoma Mountain Regional Park, and Trione-Annadel State Park. **Table 6** shows public parks in and within the Plan Area, and the larger hiking trails within six miles of the Plan Area.

Table 6: Parks in and Near the Plan Area

Park Name	Size (Acres)	Distance from Plan Area (Miles)	Jurisdiction
Harvest Park	3.30	In Plan Area	City of Santa Rosa
Andy's Unity Park	4.40	In Plan Area	Sonoma County Regional Parks
Red Hawk Neighborhood Park	0.44	In Plan Area	City of Santa Rosa
Colgan Creek Park	2.77	0.1	City of Santa Rosa
Martin Luther King Jr. Park.	5.38	0.3	City of Santa Rosa
Olive Park	0.87	0.4	City of Santa Rosa
Bayer Park and Gardens	5.95	0.6	City of Santa Rosa
Bayer Park & Gardens	5.95	0.6	City of Santa Rosa
Taylor Mountain Regional Park	1,100	0.7	Sonoma County Regional Parks
DeMeo Park	0.96	0.8	City of Santa Rosa
Doyle Community Park	21.76	1	City of Santa Rosa
Julliard Park	9.09	1	City of Santa Rosa
Southwest Community Park	19.75	1	Sonoma County Regional Parks
Trione-Annadel State Park	5,500	4	California Dept. of Parks and Recreation
North Sonoma Mountain Regional Park	820	5.6	Sonoma County Regional Parks

Source: City of Santa Rosa Parks and Recreation, Find a Park. Available at: <https://www.srcity.org/1021/Find-a-Park>

Commercial

Commercial uses are heavily concentrated in the western and central portions of the Plan Area along Santa Rosa Avenue. These uses include a mix of chain stores, big box retail, restaurants, car dealerships, and services. Many commercial uses in the Plan Area are located in strip malls.



Retail Uses in the Santa Rosa Marketplace



Vacant Land in the Plan Area

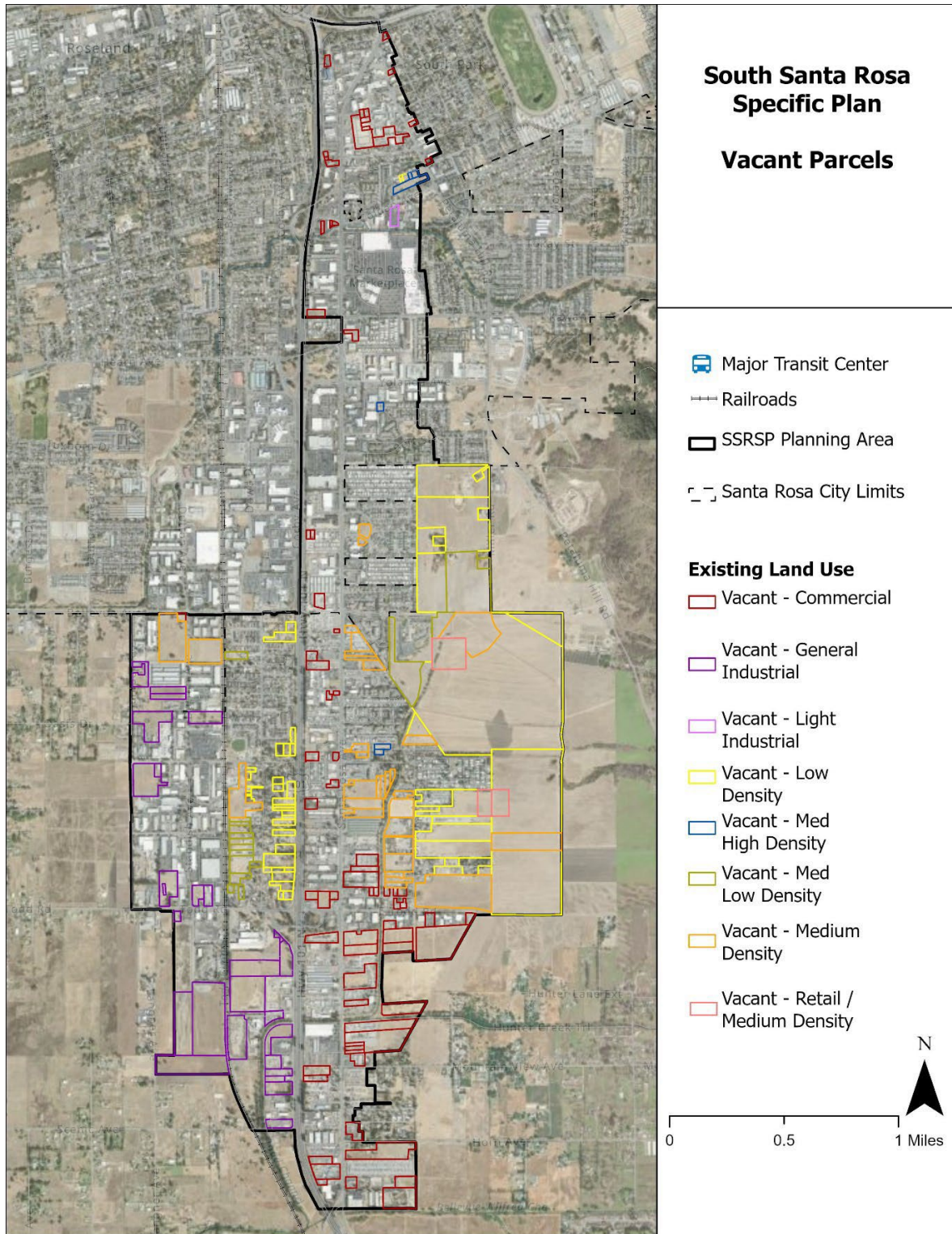
Vacant Land

Vacant sites create opportunities for new development in the Plan Area. There are 688.41 vacant acres of land available for development in the Plan Area. As shown in **Table 7**, the majority of vacant land is available for low density residential, followed by general industrial, commercial, and medium density residential. **Figure 9** shows that the majority of the vacant land is in the southeastern portion of the Plan Area and is designated for low and medium density residential development, with retail, medium density residential, and general industrial land use designations in the southern portion of the Plan Area.

Table 7: Land Uses in the Plan Area

Land Use Type	Sum of Acres	Percentage of Total Plan Area
Commercial	108.23	5.64%
General Industrial	102.25	5.33%
Light Industrial	1.2	0.06%
Low Density	312.09	16.26%
Med High Density	3.81	0.20%
Med Low Density	44.55	2.32%
Medium Density	102.25	5.33%
Retail / Medium Density	14.03	0.73%
Total Acres Vacant	688.41	35.86%

Figure 9. Vacant Parcels



General Plan Land Use

General Plans applicable to the Plan Area include Santa Rosa General Plan 2050 and Sonoma County 2020. Within the City of Santa Rosa, the Plan Area consists of a mix of retail and business services, public institutions, and various housing densities through the central area along Highway 101 and Santa Rosa Avenue. Low density residential uses are concentrated on the eastern portion of the Plan Area, and general industrial uses are concentrated on the western portion of the Plan Area. The portion of the Plan Area within unincorporated Sonoma County consists of a combination of residential and general commercial along both sides of the freeway. demonstrates the number of acres of each general plan land use within the Plan Area.

Table 8: City of Santa Rosa and Sonoma County General Plan Land Uses by Acreage

Land Use Type	Acres (City)	Acres (County)	Total Acres	Percentage of Plan Area (%)
General Industry	39.66	306.39	346.05	20.26
Light Industry	14.76	0	14.76	0.86
Low Residential	19.79	383.89	403.68	23.63
Medium Residential	38.97	183.54	222.51	13.02
Medium Low Residential	0	93.54	93.54	5.48
Medium-High Residential	13.76	13.41	27.17	1.60
Mobile Home Park	14.22	58.25	72.47	4.24
Parks/Recreation	0.39	0	0.39	0.02
Public/Institutional	0	0.42	0.42	0.03
Retail and Business Services	219.95	292.4	512.35	30.00
Retail/Medium Residential	0	14.55	14.55	0.86
Total	361.5	1346.39	1707.89	100.00

Zoning

The Plan Area located within the City of Santa Rosa is heavily zoned for commercial uses, with zoning also established for industrial and residential uses. **Table 9** includes the total acres of each zoning designation within the Plan Area. A 25-acre discrepancy exists between the Zoning and General Plan designations due to variations in how GIS data layers for Sonoma County and the City of Santa Rosa are drawn, specifically in their treatment of right-of-way areas.

Table 9: City of Santa Rosa and Sonoma County Zoning by Acreage

Land Use / Zoning Description	Sum of Acres (City)	Sum of Acres (County)	Total Acres
Administrative and Professional Office District	0.00	0.74	0.74
Agriculture and Residential District	0.00	10.90	10.90
Diverse Agriculture	0.00	328.77	328.77
General Commercial	244.99	0.00	244.99
General Industrial	51.38	0.00	51.38
Light Industrial	23.45	0.00	23.45
Heavy Industrial District	0.00	105.43	105.43
High Density Residential District	25.07	72.81	97.88
Limited Commercial	0.00	25.19	25.19
Limited Rural Industrial District	0.00	151.08	151.08
Limited Urban Industrial District	0.00	221.91	221.91
Low Density Residential District	3.22	26.3	29.52
Medium Density Residential District	6.11	88.93	95.04
Mobile Homes Residential	14.30	0.00	14.30
Neighborhood Commercial District	0.00	3.54	3.54
Public Facilities District	0.00	7.92	7.92
Planned Development	76.46	6.19	82.65
Rail	0.00	13.44	13.44
Retail Business and Service District	0.00	15.55	15.55
Rural Residential District	0.98	207.53	208.51
Total	445.96	1286.23	1732.19

CIRCULATION



Colgan Avenue at Santa Rosa Avenue after Exiting Highway 101 North

The following was prepared using the Existing Conditions Report prepared by Fehr & Peers (2024), which is provided as **Appendix A**.

Regulatory Framework

The regulatory framework discussion describes local regulations that guide land use decisions. Adopted and upcoming plans that pertain to the City are also described.

City of Santa Rosa General Plan 2035 (2009)

The *City of Santa Rosa General Plan 2035* was adopted in 2009 and provides the policy framework for regulation and development of the circulation system in the City of Santa Rosa. The Transportation Chapter of the General Plan includes the framework to provide a safe and sustainable transportation network for the City.

City of Santa Rosa Short Range Transit Plan (2016)

The *Santa Rosa CityBus Short Range Transit Plan* (S RTP) for Fiscal Years 2016–2025 outlines a strategic framework to enhance the city's public transportation system. It incorporates the "Reimagining CityBus" service plan, updates the 10-year financial strategy—including considerations for future fare adjustments—and revises goals, objectives, performance measures, and standards for both CityBus and Santa Rosa Paratransit services. Key changes from the previous S RTP include the adoption of new route types, guiding principles for transit service design, and updated performance metrics to better align with community needs and regional goals. The plan serves as a roadmap for developing a more efficient, accessible, and user-friendly transit network in Santa Rosa.

Active Transportation Plan (2025)

The City of Santa Rosa Active Transportation Plan establishes a long-term vision for improving walking, biking and rolling in Santa Rosa by updating the previous Bicycle and Pedestrian Master Plan adopted by the City Council in 2018.

Santa Rosa Local Road Safety Plan (2022)

The *Santa Rosa Local Road Safety Plan* supplements the *Bicycle and Pedestrian Master Plan* and studies eight corridors for bicycle and pedestrian needs, collision analysis, and community feedback. Engineering strategies and countermeasures were then identified for these hot spot corridors.

Sonoma County Vision Zero (2022)

The Sonoma County Transportation Authority (SCTA) and the Sonoma County Department of Health Services prepared a countywide *Vision Zero Action Plan* (VZAP) with the goal to eliminate traffic fatalities and severe injuries by 2030. The plan identifies Dutton Avenue, Kawana Springs Road, and Santa Rosa Avenue as High-Injury Network (HIN) corridors in the City. The Action Plan highlights a set of six major goals that focus on the key factors behind previous collisions and the systemic changes required to make the County's roads safer for all users.

Moving Forward 2050 (2021)

The *Sonoma County Comprehensive Transportation Plan* (CTP) identifies the need to shift transportation modes from single occupant vehicles. The plan notes success if positive trends are

shown through improved transit service coverage and ridership, expanded active transportation connectivity, shorter trip lengths, lower household travel costs, and a downwards trend in vehicle miles traveled and GHG emissions on a per capita basis.

Priority Development Area Investment and Growth Strategy Update (2017)

The One Bay Area Grant Program (OBAG 2) supports Plan Bay Area's Sustainable Communities Strategy by ensuring that agencies, like SCTA, have a transportation project priority-setting process that encourages development in the City's Priority Development Areas (PDAs). The Mendocino/Santa Rosa Avenue PDA is noted as having potential to be a North/South Rapid Bus Corridor, which aligns with the *Santa Rosa Avenue Corridor Plan* (2011). This Corridor Plan is centered on right-of-way (ROW) design improvements aimed at enhancing transportation infrastructure and promoting sustainable development along Santa Rosa Avenue.

Countywide Active Transportation Plan (2025)

The Countywide Active Transportation Plan includes projects, programs, and policies that aim to provide safer and more efficient transportation infrastructure for active transportation users. The Plan is focused on increasing access to active modes of transportation through planning for infrastructure, position well to qualify and leverage funding, and identify programs to support active transportation.

Sonoma County General Plan 2020 (2008)

The *County of Sonoma's General Plan 2020* was adopted in 2008 and is the blueprint for land use in the unincorporated areas of the County. Policies guide growth into areas with existing infrastructure, balancing urban development with preservation of the agrarian characteristics defining much of Sonoma County. The County has initiated a Countywide General Plan Update, which includes a new Environmental Justice Element, to address evolving community needs and priorities.

Existing Street Network

The SSRSP area is oriented along Highway 101 within the southern portion of the City of Santa Rosa and is served by the following roadways.

Regional

Highway 101 is a six lane north-south freeway that connects the project site to destinations throughout central Sonoma, Marin, and Mendocino Counties, with further connections to San Francisco, Los Angeles, and California's North Coast region. In the vicinity of the project site, Highway 101 includes high-occupancy vehicle lanes, which require a vehicle occupancy of two or more persons. The on-ramps are subject to ramp metering during the morning and afternoon commute periods.

Minor Arterials

Santa Rosa Avenue is a five-lane arterial with a center turn lane. The street runs in a north-south direction from 3rd Street in the north to the North Rohnert Park Trail in the south, where the roadway becomes Roberts Lake Road. Class II bicycle lanes are installed on both sides of the street. Transit services are provided along this entire corridor by both CityBus (Route 3) and Sonoma County Transit (Route 44/48). The posted speed limit in the Specific Plan Area is 40 miles

per hour.

Collectors

Bellevue Avenue is a two-lane arterial road west of Highway 101 that extends from Stony Point Road in the west and transitions to Corby Avenue which runs parallel to the west side of Highway 101. Sidewalk gaps are present along the roadway and the posted speed limit is 35 miles per hour. East of Highway 101, Bellevue Avenue is a two-lane road that terminates at an industrial shop in the west and vacant land in the east. Class II facilities are present east of Terrimay Lane. Transit services are provided along this corridor by both CityBus (Route 15) and Sonoma County Transit (Route 42) The posted speed limit is 25 miles per hour.

Colgan Avenue is a two-lane collector roadway that extends from Highway 101 ramps in the west and Petaluma Hill Road in the east. Sidewalk gaps are present along the roadway and the posted speed limit is 35 miles per hour. CityBus provides service to this corridor from Petaluma Avenue with Route 5 and Santa Rosa Ave with Route 3.

Dutton Avenue/Standish Avenue is a two-to-five-lane with center turn lane arterial street that serves residential and commercial uses along the corridor. The north-south roadway connects Guerneville Road in the north and Hearn Avenue in the south. Standish Avenue extends to Todd Road in the south. The posted speed limit in the vicinity of the project is 35 to 40 miles per hour. CityBus provides service to this corridor from West Avenue and Hearn Avenue with Route 12 or Sebastopol Road with Route 2 and 2B.

East Robles Avenue is a two-lane collector that extends from Robles Avenue Extension in the west to Brooks Avenue in the east. The road mainly serves residential uses (single family, apartments, and mobile homes), and has a posted speed of 25 miles per hour. East Robles Avenue also provides access to the Todd Creek trail.

Kawana Springs Road is a three-lane arterial roadway between Santa Rosa Avenue in the west and Petaluma Hill Road in the east with a posted speed limit of 35 miles per hour. The portion of the roadway serves large retail uses such as Target and Costco, as well as residential uses. Between Petaluma Hill Road and Farmers Lane, Kawana Springs Road is a two-lane roadway with a posted speed limit of 25 miles per hour. This portion of the roadway serves residential and institutional uses, with Sonoma Academy located at the intersection of Kawana Springs Road and Farmers Lane. The roadway includes Class II bike lanes and on-street parking, however there are gaps in the bicycle network along the corridor. CityBus provides service on Kawana Springs Road in the east bound direction from Petaluma Avenue and Santa Rosa Ave with Route 5.

Petaluma Hill Road is a two-to-three lane arterial that extends to Santa Rosa Avenue in the north and extends to Old Redwood Highway in the Sonoma County jurisdiction of Penngrove. Within the Specific Plan Area, the posted speed limit is 35 miles per hour between Santa Rosa Avenue and Colgan Avenue, and Class II bike lanes are present between Barham Avenue-Pressley Street and Colgan Avenue. CityBus provides service to this corridor from Highway 12 south to Yolanda Ave with Route 5.

Todd Road is a two-lane, east-west arterial located within Sonoma County jurisdiction. Todd Road extends west past Llano Road and changes to East Todd Road at Santa Rosa Avenue in the east. West of Highway 101, Todd Road has a posted speed of 35 miles per hour. Sonoma County Transit provides service to a small portion of Todd Road with Route 42.

Yolanda Avenue is a two-lane arterial roadway that extends from Highway 101 northbound ramps in the west to Petaluma Hill Road in the east. There are missing sidewalk gaps along Yolanda Avenue with on-street parking allowed along a portion of the north side of the roadway. The posted speed limit is 35 miles per hour. CityBus provides service on Yolanda Avenue in the west bound direction from Petaluma Avenue and Santa Rosa Ave with Route 5.

Existing Bicycle & Pedestrian Network

Pedestrian Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. The pedestrian environment was evaluated within the plan, as well as the connections to transit stops and/or nearby destinations in the greater study area.

Pedestrian connectivity is discontinuous within the SSRSP area due to gaps in the pedestrian network. The City of Santa Rosa's General Plan 2035 has a goal to develop a safe, convenient, and continuous network of pedestrian sidewalks and pathways that link neighborhoods with schools, parks, shopping areas, and employment centers. The County of Sonoma's General Plan 2020 includes a strategy to ensure that land development projects provide adequate pedestrian and bicycle facilities that will eliminate gaps, improve safety conditions in the pedestrian network, and facilitate safer connections to the alternative mode networks from trip generators. The current mix of land uses, and ongoing development creates the need for connected and safer pedestrian facilities.

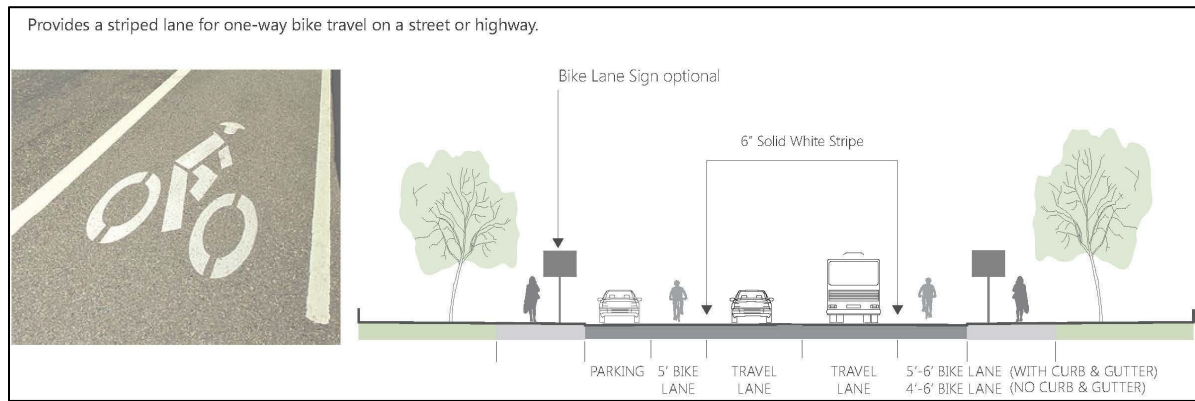
Bicycle Facilities

Chapter 1000 of the Caltrans *Highway Design Manual* identifies the following four bikeway classifications:

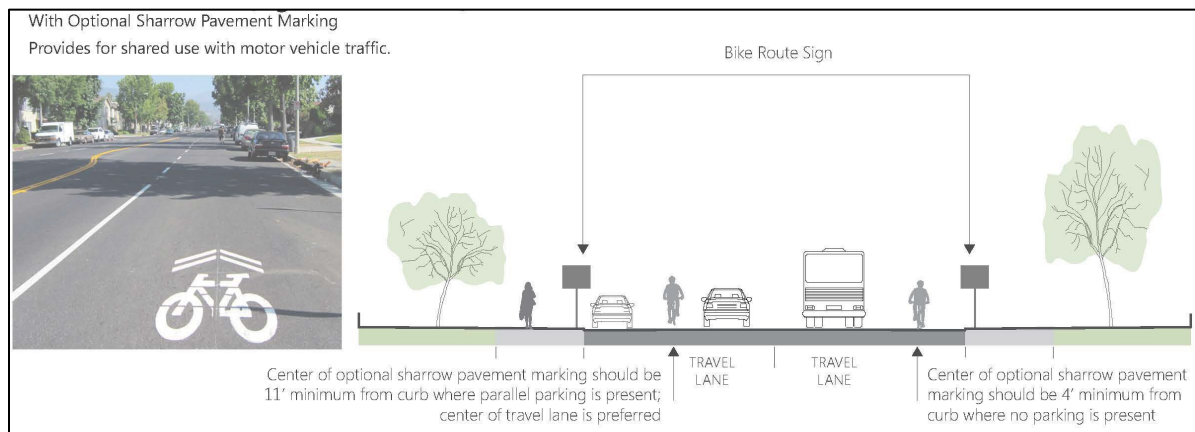
- **Class I Bikeway (Bicycle Path)** provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.



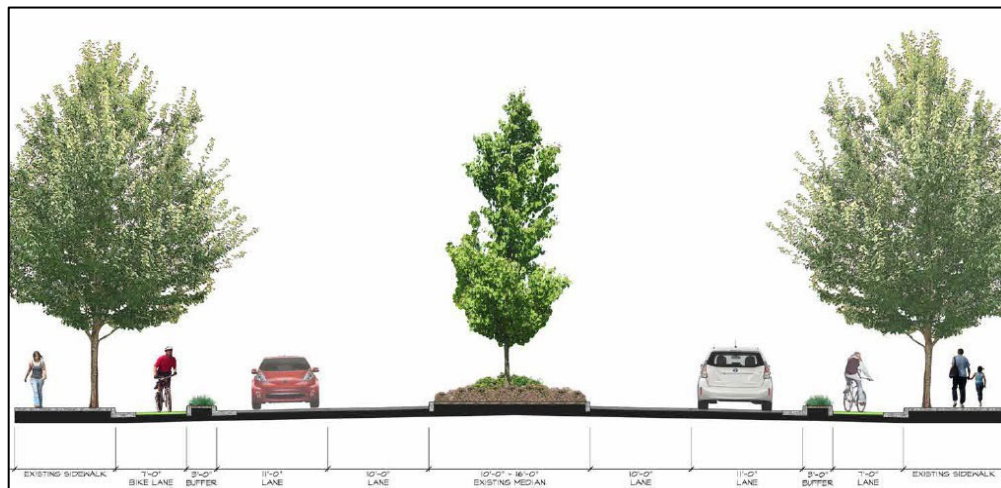
- **Class II Bikeway (Bicycle Lane)** provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally four to six feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.



- **Class III Bikeway (Bicycle Route)** provides for a right-of-way designated by signs or pavement markings (sharrows) for shared use with pedestrians or motor vehicles. Sharrows are a type of pavement marking (bike and arrow stencil) placed to guide bicyclists to the best place to ride on the road, avoid car doors, and remind drivers to share the road with cyclists.

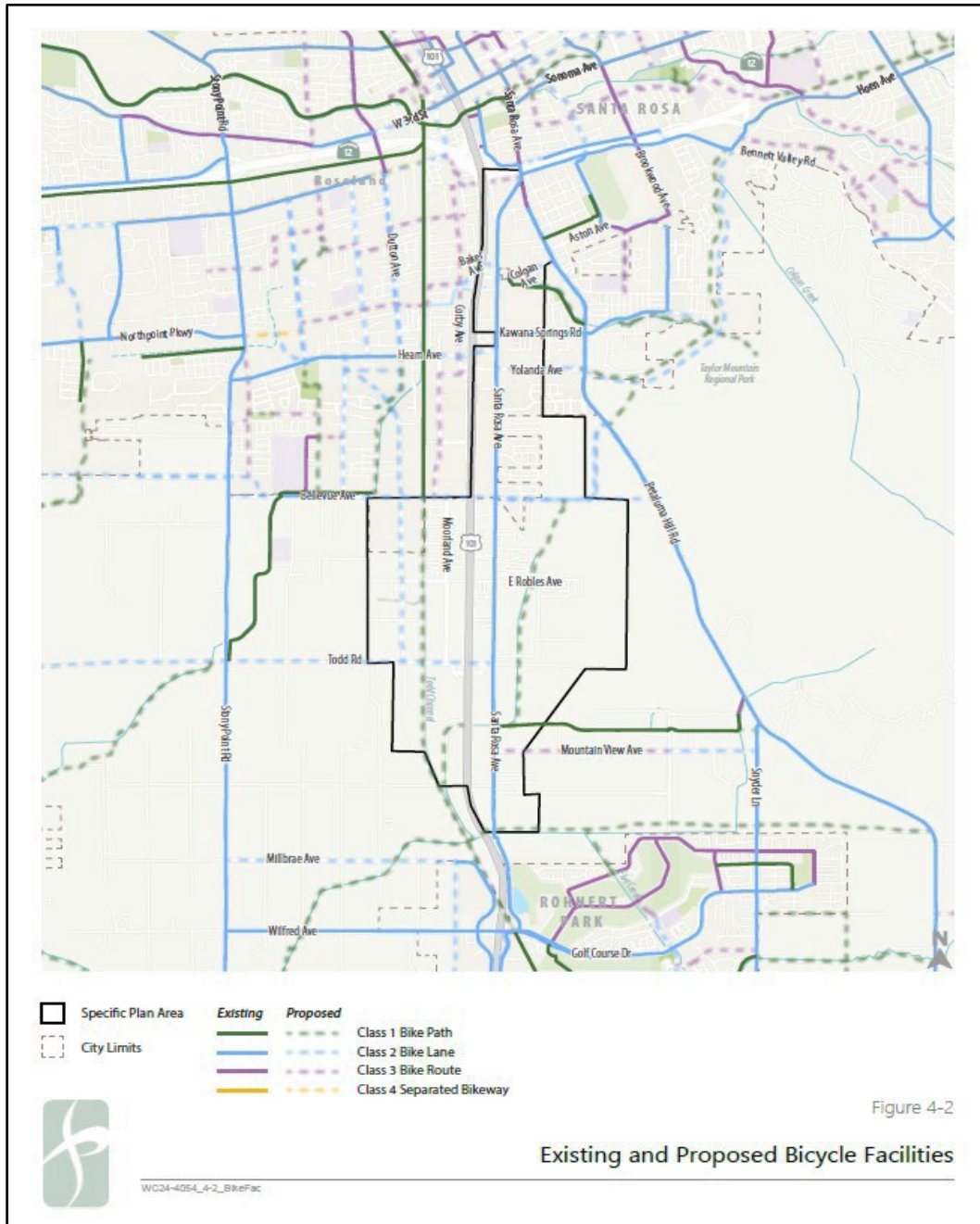


- **Class IV Bikeway**, also known as “cycle tracks” or “protected bike lanes,” provide a right-of-way designated exclusively for bicycle travel within a roadway and which are protected from other vehicle traffic with devices, including, but not limited to, grade separation, flexible posts, inflexible physical barriers, or parked cars.



Within the study area, existing Class I facilities are present along Colgan Creek between Colgan Avenue and Petaluma Hill Road, and along the Hunter Creek Trail between Scenic Avenue and Moorland Avenue and between Santa Rosa Avenue and the Plan boundary. Class II facilities are present along Santa Rosa Avenue between SR 12 and Todd Road and Kawana Springs Road between Santa Rosa Avenue and Petaluma Hill Road. Residents currently create informal bike and pedestrian facilities along streets, creek paths, and freeway overcrossings, which creates a safety hazard.

Figure 10. Existing and Proposed Bicycle Facilities



Existing Transit Network

Passenger Rail Service

Passenger rail service and connections for the Sonoma County/Marin County region are provided by SMART. The SMART passenger rail service connects the Sonoma County Airport station in the north to the Larkspur Ferry Terminal in the south, which provide service to scheduled passenger air travel and scheduled ferry transit connections to San Francisco, respectively.

Although the SMART trail runs through the west side of the Plan Area, the two stations in the City are located north of the Plan Area. There is no station within the Plan Area, with the closest

stations for Plan Area residents being the Santa Rosa Downtown Station to the north and the Rohnert Park station to the south.

Public Bus Service

Regional Bus service in the City of Santa Rosa is operated by Golden Gate Transit, Mendocino Transit, and Amtrak. Local service is provided by Santa Rosa CityBus and Sonoma County Transit (SCT) in the Plan Area. Paratransit services are operated within the Plan Area by the City of Santa Rosa, Sonoma County Transit and Marin Access.

- **Santa Rosa CityBus (CityBus):** Santa Rosa CityBus provides local bus service throughout the City of Santa Rosa seven days a week with 15 routes. CityBus Routes 3 and 5 are the only rides that operate directly within the Plan Area. Routes 3 and 5 are scheduled to return to 30-minute headways Monday- Friday but are currently operating on 60-minute headways since the pandemic. Both routes operate on a 60-minute headway on Saturday and Sunday. Both routes connect at the Transit Mall to other CityBus routes, regional transit services, and to SMART at the Downtown or North Santa Rosa SMART Stations.



Santa Rosa CityBus

- **Sonoma County Transit (SCT):** Sonoma County Transit provides regional bus throughout Sonoma County. Two Sonoma County Transit routes (42, 44/48) serve the Plan Area directly. Both routes connect at the Transit Mall to provide connections to other transit services including SMART. Table 10 summarizes the existing transit services within the SSRSP area.

Table 10: Existing Transit Service

Route ¹	From	To	Weekdays		Saturdays		Sundays	
			Operating Hours ⁵	Peak Headway ² (minutes)	Operating Hours ⁵	Headway ² (minutes)	Operating Hours ⁵	Headway ² (minutes)
Santa Rosa City Bus								
3	Santa Rosa Transit Mall	Elsa Drive	6:00 AM – 7:25 PM	60	6:15 AM – 7:40 PM	60	10:30 AM – 4:55 PM	60
5	Santa Rosa Transit Mall	Yolanda Avenue	6:30 AM – 7:55 PM	60	6:40 AM – 8:05 PM	60	10:00 AM – 4:25 PM	60
Sonoma County Transit								
42	Santa Rosa Transit Mall	West Robles Avenue	7:30 AM – 5:40 PM	60	-	-	-	-
44	Coddingtown	Petaluma Transit Mall	8:30 AM – 10:15 PM ⁴	60	7:00 AM – 9:05 PM	150	7:00 AM – 9:05 PM	150
48	Coddingtown	Petaluma Transit Mall	6:20 AM – 10:45 PM ⁴	60	8:30 AM – 10:15 PM	150	8:30 AM – 10:15 PM	150

Notes:

1. Weekday and weekend service as of April 2024.
2. Headways are defined as the time between transit vehicles on the same route.
3. Operating hours have been rounded to the nearest tenth minute.
4. Headways are provided for the peak hour, off-peak headways vary.
5. Operating hours and headways are subject to change as additional

funding becomes available.

Sources: Santa Rosa City Bus and Sonoma County Transit, 2024.

Currently Planned Roadway Improvements

Hearn Avenue Interchange Reconstruction. This project is underway and will demolish and reconstruct the Hearn Avenue interchange overcrossing to increase vertical clearance over Highway 101 and widen the overcrossing to provide two vehicle lanes in each direction, a median, six-foot sidewalks, Class IV bike lane on the north side of the bridge, and a two-way Class IV bikeway on the south side of the street that will extend from Corby Avenue and Santa Rosa Avenue. The project will also widen Highway 101 southbound off-ramp and reconfigure the intersections of Hearn Avenue/Corby Avenue and Hearn Avenue/Santa Rosa Avenue to include protected intersections and upgraded pedestrian facilities. With this interchange completion, CityBus has planned to operate a route to connect the east and west side via this overcrossing as shown the Short-Range Transit Plan for CityBus.

Bellevue Avenue Improvements at Highway 101 is an effort with Sonoma County Transit Authority to expand bicycle, pedestrian, transit, and vehicle improvements to the SSRSP area. The full improvements for this project will not be included until the next update of the regional Comprehensive Transportation Plan (CTP). The City's adopted General Plan currently identifies a full interchange at Bellevue Avenue, but this may be non-compliant with Caltrans standards due to proximity to the Hearn Avenue interchange.

Vehicle Miles Traveled

A common metric used to quantify motor vehicle use is Vehicle Miles Traveled (VMT). One VMT is a single motor vehicle being driven one mile. Many factors affect VMT, including the average

distance residents commute to work, school, and shopping, as well as the amount of non-automobile travel including walking and biking. Areas that have a diverse land use mix and ample facilities for non-automobile modes, including transit, tend to generate lower VMT than auto-oriented rural and suburban areas where residents live at a distance from work, school, and other amenities.

An important California Environmental Quality Act (CEQA) consideration related to transportation is that Senate Bill (SB) 743 has changed the metric used to identify potential significant transportation impacts in CEQA analysis. SB 743 directed the California Governor’s Office of Planning and Research (OPR) to identify a new metric and to recommend analysis methodology and thresholds. OPR selected VMT as the preferred metric and has finalized guidance material that went into effect in 2020. However, SB 743 does not prevent a city or county from continuing to analyze delay or Level of Service (LOS)⁹ as part of other plans (e.g., the general plan), studies, or on-going network monitoring. However, LOS metrics may no longer constitute the sole basis for CEQA impacts. SB 743 did not change the discretion that lead agencies must select methodology or define their own significance thresholds, but the guidance being developed by OPR should be carefully considered by lead agencies when they ultimately finalize their own recommended practices. A key factor should be how the lead agency/community values VMT reduction, especially with regards to its influence on reducing greenhouse gases, promoting active transportation, and encouraging infill development, all of which, are identified as objectives in the legislative intent of SB 743. Absent a locally established VMT threshold, the current OPR threshold guidance as contained in *Technical Advisory on Evaluating Transportation Impacts in CEQA*, OPR, December 2018, should be used. OPR recommends that for land use projects, VMT thresholds are set at fifteen percent (15%) below baseline VMT/capita for the city or region in suburban areas. The City of Santa Rosa has adopted guidelines related to VMT, but Sonoma County has not yet adopted guidelines related to VMT; Sonoma County Transportation Authority has created a vehicle miles traveled reduction calculator for member agencies.

Traffic counts were used to adjust the base year of the SCTA travel demand model to better account for the volumes in the study area and traffic congestion on Highway 101 to be more in alignment with the validation targets in the California Regional Transportation Plan guidelines. Year 2024 VMT information for the Specific Plan Traffic Analysis Zones (TAZ), the City of Santa Rosa, and Sonoma County are presented below.

- SSRSP area TAZs Total VMT per Service Population: 34.4 Total VMT per Service Population
- City of Santa Rosa Total VMT per Service Population: 23.8 Total VMT per Service Population
- Sonoma County Total VMT per Service Population: 30.0 Total VMT per Service Population

The data indicates that the TAZs within the SSRSP area have a higher VMT per service population (34.4) compared to the City of Santa Rosa (23.8) and Sonoma County (30.0). This suggests that residents in the SSRSP area are traveling more miles by vehicle, which could contribute to increased greenhouse gas emissions and traffic congestion.

Given the shift in CEQA analysis emphasizing VMT as a key metric due to SB 743, it is crucial for

the SSRSP area to implement strategies that reduce VMT. This includes promoting a diverse land use mix, enhancing facilities for non-automobile modes of transportation, and encouraging infill development. By aligning with the City of Santa Rosa's adopted VMT guidelines and considering OPR's recommended thresholds, the SSRSP can work towards creating a more sustainable, accessible, and environmentally friendly transportation network that meets state objectives and improves quality of life for residents.

Existing Intersections Level of Service

Existing intersection lane configurations, signal timings, and peak hour turning movement volumes were used to calculate level of service at the study intersections during the morning and evening peak hours. Traffic counts for the study intersections were collected in April 2024. The results of the LOS analysis for Existing Conditions are presented in **Table 11** below:

⁹ Level of Service (LOS) is a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. Federal Highway Administration (FHWA), Traffic Analysis Tools: Volume II - Decision Support Methodology for Selecting Traffic Analysis Tools.

Table 11: Existing Conditions Intersection Level of Service

Intersection		Control Type ¹	Peak Hour ²	Existing Conditions	
				Delay (sec) ³	LOS ⁴
1	Santa Rosa Avenue/Petaluma Hill Road	Signalized	AM	7.6	A
			PM	9.1	A
2	Santa Rosa Avenue/Baker Avenue	Signalized	AM	20.8	C
			PM	26.7	C
3	Santa Rosa Avenue/Colgan Avenue/US 101 Northbound Ramp	Signalized	AM	37.2	D
			PM	23.6	C
4	Petaluma Hill Road/Colgan Avenue	Signalized	AM	11.2	B
			PM	15.6	B
5	Petaluma Hill Road/Kawana Springs Road	Signalized	AM	17.7	B
			PM	19	B
6	Hearn Avenue/Corby Avenue	Signalized	AM	39.6	D
			PM	45.3	D
7	Hearn Avenue/Santa Rosa Avenue	Signalized	AM	39.8	D
			PM	60.7	E
8	Santa Rosa Avenue/Yolanda Avenue/ US 101 Northbound Ramp	Signalized	AM	33.4	C
			PM	30.7	C
9	Bellevue Avenue/Moorland Avenue	AWSC	AM	19.8	C
			PM	16.4	C
10	Santa Rosa Avenue/Bellevue Avenue	SSSC	AM	28.3 (>120)	D (F)
			PM	3.0 (43.3)	A (E)
11	Santa Rosa Avenue/East Robles Avenue	Signalized	AM	7.7	A
			PM	7.6	A
12	Todd Road/ US 101 Southbound Ramp	Signalized	AM	14.5	B
			PM	14.5	B
13	Todd Road/ US 101 Northbound Ramp	Signalized	AM	8.1	A
			PM	8.1	A
14	Santa Rosa Avenue/Todd Road	Signalized	AM	16.5	B
			PM	19.9	B

Notes:

1. Signalized = Traffic Signal Control, AWSC = All-Way Stop-Controlled Intersection, SSSC = Side-Street Stop-Controlled Intersection.
2. AM = morning peak hour, PM = evening peak hour.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Movement Delay). Delay calculated per *HCM 6th Edition* methodologies.
4. LOS = Level of Service designation per *HCM 6th Edition*.

Bold indicates unacceptable operations.

Source: Fehr & Peers, 2024.

Safety Considerations

The City of Santa Rosa has adopted several safety plans in recent years. The *Bicycle and Pedestrian Master Plan* (BPMP) provides the City with a long-term vision for improving active transportation and providing policies and actions to support in decision-making processes for investments in bicycle and pedestrian facilities. Within the SSRSP area, Santa Rosa Avenue between Petaluma

Hill Road and Colgan Avenue was highlighted as a part of the bicycle High Injury Network (HIN) and Santa Rosa Avenue between El Portal Way and Bellevue Avenue was highlighted as part of the pedestrian HIN. The BPMP proposed various bikeway and pedestrian projects within the SSRSP area to improve safety citywide.

The City's *Local Road Safety Plan* (LRSP) built on the BPMP by focusing on the HIN and updating collision data to evaluate how and whether collision frequency and severity has improved in years since the BPMP was adopted. The LRSP aimed to identify additional safety countermeasures to reduce fatal and severe injuries throughout the City. The LRSP did not identify additional focus areas within the Specific Plan Area; however, the LRSP includes additional countermeasures and strategies that should be considered for this effort.

In 2022, Santa Rosa City Council adopted the Sonoma County *Vision Zero Action Plan* (VZAP) that set a target goal of zero traffic deaths and severe injuries on roadways within the City by 2030. The VZAP identified a handful of corridors and intersections as part of the High Injury Network. The corridors include Dutton Avenue, Hearn Avenue, Kawana Springs Road, Santa Rosa Avenue, and Petaluma Hill Road. The High Injury Intersections within our study area include the Baker Avenue/Santa Rosa Avenue/Colgan Avenue intersection, the Bellevue/Dutton Avenue intersection, the Bellevue Avenue/Santa Rosa Avenue intersection, the Corby Avenue/Hearn Avenue intersection, the Kawana Springs Road/Petaluma Hill Road intersection, the Santa Rosa Avenue/driveway between Colgan Avenue & Milicent Way intersection, the Santa Rosa Avenue/Plaza Drive intersection, and the Santa Rosa Avenue/Court Street intersection. The VZAP includes goals and actions for the City of Santa Rosa and Sonoma County to consider for future improvements within the Specific Plan Area.

Evacuation Considerations

On October 8, 2017, a Red Flag Warning was issued by the National Weather Service for above-normal wind speeds in Santa Rosa and the surrounding areas. The Tubbs and Nuns Fires both ignited outside the city and due to the high winds, the fire quickly spread towards Santa Rosa. Although the 2017 Complex Fires did not affect the Specific Plan area, those that were notified to evacuate due to the fires, evacuated south. The City and County's After Action Reports (AARs) highlight improvements needed towards existing infrastructure including the communication systems, to alert the community to the need to evacuate if a similar scenario were to occur.

After Action Reports were prepared by the City of Santa Rosa and Sonoma County for the October 2017 Complex Wildfires. The City's AAR entitled *Coming Together in Crisis: The Santa Rosa Story* (2019) and the County's entitled the *Emergency Operations Center After Action Report & Improvement Plan* (2018) highlight the story of the wildfires, limitations on City and County staff during the time of the wildfires, and improvements for wildfire response in the event of a future fire.

PUBLIC SERVICES & INFRASTRUCTURE



School Bus in Plan Area

Essential Services

Police Service

The City of Santa Rosa Police Department and Sonoma County Sheriff's Department serve the Plan Area by providing law enforcement services. There are no police or sheriff stations, jails, or other facilities within the Plan Area.

Fire Service

The City of Santa Fire Department and the Sonoma County Fire District serve the Plan Area providing fire protection and prevention, emergency medical services, and more. Sonoma County Fire District Station 4 is located on the north side of Todd Road, between Standish and Moorland Avenues, within the Plan Area.



Sonoma County Fire District Station 4

Childcare & Education

Schools serve as nodes of activity in the Plan Area where children and parents walk and drive in the mornings and afternoons, and evenings pending after-school activities. There are several schools within one mile of the Plan Area, including:

- Amarosa Academy (7-12)*
- Bellevue School (K-6)
- Brook Hill School (K-6)
- Elsie Allen High School (9-12)
- Hahn (Marguerite) Elementary School (TK-5)
- Kawana Springs Elementary School (K-6)
- Meadow View School (K-6)
- Roseland Accelerated Middle School (7-8, Charter)
- Roseland Creek Elementary School (K-6)
- Roseland Elementary School (Pre-K-6)
- Roseland University Prep (9-12, Charter)

- Santa Rosa Middle School (7-8)
- Sheppard Accelerated School (K-6)
- Taylor Mountain School (K-6)*

**Located in the Plan Area*

Formal childcare, such as daycare centers, are concentrated in the northern portion of the Plan Area. Most are private daycare centers or in-home family-run childcare services.

Libraries

There are no libraries located within the Plan Area. The nearest library, Roseland Regional Library, is located approximately 0.75 miles to the northeast of the Plan Area in Roseland.

Open Space & Recreational Facilities

The Plan Area currently lacks open space and recreation, as well as connectivity between the existing resources. The Plan Area has three public parks: Sonoma County's Andy Lopez Unity Park (4.76 acres), and City of Santa Rosa's Red Hawk Park (0.34 acres), and Harvest Park (3.60 acres). Typically, a community is considered well-resourced with open space when every household lives within a 10-minute walk from access to a park or natural resource. The parks in the Plan Area are concentrated along Santa Rosa Avenue, and many residents of the Plan Area do not live within a 10-minute walk of any of the parks. Therefore, this is considered a "park poor" community.



Class 1 Path near Plan Area

Additionally, connectivity between resources is restricted by Highway 101 running north to south through the center of the Plan Area. A lack of pedestrian and cyclist infrastructure also limits the ability of community members to access recreational activities, as discussed in the Circulation section of this document.

Infrastructure

Water

This section summarizes the findings from the SSRSP Existing Conditions Memo (Watearth, 2024), which examines water and wastewater infrastructure. These insights form the foundation for informed decision-making on infrastructure improvements, sustainability measures, and regulatory compliance necessary for supporting future growth in the Plan Area.

Regulatory Setting

California adopted the Water Conservation (WC) Act of 2009, with the goal of reducing statewide urban per capita water use by 20 percent (%) by 2020 (UWMP, 2020). As the effects of climate

change became more apparent, it became clear that more water conservation efforts are needed to maximize water use in the state of California. With the signing of 2018 water conservation legislation (SB 606 and AB 1668 “Making Water Conservation a California Way of Life”), four primary goals were identified (CDWR 2018):

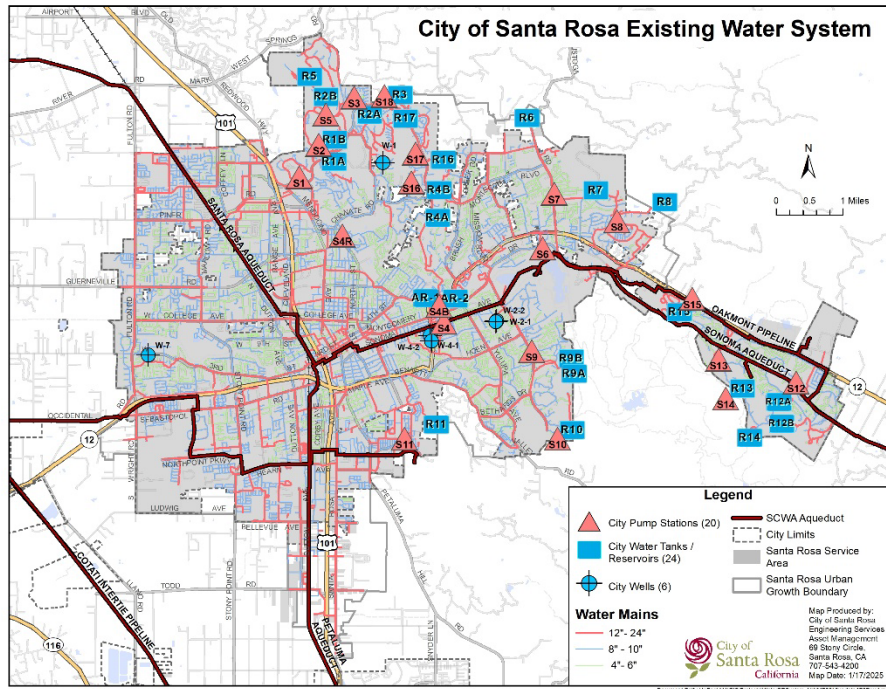
1. Use water more wisely
2. Eliminate water waste
3. Strengthen local drought resilience
4. Improve agricultural water use efficiency and drought planning

The City of Santa Rosa achieved the original 20% water conservation goal and is also committed to achieving compliance with the 2018 Making Water Conservation a California Way of Life legislation.

Water Sources

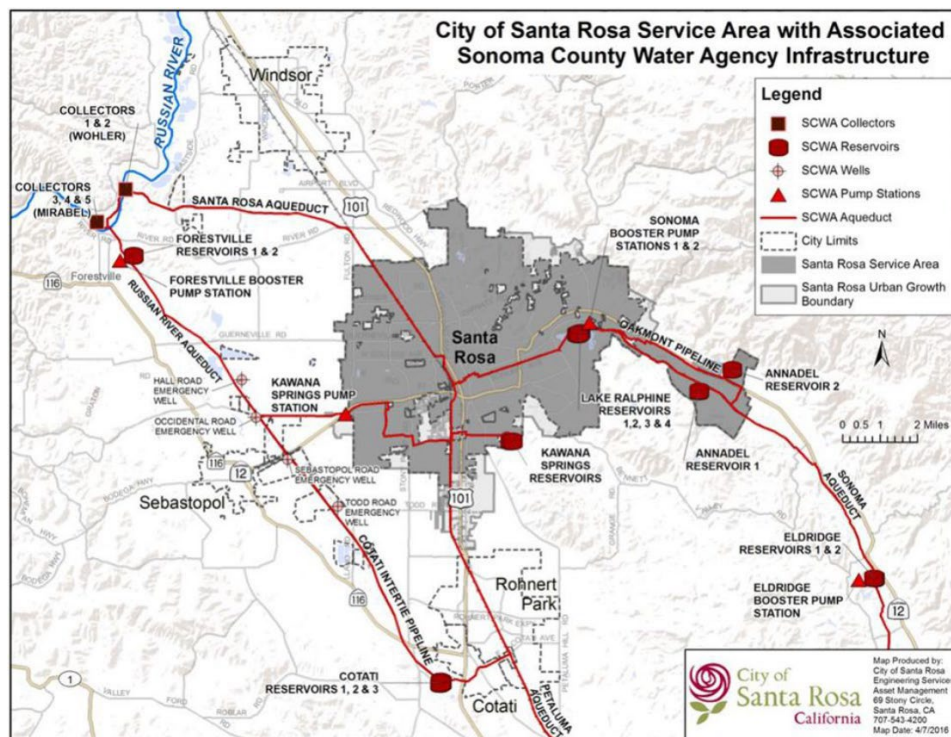
The Urban Water Management Planning Act requires that water suppliers with more than 3000 connection or more than 3000 acre-feet of demand update their Urban Water Management Plan (UWMP) at least every five years, demonstrating water supply reliability in normal, single dry, and multiple dry water years for their service area. T. A UWMP Update for the City of Santa Rosa is created every five years, with the most recent released in 2020. The *City of Santa Rosa's 2020 UWMP* defines a service area as the City's municipal boundary. This boundary does not currently include the entire South Santa Rosa Plan Area, only a portion. Within the *2020 UWMP* the South Santa Rosa Plan Area was defined as the voter-approved Urban Growth Boundary, shown in **Figure 11**. **Figure 12** details the City of Santa Rosa service area with associated Sonoma County water agency infrastructure. The recycled water irrigation service area is a subset of the City service area, with no plans for expansion. Beyond this area, recycled water is permitted to be trucked for dust control for construction including into the South Santa Rosa Plan Area, the recycled water trucking program boundary is shown in Figure 13.

EXISTING CONDITIONS REPORT | PUBLIC SERVICES & INFRASTRUCTURE
 Figure 11. City of Santa Rosa Existing Water System



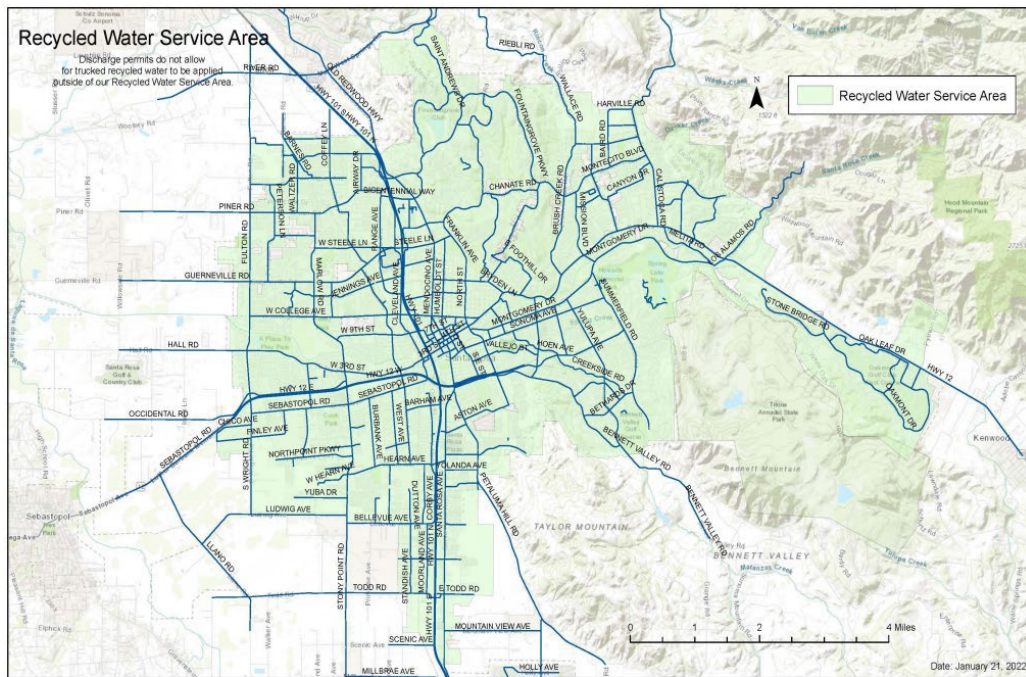
Source: Engineering Services Asset Management, 2025

Figure 12. City of Santa Rosa Service Area with Associated SCWA Infrastructure



Source: Santa Rosa 2020 UWMP

Figure 13. Recycled Water Service Area



Source: Santa Rosa 2020 UWMP

The City of Santa Rosa's 2020 UWMP analyzes potable and non-potable water supply sources over the short- and long-term. The City of Santa Rosa has three existing sources of water supply (UWMP, 2020):

1. Entitlement from Sonoma Water for potable water.
2. Groundwater from the City of Santa Rosa's potable water wells.
3. Recycled water (non-potable) from the Santa Rosa Regional Water Reuse System; owned and operated by the City of Santa Rosa.

To enhance the City's water supply resiliency, Santa Rosa Water conducted a study of water supply options and developed an adaptive Water Supply Alternatives Plan (Plan) in 2023 aimed at determining the feasibility of reducing vulnerability to water shortages and enhancing long-term water supply reliability. This Plan identifies a path forward to diversify the City's water supply portfolio in the coming years, including adding new capacity. Water use regulations and projections implemented by the City of Santa Rosa aim to ensure that the addition of the South Santa Rosa Plan Area to the water supply will strive to not affect current and future water demands, although a Water Supply Assessment for this Plan area will be undertaken to determine the impact more fully, consistent with state regulations. Multiple scenarios were studied in the 2020 UWMP to ensure water supply will be sufficient to meet increasing demands through 2045, including for the portion of the South Santa Rosa Plan Area that was evaluated as part of the UWMP:

- In normal years, water supply will be sufficient to meet increasing demand through 2045.
- In dry five-year periods, equivalent to the driest five-year period on record in the City of Santa Rosa, water supply will be sufficient to meet increasing demand through 2045.
- If a severely dry single year scenario occurs, the existing water conservation program

established by the City of Santa Rosa will be utilized to continue reduced demand and ensure the water supply is not exceeded.

Table 12 summarizes current water supplies and projected water supplies described in the 2020 UWMP.

Table 12: Santa Rosa Potable Water Supply Summary

Source	Additional Detail	2020, Actual (Average MGD)	2025 (MGD)	2030 (MGD)	2035 (MGD)	2040 (MGD)	2045 (MGD)
Purchased or Imported Water	Potable (contract)	16.09	25.98	25.98	25.98	25.98	25.98
Groundwater (not desalinated)	Potable (City)	1.12	2.05	2.05	2.05	2.05	2.05
Total Potable Water		17.21	28.03	28.03	28.03	28.03	28.03

Source: Santa Rosa 2020 UWMP

Table 13 details the number of potable water customer connections and percentage breakdowns from the 2020 UWMP. Most connections for potable water are single-family with some multi-family residential and commercial. The remaining connections are limited to industrial, institutional/government, landscape, and fire lines.

Table 13: Santa Rosa Current Potable Water Customers (2020)

Sector	Number of Connections (2020)	Number of Connections (2024)	
Single-Family	45,314	46,200	
Multi-Family	3,374	3,505	
Commercial	2,616	2,613	
Industrial	66	65	
Institutional/Governmental	242	232	
Landscape	1,494	1,552	
Fire Lines	1,215	1,289	
Total	54,321	55,637	

Source: Santa Rosa 2020 UWMP

Approximately 93% of the City's potable water is purchased or imported while the remaining 7% is obtained from City water sources. The City's potable water supply from Sonoma Water is surface water diverted from the Russian River (99%) and groundwater wells (1%) located in the Santa Rosa Plain sub-basin. The groundwater is pumped by the City of Santa Rosa from six municipal groundwater wells within the Santa Rosa Plain sub-basin of the Santa Rosa Valley Groundwater Basin:

- **Farmers Lane Wells No. 1 and No. 2:** Can reasonably provide up to 1,300 acre-feet per year (AFY) and are the City's only potable sources in active use. The wells are used to supplement potable water supplies obtained from Sonoma Water, particularly during

high demand periods.

- **Carley Well and Peter Springs Well:** Primarily provide water for landscape irrigation to an adjacent park, refilling Lake Ralphine, and irrigation of school grounds. The wells provide the City with approximately one MGD of groundwater capacity on a stand-by emergency basis.
- **Farmers Lane Well No. 3:** Operated to provide small amounts of landscape irrigation water supply to areas adjacent to the well.
- **Leete Well:** Used only to provide water during an emergency outage condition. Currently out of service for several years due to casing separation.

Santa Rosa’s potable water is distributed by a combination of pipelines (624 miles), storage reservoirs (21 water tanks), and pump stations (19). To accommodate the network of pipelines, the distribution system is structured into 18 major pressure zones, and smaller sub-zones, ranging in diameter from 4 to 24 inches. The 19 water pumps are distributed throughout this water distribution system as well as one well treatment facility.

Water Infrastructure Map

A water infrastructure map was developed for the South Santa Rosa Plan Area. **Appendix B** outlines the water infrastructure within the South Santa Rosa Plan Area: water tanks, pump stations, and water main count information is detailed below. Values were compared to the entire City of Santa Rosa.

- Water Tanks: 23 within the City of Santa Rosa; 0 within South Santa Rosa Plan Area.
- Pump Stations: 19 within the City of Santa Rosa; 0 within South Santa Rosa Plan Area.
- Water Mains: 27,639 (763 mi) within the City of Santa Rosa; 1,794 (38 mi) within South Santa Rosa Plan Area.

Existing Water Demands

The existing water demands of Santa Rosa are driven by the current population, climate, and supply capacity. Variable weather conditions have an impact on the length of irrigation season, peak water demand, and supply reliability. **Table 14** details the recorded amount of potable water used from 2020 to 2024 and the projected 2025 values. 2024 includes values from the months of January to August.

Table 14: Santa Rosa Potable Water Supplies

Source	Additional Detail	2020, Actual (MGD)	2021, Actual (MGD)	2022, Actual (MGD)	2023, Actual (MGD)	2024, Current (MGD)	2025*, Projected (MGD)
Purchased or Imported Water	Potable (contract)	16.09	14.14	13.55	13.44	9.56	25.98
Groundwater (not desalinated)	Potable (City)	1.12	1.18	0.94	1.10	0.74	2.05
Total Potable Water		17.21	15.32	14.49	14.54	10.3	28.03

*Santa Rosa 2020 UWMP Projected Value; Additional values were supplied by the City of Santa Rosa.

Future Water Demands

The future water demands of Santa Rosa are driven by population increase, change in climate, and future supply capacity. Published housing projections, provided in **Table 15** below, show an 18% increase in the number of units in Santa Rosa by 2040. Of the approximately 74,000 homes in 2024, 6,060 households are located within the South Santa Rosa Plan Area, as discussed in the Population Characteristics section of the General Plan. **Table 16** projects potential potable water supplies over the next 25 years. The demand projections address all classifications, including projections for all types of customer water sales, water losses from the potable water system, and the addition of the urban growth boundary. The City of Santa Rosa did not reduce demand projections for anticipated active water savings from future customer participation in the City's ongoing water use efficiency programs (UWMP, 2020). Therefore, the projections are conservative as the City plans to continue to save water with conservation measures.

Table 15: City of Santa Rosa Housing Projections

Housing Type	2010	2015	2020	2025	2030	2035	2040
Single-Family Units, # of homes	47,265	49,420	49,420	49,485	50,155	51,090	52,525
Multi-Family Units, # of homes	20,620	21,455	21,455	24,275	27,645	29,640	31,355
Total	67,885	70,875	70,875	73,760	77,800	80,730	83,880

Source: Association of Bay Area Governments, Plan Bay Area Projections 2040, November 2018
Santa Rosa 2020 UWMP

Table 16: City of Santa Rosa Projected Water Supplies

Source	Additional Detail	2025 (MGD)	2030 (MGD)	2035 (MGD)	2040 (MGD)	2045 (MGD)
Purchased or Imported Water	Potable (contract)	25.98	25.98	25.98	25.98	25.98
Groundwater (not desalinated)	Potable (City)	2.05	2.05	2.05	2.05	2.05
Total Potable Water		28.03	28.03	28.03	28.03	28.03

Source: Santa Rosa 2020 UWMP

Planned Improvement Projects

As of 2020, California Water Code requires water suppliers to account for the impact of climate change on potable and non-potable water supplies and supply reliability (UWMP, 2020). Sonoma County prepared a report, *Climate Ready Sonoma County: Climate Hazards and Vulnerabilities* (prepared by North Bay Climate Adaption Initiative for Sonoma County Regional Climate Protection Authority) to discuss climate change and the affect it will have on the County:

- Higher average temperatures and more extreme heat events;
- More frequent and intense droughts;
- More variable rain and seasonality;
- Greater risk of extreme floods;
- More frequent and intense wildfires; and

- Sea level rise.

To address climate change and per California state law, the City of Santa Rosa developed the Water Shortage Contingency Plan (WSCP). This document establishes protocols to be implemented when City-wide potable and non-potable water supply shortage levels are triggered. The City's WSCP defines long-term demand projections, , rationing stages, and per capita allocations in rationing stages. The City of Santa Rosa's climate change mitigation and adaptation efforts have been consistently funded through regular budgeting process for comprehensive asset management and capital improvement projects (UWMP, 2020).

Water planned improvements involve the implemented Capital Improvement Plan (CIP), a five-year financial plan for the maintenance and expansion of public infrastructure. Projects are prioritized based on need and amount of funding available. The CIP identifies public facility improvements that are needed, provides a design and construction schedule, and identifies funding for the projects (CIP, 2024). Of the 70 total projects proposed and currently under construction, 12 are related to water and waste water within the City of Santa Rosa.

Wastewater

Regulatory Setting

In Santa Rosa, wastewater is treated and approved for non-potable reuse under the National Pollution Discharge Elimination System (NPDES) Permit. Depending upon the amount of rainfall in any given year, approximately 98% of the Regional System's wastewater is recycled; in 2020, 100% of the wastewater was recycled (UWMP, 2020). The City distributes and uses this recycled water for non-potable uses (landscape irrigation and dust control) within the urban jurisdiction under the State Water Resources Control Board (SWRCB) General Order for Recycled Water Use WQ 016-0068- DDW (SWRCB, 1986), while the majority of wastewater is sent to the Geysers Recharge Project and agricultural users outside the city jurisdiction for beneficial reuse. The City of Santa Rosa Wastewater is treated at Title 22 Tertiary level, the highest non-potable level recognized in the State water recycling regulations.

Agencies that Provide Wastewater Treatment Facilities and Services

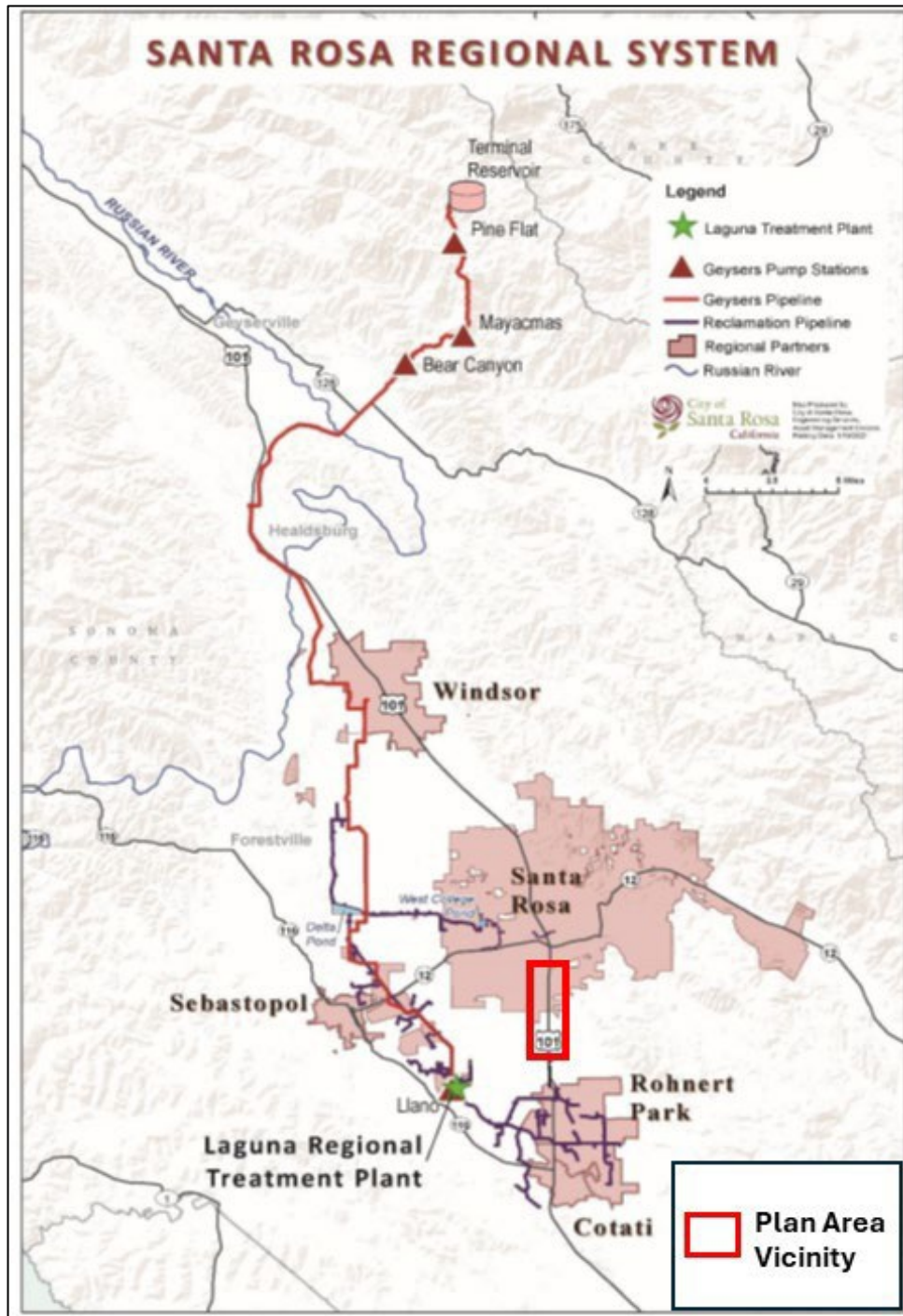
Wastewater is recycled, treated, and reused for non-potable uses by the City of Santa Rosa's Laguna Treatment Plant (LTP). The LTP system treats wastewater collected from homes, businesses, and nearby municipalities including the cities of Santa Rosa, Cotati, Rohnert Park, and Sebastopol as well as the South Park Sanitation District and some portions of unincorporated Sonoma County. The treated wastewater is then recycled for landscape irrigation, while the majority is sent to the Geysers Recharge Project and the City of Rohnert Park for urban reuse. The City of Santa Rosa's water recycling system is monitored by state, local, and federal agencies (UWMP, 2020). This recycled water is designed to meet or exceed California standards for all recycled water uses except drinking water.

LTP is part of a regional system, Santa Rosa Regional Water Reuse System, which operates and maintains recycled water for more than 225,000 residents and 6,500 businesses for the following cities/areas (UWMP, 2020), shown in **Figure 14**:

- City of Cotati;
- City of Rohnert Park;

- City of Santa Rosa;
- City of Sebastopol; and
- The South Park Sanitation District and portions of Unincorporated Sonoma County.

Figure 14. Santa Rosa Regional System



LTP is a tertiary level treatment facility; flow values are discussed in detail in the **Annual Average Flows** section. Tertiary treated water is high quality, metered, and safe for many reuse purposes including:

- Irrigation of landscape,
- Agricultural crops,
- Vineyards,
- Playgrounds,
- Golf courses, and
- Public parks.

Areas Served by Septic

Septic accounts for approximately 40.6% of the South Santa Rosa Plan Area’s wastewater capacity. Sewers account for approximately 59.4% of the South Santa Rosa Plan Area’s wastewater capacity, conveyed to local wastewater treatment plants. The area served by septic within the South Santa Rosa Plan Area is shown in **Appendix B**. The area served by septic tanks within the South Santa Rosa Plan Area versus the area served by sewers within the South Santa Rosa Plan Area is shown in **Table 17**.

Table 17: Area Served by Septic within South Santa Rosa Plan Area

Area served by Septic Tanks within South Santa Rosa Plan Area (mi ²)	Area served by Sewers within South Santa Rosa Plan Area(mi ²)	Septic Tanks Percent Area within South Santa Rosa Plan Area (%)	Sewer Percent Area within South Santa Rosa Plan Area (%)
1.09	1.59	40.6	59.4

Wastewater and Recycled Water Infrastructure

A wastewater infrastructure map was constructed for the South Santa Rosa Plan Area. **Appendix B** outlines the wastewater infrastructure within the South Santa Rosa Plan Area. Sewer main line count information is detailed below. Values were compared to the entire City of Santa Rosa to highlight the South Santa Rosa Plan Area’s wastewater use.

- 18,082 sewer main lines (612 mi distance) are within the City of Santa Rosa:
- 712 sewer main lines (24.6 mi distance) are within the entire South Santa Rosa Plan Area.
 - 412 sewer main lines (13.0 mi distance) are within the City portion of the South Santa Rosa Plan Area.
 - 300 sewer main lines (11.6 mi distance) within unincorporated areas of the South Santa Rosa Plan Area.

Appendix B details the Pipe and Diameter classifications within the South Santa Rosa Plan Area for the wastewater network.

Annual Average Flows

The LTP is a tertiary wastewater treatment facility that processes an average daily flow of 16.73 MGD and an average dry weather flow of 13.13 MGD based on 2020-2023 data. The plant's maximum permitted daily dry weather flow is 21.34 MGD and the Treatment Plant does not have increased capacity due to limitations on solids disposal capacity.

Wastewater Collection and Treatment

In 2024, LTP treated 7.77 billion gallons of wastewater. Of this, 1.71 billion gallons were recycled for urban and agricultural irrigation, and 4.77 billion gallons were recycled to the Geysers, reflecting Santa Rosa's significant focus on water reuse to support sustainability goals.

Wastewater Flow and Recycled Water Projections

Projections indicate that the availability of non-potable recycled water within the City's urban boundary (which includes the Plan Area) will remain steady at 0.125 MGD through 2045. Less than 1% of this recycled water will be used within the urban growth boundary, primarily for landscape irrigation.

Stormwater

Regulatory Setting

The regulatory framework for stormwater management in the Plan Area is governed by both federal and state agencies. The U.S. Environmental Protection Agency (EPA) enforces the Clean Water Act (CWA), including the National Pollutant Discharge Elimination System (NPDES), which requires municipalities to manage stormwater discharges to minimize pollution. At the state level, the California State Water Resources Control Board and the North Coast Regional Water Quality Control Board oversee compliance with stormwater quality standards. Local ordinances also provide additional guidance, ensuring proper drainage infrastructure and pollution control measures are in place.

Service Provider(s)

Stormwater infrastructure in the Plan Area is managed by the City of Santa Rosa Public Works Department and Santa Rosa Water. The departments are responsible for maintaining existing stormwater facilities and implementing improvements to ensure the system meets community needs. In unincorporated areas, Sonoma County Public Infrastructure oversees stormwater management in collaboration with regional agencies such as Sonoma Water.

Stormwater Collection System

The Plan Area's stormwater collection system consists of a combination of above-ground drainage features, such as gutters, culverts, and retention basins, and below-ground stormwater pipelines. These facilities work together to mitigate flooding during storm events, channel runoff into designated outflows, and reduce pollutant loads entering waterways. The system is designed to accommodate stormwater generated from residential, commercial, and industrial uses within the Plan Area.

Planned Improvement Projects

The City of Santa Rosa and Sonoma Water have identified numerous stormwater improvement projects needed to address system deficiencies and future needs. These projects include upgrading stormwater pipelines to accommodate increased flow capacity, constructing new retention basins to manage peak flows, and implementing green infrastructure initiatives such as bioswales and other forms of Low Impact Development to enhance water infiltration and quality. The City is currently drafting a Storm Drain Master Plan that provides a condition assessment, prioritization of potential projects, and an analysis of financial needs and potential funding sources.

Watershed Mapping and Slope Studies

The Plan Area lies within the Laguna de Santa Rosa watershed, with significant drainage flowing into nearby creeks and rivers. A comprehensive slope analysis has identified areas susceptible to erosion and sedimentation, requiring targeted mitigation measures to protect water quality and maintain soil stability.

Storm Drain Pump Stations

Preliminary analyses indicate that additional storm drain pump stations may be required to handle runoff in low-lying areas. Locations for these facilities will be determined based on hydrological modeling and community input.

Infrastructure Needs to Meet Demand

To meet future stormwater management needs, the Plan Area will require significant infrastructure upgrades, including:

- Expansion of pipeline collection systems to serve new development and ensure adequate flow capacity.
- Construction of additional retention basins to mitigate peak runoff events.
- Installation of emergency stormwater pump stations in flood-prone areas to enhance system reliability during extreme weather events.

Solid Waste

North Bay Corporation, operating as Recology, is responsible for the collection of municipal solid waste generated in Santa Rosa. Recology provides weekly curbside collection of refuse, recycling, and compost. Recology collection vehicles deliver the material to Central Landfill outside of Petaluma, California. The Plan Area lies within the jurisdiction of the Sonoma County Waste Management Agency (SCWMA). Solid waste from the City of Santa Rosa is primarily disposed of at Central Landfill which is anticipated to be operational through 2043 and can accept a maximum throughput of 2,500 tons per day¹⁰. The remaining capacity of the landfill is 9.2 million cubic yards.¹¹

Energy

Gas and electricity are distributed in Sonoma County by Pacific Gas & Electric (PG&E). The Bellevue Substation is located in the southern portion of the Plan Area at the intersection of Santa Rosa Avenue and Mountain View Avenue. One main transmission line, the Santa Rosa-Corona line, runs north-south through the Plan Area. The Santa Rosa-Corona line intersects with the Stony Point Tap line further north in the Plan Area at Santa Rosa Avenue and Bellevue Avenue.

¹⁰ Certain types of solid waste, such as hazardous materials, cannot be disposed of at the Central Landfill and are diverted to specialized facilities. Hazardous waste from residents, including paints, solvents, and batteries, can be disposed of at the Household Hazardous Waste Facility at the Central Disposal Site or during collection events organized by Zero Waste Sonoma.

¹¹ California Department of Resources Recycling and Recovery (CalRecycle, 2022)

Telecommunications

AT&T and Comcast provide telecommunications, cable television, and Internet services in the area. There are relatively high levels of digital connectivity in the Plan Area, with 93.1% of households having a computer and 85.5% with broadband internet access. By comparison, 96.5% of households in the City and 96.6% in the County have a computer and 93.4% of both City and County households have broadband internet access.¹²

¹² U.S. Census Bureau, ACS 5-Year Estimates, 2024

RESILIENCE & CLIMATE ADAPTATION



U.S. Highway 101 and State Highway 12 interchange

Plan Integration

City of Santa Rosa General Plan

The City of Santa Rosa is updating its General Plan with final adoption planned for Spring 2025. Chapter 5 of the draft General Plan includes the Safety, Climate Resilience, Noise, & Public Services and Facilities Element. This Chapter provides the framework for mitigating risks associated with natural and human-caused environmental hazards that may pose a risk to life and property in Santa Rosa. Santa Rosa's desirable environmental features are assets to the community, but also pose flood, seismic, fire, drought, and slope instability hazards. This chapter of the General Plan focuses on ensuring that Santa Rosa is resilient to hazards and equipped to recover from future events through goals, policies, and actions for climate resilience, safety, public services and facilities, and noise.

Chapter 3 of the City's proposed general plan update, entitled Circulation, Open Space, Conservation, and Greenhouse Gas (GHG) Reduction, identifies new and continued actions, programs, and policies to support the City's efforts to preserve and improve open space and environmental quality, and to reduce greenhouse gas (GHG) emissions from the transportation and energy sectors. Appendix A of the proposed general plan outlines a specific strategy to reduce community GHG emissions, and Appendix B describes the community's vulnerabilities to climate change impacts and the resources and advantages the City has in preparing for those impacts.

Sonoma County General Plan

Sonoma County's current general plan is the General Plan 2020, adopted in 2008. It consists of 10 elements including Land Use, Circulation and Transit, Land Use, Open Space and Conservation, Noise, Public Safety, and more. A significant focus of the General Plan is on greenhouse gas (GHG) reduction and enhancing climate resilience, recognizing the importance of mitigating climate change impacts on the County's unique natural environment. Policies within the General Plan emphasize sustainable development practices, aiming to balance urban growth with the preservation of open space and agricultural lands, including the scenic Sonoma Foothills. Its policies guide growth into areas with existing infrastructure and balance urban development with preservation of the agrarian characteristics defining much of Sonoma County. The County is currently updating its General Plan, incorporating new goals for reducing GHG emissions and adapting to climate-related challenges.

Natural Hazard Vulnerability

Flooding

Flooding or inundation by water can occur because of storm events, dam failure, seiche, and tsunamis. Flooding is the most frequent natural hazard impacting Sonoma County, with most frequent flooding occurring along the Russian River, Petaluma River, and Sonoma Creek, as well as tributaries within these watersheds. Runoff generated in Santa Rosa drains via nine watershed areas that ultimately discharge into the Laguna de Santa Rosa. Numerous major creeks and various tributaries convey the stormwater between the City's runoff-generating sources and the Laguna de Santa Rosa. Santa Rosa Creek is a part of the City's largest drainage basin, draining

the northern portion of the City as well as the downtown area. In the Plan Area, Colgan Creek is used as a storm drain system discharge point and is a direct tributary to Laguna de Santa Rosa. Todd Creek also provides drainage for the Plan Area and is a tributary to Laguna de Santa Rosa via the Bellevue-Wilfred Channel. Flooding has been known to occur in the southern portion of the City along Colgan Creek and Roseland Creek.¹³

Figure 15 shows the 100-year and 500-year floodplains in the region based on floodplain mapping by the Federal Emergency Management Agency (FEMA). As shown therein, a small part of the northern portion of the Plan Area within the City of Santa Rosa is within the 100-year and 500-year floodplain near Colgan Creek.

Wildfire

Wildfire-urban interface fires are prevalent in Sonoma County. Several historically large fires have affected the Santa Rosa community as well as the Sonoma County region within the last 10 years, which are listed below.

- Tubbs/Nuns Fires – 2017
- Kincaid Fire - 2019
- LNU Lightening Complex Fires- 2020
- Glass Fire - 2020

As shown in **Figure 16** below, there are no designated Very High or High Fire Hazard Severity Zones located within the Plan Area. However, several areas of moderate Risk of Fire exist immediately adjacent to the Plan Area, east of the entire jurisdiction of Santa Rosa and east of Petaluma Avenue. Wildfire and disaster preparedness remain important considerations in the Plan Area due to the history and risk level of large wildfires in the surrounding areas.

Earthquake/Seismic Hazards

The United States Geological Survey has identified the location of where the Rodgers Creek Fault, which lies east of the San Andreas Fault, crosses the Santa Rosa Creek floodplain in central Santa Rosa. At its closest point, the eastern edge of the Plan Area is located approximately 0.75-miles to the west of the active Rodgers Creek Fault Zone, shown **Figure 17**.

¹³ (City of Santa Rosa 2020).

Figure 15. FEMA Floodplains

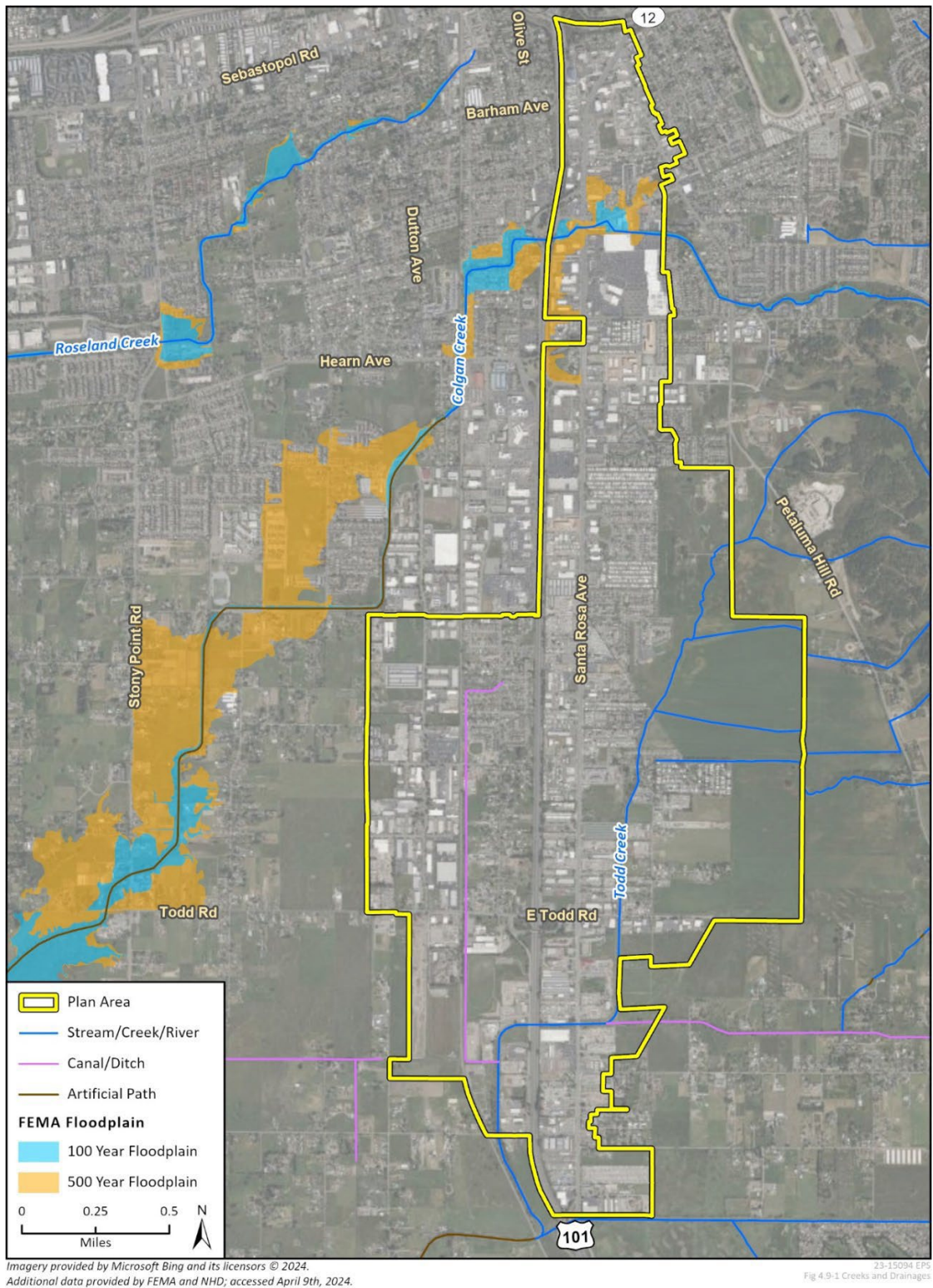
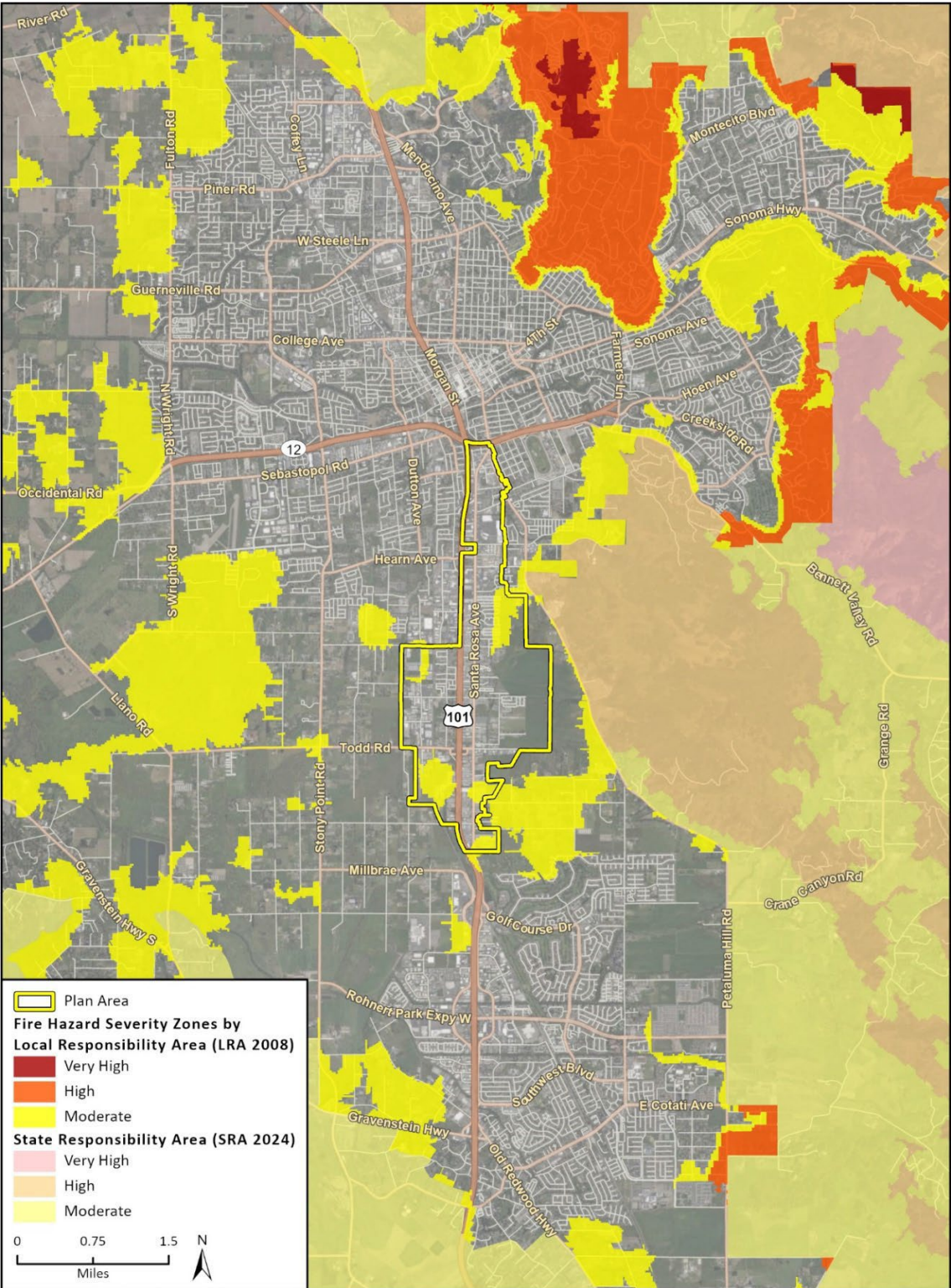


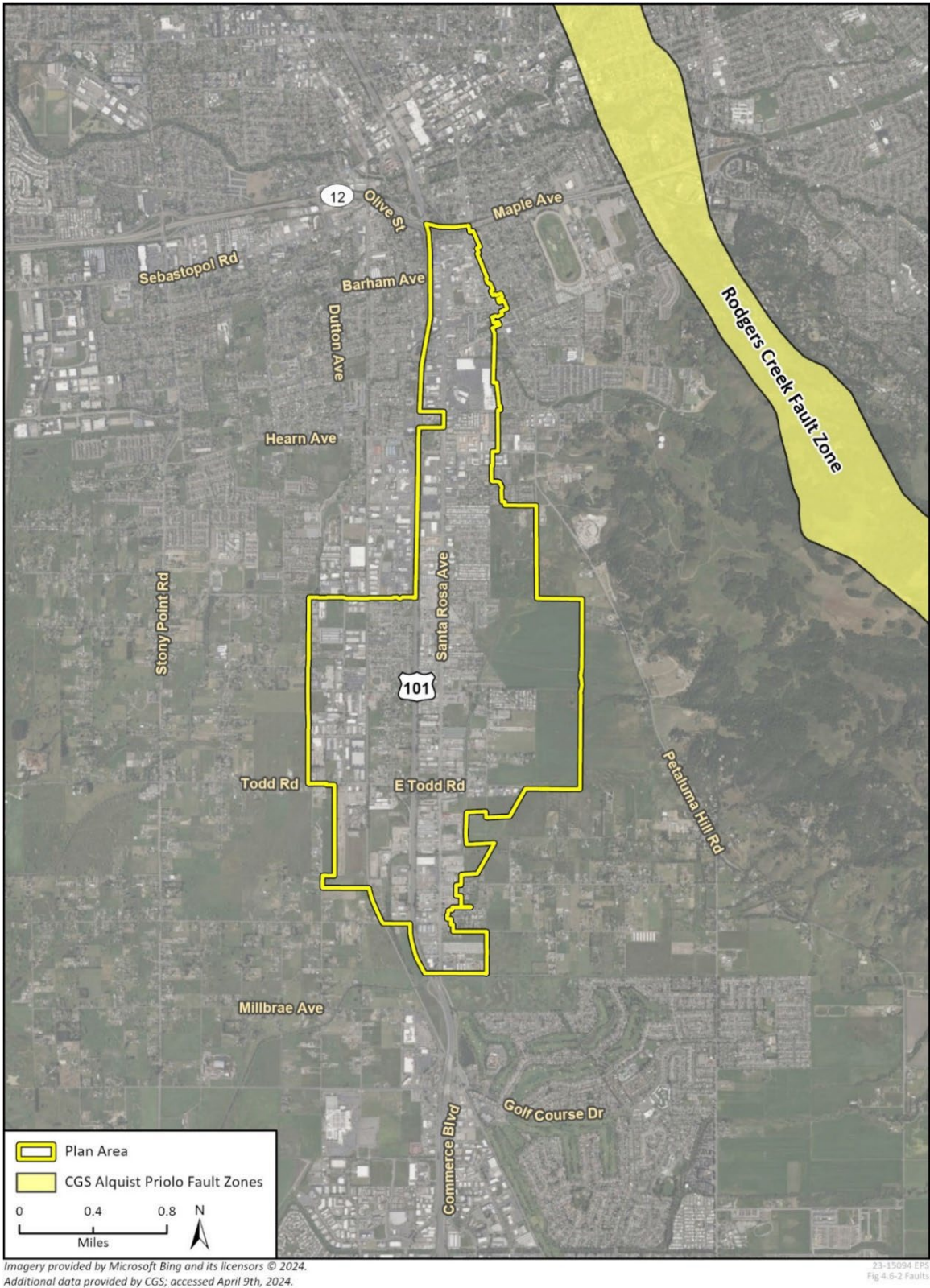
Figure 16. Fire Hazard Severity Zones



Imagery provided by Microsoft Bing and its licensors © 2024.
Additional data provided by CALFIRE, 2008/2024.

23-15094 E.P.
Fig WF-1 Fire Hazard Severity Zones

Figure 17. Fault Zones



Noise

The 2050 Santa Rosa General Plan addresses the adverse effects of noise in Chapter 5, Safety, Climate Resilience, Noise, and Public Services and Facilities. The City’s General Plan establishes standards for acceptable noise levels in different land use districts, such as residential or industrial, and describes feasible policies and practices to help maintain them. Major sources of noise in the Plan Area include Highways 101 and 12, the Northwest Pacific Railroad, and auto-oriented commercial and light industrial activity along the railroad.

U.S. Highway 101 & State Highway 12

Highway 101 and State Highway 12 are two of the largest noise generators in the Plan Area. The highways generate a sound level of approximately 80 db(A).

Northwest Pacific Railroad

The Northwest Pacific Railroad runs approximately parallel to Highway 101, and crosses West Robles Avenue, Todd Road, and Scenic Avenue within the Plan Area. The railroad is surrounded by commercial, light-industrial land, and some single-family residential land uses.

Biological Resources

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the United States Fish and Wildlife Service (USFWS), under the Federal Endangered Species Act (FESA), those listed or candidates for listing as rare, threatened, or endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA), animals designated as “Species of Special Concern” by CDFW, and CDFW Special Plants, specifically those with a California Rare Plant Rank of 1A, 1B, and 2, as assigned by the California Native Plant Society’s (CNPS) online Inventory of Rare and Endangered Plants of California.¹⁴

Special-Status Plant Species

Sixty (60) special-status plant species known to occur in the region were evaluated for their potential to occur in the Plan Area. Based on the lack of generally required habitat types or features in the Plan Area, such as coniferous forest, native prairie and grasslands, chaparral, rocky outcrops, serpentine and volcanic soils, and other species-specific habitat requirements, 45 special-status plant species were excluded from further evaluation. As shown in **Table 18**, fifteen (15) have some potential to occur based on the presence of suitable alkali soils and wetland habitat.

¹⁴ (CNPS, 2024)

Table 18: Special-status Plant Species with Potential to Occur in the Plan Area

Common Name	Scientific Name	Status
Low Potential to Occur		
Sonoma alopecurus	<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	CRPR 1B.1
Thurber's reed grass	<i>Calamagrostis crassiglumis</i>	CRPR 2B.1
pappose tarplant	<i>Centromadia parryi</i> ssp. <i>parryi</i>	CRPR 1B.2
Peruvian dodder	<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	CRPR 2B.2
dwarf downingia	<i>Downingia pusilla</i>	CRPR 2B.2
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	State endangered
congested-headed hayfield tarplant	<i>Hemizonia congesta</i> ssp. <i>congesta</i>	CRPR 1B.2
legenere	<i>Legenere limosa</i>	CRPR 1B.2
Baker's navarretia	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	CRPR 1B.1
round-headed beaked-rush	<i>Rhynchospora globularis</i>	CRPR 2B.1
Kenwood Marsh checkerbloom	<i>Sidalcea oregana</i> ssp. <i>valida</i>	Federal and state endangered
long-styled sand-spurrey	<i>Spergularia macrotheca</i> var. <i>longistyla</i>	CRPR 1B.2
saline clover	<i>Trifolium hydrophilum</i>	CRPR 1B.2
Moderate Potential to Occur		
Sonoma sunshine	<i>Blennosperma bakeri</i>	Federal and state endangered
Burke's goldfields	<i>Lasthenia burkei</i>	Federal and state endangered

CRPR (CNPS California Rare Plant Rank)

1B=Rare, Threatened, or Endangered in California and elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1=Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

Special-Status Wildlife Species

Thirty-two (32) special-status animal species known to occur in the region were evaluated for their potential to occur within the Plan Area. Fifteen (15) special-status animal species were excluded from further analysis based on the lack of required habitat types or features within the Plan Area such as large river systems, forested habitats, or mountainous terrain, or because the Plan Area is outside of the species' known range. One special-status wildlife species was previously documented within the Plan Area, and 16 special-status animal species have some potential to occur due to the presence of wetlands, streams, and suitable nest trees in, or in the vicinity of, the Plan Area (**Table 19**).

Table 19: Special-status Animals with Potential to Occur in the Plan Area

Common Name	Scientific Name	Status
Low Potential to Occur		
Crotch bumble bee	<i>Bombus crotchii</i>	State candidate endangered
western bumble bee	<i>Bombus occidentalis</i>	State candidate endangered
California freshwater shrimp	<i>Syncaris pacifica</i> California	Federal and state endangered
tricolored blackbird	<i>Agelaius tricolor</i>	State threatened
golden eagle	<i>Aquila chrysaetos</i>	FP, WL
burrowing owl	<i>Athene cunicularia</i>	SSC
Moderate Potential to Occur		
western pond turtle	<i>Emys marmorata</i>	Federally proposed threatened
California red-legged frog	<i>Rana draytonii</i>	Federally threatened
white-tailed kite	<i>Elanus leucurus</i>	FP
pallid bat	<i>Antrozous pallidus</i>	SSC
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SSC
western red bat	<i>Lasiurus frantzii</i>	SSC
American badger	<i>Taxidea taxus</i>	SSC
High Potential to Occur		
Cooper's hawk	<i>Accipiter cooperii</i>	WL
sharp-shinned hawk	<i>Accipiter striatus</i>	WL
ferruginous hawk	<i>Buteo regalis</i>	WL
Presumed Present		
California tiger salamander – Sonoma County DPS	<i>Ambystoma californiense</i> Pop. 1	Federally endangered and state threatened

SSC = CDFW Species of Special Concern FP = State Fully Protected WL = State Watch List

Agricultural and Forest Resources

The California Department of Conservation defines the land within the Plan Area as “Urban and Built-Up Land” and “Farmland of Local Importance.” While the areas identified as Farmland of Local Importance might have potential for agricultural use, under the California Environmental Quality Act (CEQA), Farmland of Local Importance and Grazing Land are not considered Important Farmland. Based on a review of aerial photographs, there does not appear to be any significant forestry resource within the Plan Area.

Air Quality

According to CalEnviroScreen 4.0, traffic and diesel particulate matter from Highway 101 and Santa Rosa Avenue are the greatest threats to air quality in the Plan Area. The level of traffic and diesel particulate matter in the Plan Area is particularly high north of Mountain View Avenue, with the area in the 77th Percentile for diesel particulate matter and the 85th percentile for traffic.

Scenic Resources

Scenic resources are natural landscapes or built environments that possess significant visual or aesthetic qualities, contributing to the overall beauty and identity of a place. They include features such as natural settings, historic landmarks, cultural sites, and picturesque views that enhance the visual experience of residents and visitors.

In the City of Santa Rosa's 2035 General Plan, scenic resources are recognized as valuable assets that require preservation and enhancement. The General Plan specifically designates certain roadways and natural features as scenic resources due to their unique qualities.

Scenic Roadways

Highway 12 (from its interchange with Highway 101 west to Fulton Road) and Highway 101 throughout the City are designated as scenic roads. These roadways are noted for their:

- Natural Settings: Offering views of rolling landscapes, mature trees, and the surrounding hills and valleys.
- Historic or Cultural Features: Showcasing landmarks, architectural elements, and sites of historical significance that reflect the City's heritage.

Policies in the General Plan aim to preserve and enhance the visual appeal of these scenic roads by:

- Regulating roadside development to ensure it complements the scenic character.
- Managing signage and advertising to prevent visual clutter.
- Promoting landscaping that enhances natural beauty.

Sonoma Foothills

The Sonoma Foothills are identified as a crucial scenic resource. These rolling hills provide a picturesque backdrop to Santa Rosa, significantly contributing to the City's natural beauty and visual character. The General Plan includes policies to protect the scenic quality of the Sonoma



Taylor Mountain Provides a Backdrop in the East

Foothills by:

- Managing Development: Ensuring that any new construction respects the natural contours and minimizes visual impact on the landscape.
- Conserving Natural Features: Preserving open spaces, native vegetation, and wildlife habitats to maintain the area's ecological integrity.
- Enhancing Public Enjoyment: Supporting the creation of trails and viewpoints for residents and visitors to experience and appreciate the foothills.

Environmental Justice

The CalEnviroScreen tool is used to assess the health risks posed by environmental contaminants in California communities. It utilizes census tracts to define geographical regions to compare the health risks in different communities. A majority of the Plan Area is within census tract 6097151402 which ranks in the 74th percentile of environmental burden among California communities. One of the greatest threats throughout the Plan Area is the quality of drinking water. The presence of industrial uses along Santa Rosa Avenue and the volume of traffic along Highway 101 and Santa Rosa Avenue cause contaminants to run off into water supplies and ground water recharge, creating unsafe groundwater and drinking water in the area. Given the disproportionate presence of communities of color and low-income communities in the Plan Area, the threat to groundwater is an environmental justice issue.

Hazardous Materials and Sites

There is one active Cleanup Site in the Plan Area located at 3017 & 3019 Santa Rosa Avenue. This site was formerly occupied by Golden Technology, a facility that manufactured circuit boards from 1969 to 1975 and discharged waste onsite, affecting the soil and groundwater. The Department of Toxic Substances Control (DTSC) oversees the remediation efforts. The site is currently developed as a warehouse and land use restrictions limit what can be developed onsite.

The Plan Area west of Highway 101 falls within census tract 6097153200 which is designated as a Disadvantaged Community under California Senate Bill 535 (SB 535). Enacted in 2012, SB 535 mandates that a portion of the proceeds from the state's Cap-and-Trade Program be invested in projects that benefit disadvantaged communities. These communities are identified using environmental, health, and socioeconomic criteria through the CalEnviroScreen tool developed by the California Environmental Protection Agency (CalEPA).

By being designated under SB 535, this region is eligible for funding aimed at reducing pollution, improving public health, and promoting environmental equity. Investments may include environmental cleanup projects, air quality improvements, sustainable transportation initiatives, and other programs that enhance the quality of life for residents. This designation provides an opportunity to address the environmental challenges in the area, such as the remediation of contaminated sites like the former Golden Technology facility.

Historic Resources

Although there are no Historic Preservation Districts in the Plan Area, there are six parcels within the Plan Area that are individual properties potentially eligible for local designation according to a windshield survey performed by Santa Rosa Department of Community Development in 2004.

REGULATORY FRAMEWORK



Multifamily Residential and Retail Uses within the Plan Area

Policy Framework

The South Santa Rosa Specific Plan project area encompasses approximately 1,900 acres, including about 1,400 acres of unincorporated County land. The City lands are currently governed by the Santa Rosa General Plan 2035, with General Plan 2050 planned for adoption in Spring 2025. Sonoma County General Plan 2020 is the governing document for the unincorporated County lands. Key policies from relevant plans that guide development and improvements in the Specific Plan Area include the following:

Table 20: Policy Framework

Name	Regulatory Framework
Santa Rosa General Plan 2050	LUL-E-2: As part of planning and development review activities, ensure that projects, subdivisions, and neighborhoods are designed to foster livability. Utilize the City's Design Guidelines as a reference when evaluating the following neighborhood components: • Streets. Street design, traffic calming, and landscaping can make great contributions to the creation of successful neighborhoods. Neighborhood streets should be quiet, safe, and accommodate pedestrians and bicyclists. • Connections. Neighborhoods should be well connected to local shops and services, public plazas and gathering places, park lands, downtown, schools, and recreation by adequate and safe streets, bike lanes, public pathways, trails, general infrastructure (e.g., sidewalks and crosswalks), and transit. • Neighborhood Character. Each neighborhood should maintain a distinct identity, such as the historic preservation districts featuring Victorian cottages and California bungalows. • Diversity and Choice. Neighborhoods should provide choices for residents with different values. Different housing types and locations within the City accommodate a diverse range of needs. GM-A-1: Contain urban development in the Santa Rosa area within the City's Urban Growth Boundary. H-D-11: Encourage the development of affordable housing for the elderly, particularly for those in need of assisted and skilled nursing care. Continue to provide funding and offer incentives such as density bonuses, reduced parking requirements, design flexibility, and deferred development fees.
Santa Rosa Municipal Code	The Santa Rosa Municipal Code contains relevant policies and regulations for planning and building such as the zoning code, the building code, noise regulations, and other such policies. The City of Santa Rosa's zoning ordinance carries out the policies of the City's General Plan by classifying and regulating the uses of land and structures within the City. The City's zoning ordinance applies to all land uses, subdivisions, and development within the city. The purposes of the City's zoning ordinance are to: • Provide standards for the orderly growth and development of the City, and guide and control the use of land to provide a safe, harmonious, attractive, and sustainable community; • Implement the uses of land designated by the Santa Rosa General Plan and avoid conflicts between land uses; • Maintain and protect the value of property; • Conserve and protect the open space, scenic beauty, and other natural resources of the City; • Protect the character, and social and economic stability of residential, commercial, and industrial areas; • Assist in maintaining a high quality of life without causing unduly high public or private costs for development or unduly restricting private enterprise, initiative, or innovation in design; and • Provide for appropriate citizen participation in the decisions made in compliance with this Zoning Code.

	City Zoning Districts within the Plan Area are outlined below: Residential Zoning Districts • Rural Residential (RR) • Single-Family Residential (R-1) • Medium Density Multi-Family Residential (R-2) • Multi-Family Residential (R-3) • Mobile Home Park (MH) Commercial Zoning Districts • Office Commercial (CO) • Neighborhood Commercial (CN) • General Commercial (CG) • Motor Vehicle Sales (CV) • Community Shopping Center (CSC) Industrial Zoning Districts • Light Industrial (IL) • General Industrial (IG) Special Purpose Zoning Districts • Open Space-Recreation (OSR) • Open Space-Conservation (OSC) • Public and Institutional (PI) • Planned Development (PD) Combining Districts • Gateway (-G) • Senior Housing (-SH) • Rural Heritage (-RH)
County of Sonoma Zoning Code	The County of Sonoma’s Zoning Code contains relevant development standards and regulations for development activities in those portions of the Plan Area that lie within the unincorporated County. Zoning Districts within the Plan Area are outlined below: Residential Zoning Districts • Rural Residential (RR) • Low Density Residential (R-1) • Medium Density Residential (R-2) • High Density Residential (R3) Commercial Zoning Districts • Neighborhood Commercial District (C1) • Retail Business and Service District (C2) • General Commercial District (C3) • Limited Commercial District (LC) • Commercial Rural District (CR) Industrial Zoning Districts • Industrial Park (MP) • Limited Urban Industrial (M1) • Heavy Industrial (M2) Special Purpose Zoning Districts • Planned Community (PC)

	- Public Facilities (PF) Combining Districts - Affordable Housing (-AH) - Workforce Housing (-WH)
South Santa Rosa Area Plan (County)	The South Santa Rosa Area Plan was developed to implement the County’s 1978 General Plan. Adopted by the County in May 1982, the Plan focuses on mitigating impacts of higher-density development on infrastructure and agricultural operations, and also emphasizes preserving the area’s natural features. Full public improvements to meet the City’s General Plan standards are required for the urban development of County lands within the City of Santa Rosa’s Sphere of Influence and Urban Growth Boundary.
SCTA Active Transportation Plan	The Countywide Bicycle & Pedestrian Master Plan process assists in defining priorities for bicycle and pedestrian improvements, identifying strategies for the implementation of associated projects and programs, and supporting countywide bicycle and pedestrian coordination. This Plan places all participating jurisdictions in an improved position to qualify for, and leverage, funding.
Sonoma County General Plan	The following policies from the County’s General Plan 2020 are applicable to the unincorporated lands within the Plan Area: Policy LU-2c: Encourage the retention and production of diverse types of housing within Urban Service Areas in order to provide adequate housing choices for current and future residents. Policy LU-2d: Inventory, conserve and increase the amount and type of housing that accommodates those with special housing needs. Populations needing special types of housing include farm employees, the terminally ill, mentally disabled, handicapped people, abused spouses and children, and the homeless. Policy LU-6i: Provide expanded opportunities for a mix of residential and commercial or industrial use in Urban Service Areas. Policy LU-10a: Establish maximum densities and/or siting standards for development in designated Community Separators, Scenic Landscape Units, Scenic Corridors, Biotic Habitat Areas, Habitat Connectivity Corridors, and Riparian Corridors. Policy LU-16b: Consider requiring joint city/county design review for projects within the Santa Rosa Urban Service Boundary. Policy LU-20c: Establish procedures for joint city/county review of major projects within the City Spheres of Influence. Policy OSRC-2a: Avoid amendments to increase residential density in Scenic Landscape Units in excess of one unit per ten acres. The land use plan may designate a lower density or larger minimum lot size. Policy OSRC-3e: In conjunction with Section 2.5 “Policy for Urban Design,” incorporate design criteria for Scenic Corridors in urban areas. Policy OSRC-5a: Develop Urban Design Guidelines appropriate for each Urban Service Area in unincorporated Sonoma County that reflect the character of the community. Policy WR-1c: Prioritize stormwater management measures in coordination with RWQCB direction, focusing on urbanizing watershed areas and watersheds with impaired water bodies. Policy PF-2x: Utilize development fees to require that new development pays for its share of needed infrastructure as identified in Capital Improvement Plans.

Santa Rosa Bike and Pedestrian Master Plan	Policy 1: Integrate bicycle and pedestrian network and facility needs into all city planning documents and capital improvement projects. Policy 3: Design a Low Stress Bikeway Network suitable for the “Interested but Concerned,” to include people of all ages and ability levels riding bicycles. Policy 4: Design a connected, convenient, and comfortable pedestrian network to serve people of all ages and abilities. Policy 5: Design accessible, comfortable, and continuous off-street paths that contribute to the framework of Santa Rosa’s active transportation network. Policy 6: Develop an easy to read, unified, and comprehensive wayfinding system for bicyclists, pedestrians, and trail users. Policy 11: Maintain designated facilities to be comfortable and free of hazards to bicycling and walking. Policy 12: Maintain bicycle parking. Policy 14: Encourage Santa Rosa Public Schools to participate in the Safe Routes to School program.
Santa Rosa City-wide Creek Master Plan	The City-wide Creek Master Plan, adopted in 2007 and updated in 2013, outlines a set of creek-related policies and recommendations for site-specific improvements to the nearly one hundred miles of creeks that flow through Santa Rosa. These guidelines provide recommendations for development and to educate the public about the connection between storm drains and local creek health. Policies that are most relevant within the Plan Area are listed below: Policy OS-1-1. Provide an open space network that is linked by pedestrian and bicycle paths, and that preserves and enhances Santa Rosa’s significant visual and natural resources. Policy OS-1-2. Encourage the Sonoma County Agricultural Preservation and Open Space District to appropriate funds for the acquisition of open space within and surrounding Santa Rosa. Priorities for acquisition would include lands adjacent to creeks, such as the Santa Rosa Creek Greenway corridor and Colgan Creek. Policy OS-1-3. Coordinate with public and private entities to link open spaces with a network of paths and trails, including Sonoma County Water Agency access roads, Sonoma County Regional Parks Department trails, the Sonoma Marin Area Rail Transit (SMART) trail, and the Bay Area Ridge Trail. Policy RT-3-2. Develop public plazas and gathering places along creeks. These small open spaces along creeks serve as rest areas for trail users and gathering places for local residents. Policy RT-6. Prioritize creek restoration projects on City-owned lands such as public parks. 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.

Table 21: Regulations for City of Santa Rosa Zoning Districts in the Plan Area

Zoning Designation	Max Density (du/acre)	Max Height	Max Coverage	Setbacks (min allowed)			
				Front And Corner Side Lot	Side Interior	Side Corner	Rear
Residential (R)	See chapter 20-22.040 and 22.050 of the Zoning Ordinance						
Rural Residential (RR-40 & RR-20)	2	35’ – primary structures 16’ – accessory structures	40% - residential 75% - meeting facility (per CUP approval)	20’	5’	20’- RR-40 15’ – RR-20	20’
Single-Family Residential (R-1-6, R-1-7.5, R-1-9, R-1-15)	2	35’ – primary structures 16’ – accessory structures	40% - residential 75% - meeting facility (per CUP approval)	15’ – R-1-6 20’ – all other R-1’s	5’ for 1-story and 10’ for 2-story parts of structures – R-1-6 & R-1.7.5 10’ – R-1-9 & R-1-15	15’	15’ – R-1-6 20’ – all other R-1’s
Medium Density Multi-Family Residential (R-2)	1 unit per 3,000 sf 8-18 DU/AC	35’ – primary structures 16’ – accessory structures	50%	10’ (1-story portion can project 6’ and req’d stairs can project 10’)	5’ – unless abutting an R-3, then 0’	10’ – with 1-story portion (6’) and req’d stairs can project 10’)	15’
Multi-Family Residential (R-3-10, R-3-15, R-3-18, R-3-30 & R-3-HD) Medium High Density	1 unit per 3,000 sf to 1 unit per 1,450 sf or determined by CUP 18-30 DU/AC	35’ -40’ – primary structures 16’ – accessory structures	55%-75%	10’	0-5’ for floor 1 and 10’ for floor 2	10’	15’
Mobile Home Park (MH)	4 to 18	35’	–	20’	5-10’	5-10’	20’
Transit Village-Residential (TV-R)	25 to 40	3-4 stories depending on adjacent uses	100%	None, except as required by the review authority	None, except as required by the review authority	None, except as required by the review authority	None, except as required by the review authority
Neighborhood Mixed Use (NMU)	No maximum. See FAR Section 20-23.060.A.	No maximum. See FAR Section 20-23.060.A	100%	0-10’ 5-12’	0-10’	0-10’	0’
Office Commercial (CO)	30	35’	65%	15’	5’	15’	1- story building—5’ 2- story building—10’; 15’ adjacent to R zone 3 or more stories—15’ 25’ adjacent to R zone

Zoning Designation	Max Density (du/acre)	Max Height	Max Coverage	Setbacks (min allowed)			
				Front And Corner Side Lot	Side Interior	Side Corner	Rear
Neighborhood Commercial (CN)	1 unit req'd per 4,000 sf of non-residential use, to a max. 30 du/ac	45'	85% for retail/service uses other than lodging; 65% for recreation, education, public assembly, lodging, public buildings and utilities	7.5' adjacent to residential zone or use, or more as required by Design Review; 0' elsewhere	5' adjacent to residential zone or use, or more as required by Design Review; 0' elsewhere	5' adjacent to residential zone or use, or more as required by Design Review; 0' elsewhere	10' adjacent to residential zone or use, or more as required by Design Review; 0' elsewhere
General Commercial (CG)	30	55'	100%	7.5' adjacent to residential zone or use, or more as required by Design Review; 0' elsewhere	5' adjacent to residential zone or use, or more as required by Design Review; 0' elsewhere	5' adjacent to residential zone or use, or more as required by Design Review; 0' elsewhere	10' adjacent to residential zone or use, or more as required by Design Review; 0' elsewhere
Motor Vehicle Sales (CV)	Residential not allowed	55'	85%	20'	5' adjacent to residential zone or use; 0' elsewhere.	5' adjacent to residential zone or use; 0' elsewhere.	20'
Community Shopping Center (CSC)	1 unit required per 4,000 sf of nonresidential floor area up to 30 DU/AC	55'	100%	7.5' adjacent to residential zone or use; 0' elsewhere.	5' adjacent to residential zone or use; 0' elsewhere.	5' adjacent to residential zone or use; 0' elsewhere.	5' adjacent to residential zone or use; 0' elsewhere
Light Industrial (IL)	Determined by Review Authority	55'	Determined by CUP	7.5' adjacent to residential zone or use; set by CUP approval elsewhere	5' adjacent to residential zone or use; set by CUP approval elsewhere	5' adjacent to residential zone or use; set by CUP approval elsewhere	10' adjacent to residential zone or use; 0' elsewhere
General Industrial (IG)	Determined by Review Authority	55'	85%	7.5' adjacent to residential zone or use; set by CUP approval elsewhere	5' adjacent to residential zone or use; set by CUP approval elsewhere	5' adjacent to residential zone or use; set by CUP approval elsewhere	10' adjacent to residential zone or use; 0' elsewhere
Open Space—Recreation (OSR)	1 DU/ 40 AC; or 1 DU/ legal lot < 40 AC	35'	1% or 6,000 sf, whichever is greater	Determined by CUP	Determined by CUP	Determined by CUP	Determined by CUP
Open Space—Conservation (OSC)	1 DU/ 40 AC; or 1 DU/ legal lot < 40 AC	35'	1% or 6,000 sf, whichever is greater	Determined by CUP	Determined by CUP	Determined by CUP	Determined by CUP
Public and Institutional (PI)	Determined by CUP for student housing	35'	65%	15'	15'	15'	15'

Table 22: Regulations for County of Sonoma Zoning Districts in the Plan Area

Zoning Designation	Max Density (du/acre)	Max Height	Max Coverage	Setbacks (min allowed)			
				Front And Corner Side Lot	Side Interior	Side Corner	Rear
Rural Residential (RR)	N/A Determined by parcel-specific GP LU Map or zoning, whichever is more restrictive	35'	35%	20'	5'	20'	20'
Low Density Residential (R-1)	1-6	35'	40%	20'	5'	20'	20'
Medium Density Residential (R-2)	6-12	35'	50%	20'	5'	20'	20'
High Density Residential (R3)	12-20	†	60%	15'	5'	15'	10'
Neighborhood Commercial District (C1)	N/A	35'	50%	No min.	No min.	No min.	No min.
Retail Business and Service District (C2)	N/A	35'	50%	No min.	No min.	No min.	No min.
General Commercial District (C3)	Mixed Use Developments not permitted	35'	50%	No min.	No min.	No min.	No min.
Limited Commercial District (LC)	N/A	35'	50%	No min.	No min.	No min.	No min.
Commercial Rural District (CR)	N/A	35'	50%	No min.	No min.	No min.	No min.
Industrial Park (MP)	N/A	65'	50%	As established by precise development plan or specific plan	As established by precise development plan or specific plan	As established by precise development plan or specific plan	10 ft.
Limited Urban Industrial (M1)	N/A	65'	50%	No min.	No min.	No min.	No min.
Heavy Industrial (M2)	N/A	65'	50%	No min.	No min.	No min.	No min.
Planned Community (PC)	N/A	35'	50%	20'	5'	20'	20'
Public Facilities (PF)	N/A	35'	N/A	20'	5'	20'	20'
Affordable Housing Combining District (-AH)	Same design and development						

Zoning Designation	Max Density (du/acre)	Max Height	Max Coverage	Setbacks (min allowed)			
				Front And Corner Side Lot	Side Interior	Side Corner	Rear
	criteria as R3 - High Density Residential						
<i>Workforce Housing (-WH)</i>							

CONCLUSION



Mural within the Plan Area

The Plan Area faces a range of challenges and opportunities across various sectors, reflecting the complexity of urban development within the region. As this area continues to grow, careful attention to environmental, social, and economic dimensions is essential to create a more sustainable and equitable community.

Challenges

The Plan Area encounters significant obstacles, including the need to improve water resource management, enhance transportation connectivity, and address climate resilience. Long-term efforts, such as constructing new wells and protecting groundwater recharge areas, are essential to sustain the region's water supply and ensure resilience against climate-induced stressors.

In addition, environmental justice issues are particularly prominent, as certain neighborhoods are disproportionately affected by pollution and limited access to vital resources. The existing infrastructure, especially in underserved areas, requires upgrades to support public safety, accessibility, and resilience in the face of natural hazards like seismic events and flooding. Furthermore, achieving balance in land use amidst growing demands for residential and commercial spaces poses additional planning challenges.

Opportunities

There are multiple avenues for improvement and sustainable development within the Plan Area. Enhancing public transportation options and promoting active transportation networks (such as pedestrian and cycling infrastructure) can foster greater connectivity, reduce emissions, and improve quality of life. Investments in affordable housing are also critical, as these can alleviate housing pressures and support a diverse, economically inclusive community. Additionally, promoting economic development within local commercial zones can strengthen the area's job market, supporting both current residents and new populations anticipated in the future.

APPENDIX A

FEHR & PEERS – EXISTING CONDITIONS REPORT

Admin Draft

South Santa Rosa Specific Plan Existing Conditions Report

Prepared for:
4LEAF, INC.

April 2024

WC24-4054

FEHR  PEERS

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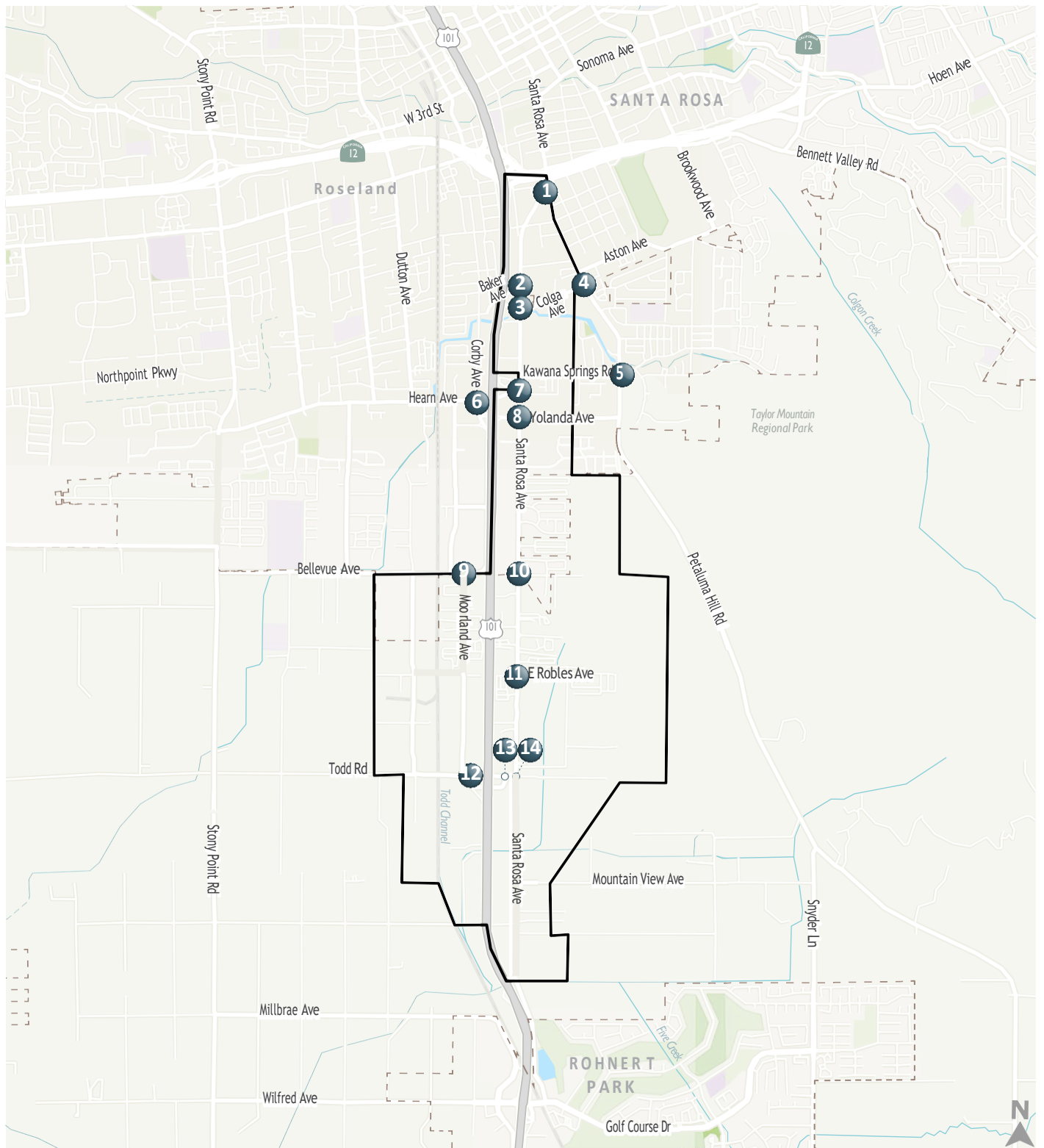
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1. Introduction

1.1 Plan Area

The South Santa Rosa Specific Plan (SSRSP) area, located in the southern part of the City of Santa Rosa, includes the Santa Rosa Corridor Priority Development Area and the County of Sonoma's South Santa Rosa Avenue Priority Development Area as well as adjacent neighborhoods that are relevant for the area. The area encompasses approximately 1,900 acres, including approximately 1,400 acres of unincorporated County land, including the area south of State Route (SR) 12 and east of US Highway 101 (US 101), extending to Petaluma Hill Road in the east, and south to the Urban Growth Boundary incorporating both sides of US 101 as shown in **Figure 1-1**.

The Specific Plan area has been identified as an "Area of Change" in the City's current General Plan Update process and contains a variety of housing types and non-residential uses. A portion of the Specific Plan area along Todd Creek, also known as the "2010 Area" in the City's current General Plan 2035, has been identified as an area in need of a detailed land use plan to identify provision of services, circulation, parks and open space, and the impact of potential development on Downtown Santa Rosa.



- Specific Plan Area
- # Study Intersection
- City Limits



Figure 1-1

Study Area

1.2 Overview

This Existing Conditions report is a comprehensive document analyzing the current state of the Specific Plan area. The report includes detailed information on the existing land use, zoning regulations, transportation infrastructure, demographics, and other relevant factors. The report presents the existing conditions, challenges, and opportunities in the project area and is crucial for making informed decisions during the planning process.

1.3 Report Organization

This report is divided into two additional chapters as described below:

- **Chapter 2 – Local Regulatory Framework** analyzes the local regulations that guide land use decisions.
- **Chapter 3 – Circulation** describes the existing circulation network within the project area, including the existing street, bicycle, pedestrian, and transit network.

1.4 Finding, Issues, and Opportunities

- **Existing Land Uses.** The City of Santa Rosa follows a typical suburban pattern, with distinct areas of residential, commercial, and retail areas. Residential units are typically single-family, detached units, with some areas of multifamily housing. Commercial and industrial uses are generally situated along the Sonoma-Marín Area Rail Transit (SMART) rail line in the west and the Santa Rosa Avenue corridor in east.
- **Complete Streets and the Safe System Approach.** The transportation network in the Specific Plan area is mainly catered towards driving as trips contained within the City of Santa Rosa account for 44 percent of all vehicle trips in the County (Sonoma County Vision Zero Action Plan, 2022, page 47). Most key intersections currently operate within the Level of Service (LOS) D standard adopted by the City of Santa Rosa and the County of Sonoma. The two intersections that operate below the City and County's standard are the Hearn Avenue/Santa Rosa Avenue intersection in the evening peak hour, and the Santa Rosa Avenue/Bellevue Avenue intersection in both the morning and evening peak hours. The roadway system is complemented by a partially complete bicycle and pedestrian network. Reconfiguring the street system to align with the Safe Systems elements and Safe System roadway Design Hierarchy creates safer streets and connectivity for those using active transportation modes to travel within the city and to nearby cities such as Rohnert Park and Cotati.
- **Vehicle Miles Traveled and Transit Usage.** The City of Santa Rosa is served by multiple local and regional bus routes that operate at 60-minute intervals during the weekday, and 60 to 150-minute intervals during the weekends. Increasing the use of public transit by increasing frequencies would help address the high drive-alone mode share for the city, which may help it qualify for additional transportation funding dollars in the future.
- **Opportunities for Infill Development and Expansion of Housing and Jobs.** Through the Specific Plan, there are multiple opportunities for infill development and urban intensification as noted in the Missing Middle Housing Initiative (2021, page 39). This Specific Plan also complements other planning efforts in Santa Rosa, such as the Todd Creek/2010 Area Project.

- **Expansion of Housing and Jobs in surrounding lands.** There are multiple opportunities for new development and expansion opportunities. The Santa Rosa General Plan 2035 LUL-H identifies the Santa Rosa Avenue Corridor with the need for fostering the development between Bellevue Avenue and Todd Road. Development should improve the appearance and function of the existing commercial strip corridor with a mix of retail and residential uses that serves bicyclists and pedestrians. SCTA's Priority Development Area Investment & Growth Strategy notes the potential for Santa Rosa Avenue to be a North/South Rapid Bus Corridor with transit-oriented development and commercial infill. As such development occurs, the goal is for residents and employees to utilize the bus transit system and increase walking and bicycling as means of transport.

2. Local Regulatory Framework

The regulatory framework discussion describes local regulations that guide land use decisions. Adopted and upcoming plans that pertain to the city are also described.

2.1 Existing Planning Efforts

City of Santa Rosa General Plan 2035 (2009)

The City of Santa Rosa General Plan 2035 was adopted in 2009 and provides the policy framework for regulation and development of the circulation system in the City of Santa Rosa. The Transportation Chapter of the General Plan includes the framework to provide a safe and sustainable transportation network for the City.

Bicycle and Pedestrian Master Plan Update (2018)

The Bicycle and Pedestrian Master Plan (BPMP) establishes a long-term vision for improving active transportation modes in the city. The plan identifies network improvements along with implementation of the improvements through a prioritization and phasing process.

Santa Rosa LRSP (2022)

The Santa Rosa Local Road Safety Plan (LRSP) supplements the Bicycle and Pedestrian Master Plan and studies eight corridors for bicycle and pedestrian needs, collision analysis, and community feedback. Engineering strategies and countermeasures were then identified for these hot spot corridors.

Sonoma County Vision Zero (2022)

The Sonoma County Transportation Authority (SCTA) and the Sonoma County Department of Health Services prepared a countywide Vision Zero Action Plan (VZAP) with the goal to eliminate traffic fatalities and severe injuries by 2030. The plan identifies Dutton Avenue, Kawana Springs Road, and Santa Rosa Avenue as High-Injury Network (HIN) corridors in the city. The Action Plan highlights a set of six major goals that focus on the key factors behind previous collisions and the systemic changes required to make the County's roads safer for all users.

Moving Forward 2050 (2021)

The Sonoma County Comprehensive Transportation Plan (CTP) identifies the need to shift transportation modes from single occupant vehicles. The plan notes success if positive trends are shown through improved transit service coverage and ridership, expanded active transportation connectivity, shorter trip lengths, lower household travel costs, and a downwards trend in vehicle miles traveled and GHG emissions on a per capita basis.

Priority Development Area Investment and Growth Strategy Update (2017)

The One Bay Area Grant Program (OBAG 2) supports Plan Bay Area's Sustainable Communities Strategy. The purpose of this plan is to ensure that agencies, like SCTA, have a transportation project priority-setting process that encourages development in the City's priority development areas (PDA). The Mendocino/Santa Rosa Avenue PDA is noted as having potential to be a North/South Rapid Bus Corridor and to be in alignment with the Santa Rosa Avenue Corridor Plan (2011).

Countywide Bicycle and Pedestrian Plan (2010)

The Countywide Bicycle and Pedestrian Plan includes projects, programs, and policies that aim to provide safer and more efficient transportation infrastructure for active transportation users. This plan is currently being updated to the Countywide Active Transportation Plan and will be focused on increasing access to active modes of transportation through planning for infrastructure, position well to qualify and leverage funding, and identify programs to support active transportation.

3. Approach Methodology

3.1 Level of Service Analysis Methods and Thresholds

CEQA Guidelines §15064.3(a) notes that “a [land use] project’s effect on automobile delay shall not constitute a significant environmental impact. Thus, the effect of the project on automobile congestion (as measured by metrics such as Level of Service) are less-than-significant by statute. However, an informational (i.e., not performed for CEQA purposes) intersection analysis has been performed to aid in understanding if off-site transportation improvements may be beneficial in promoting efficient vehicular circulation in the vicinity of the project site after implementation of the project. The intersection analysis parameters are discussed in the following subsections.

3.1.1 Signalized Intersections Level of Service

The operations of roadway facilities are described with the term level of service (LOS), a qualitative description of vehicular traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, which reflects free-flow conditions where there is very little interaction between vehicles, to LOS F, where the vehicle demand exceeds the capacity and high levels of vehicle delay result. LOS E represents “at-capacity” operations. When traffic volumes exceed the capacity at a signalized intersection, vehicles may wait through multiple signal cycles before traveling through the intersection; these operations are designated as LOS F. Generally, the City of Santa Rosa’s LOS standard (per the General Plan) is LOS D or better along all major corridors (such as Santa Rosa Avenue).

The method described in Chapter 19 of the Transportation Research Board’s Highway Capacity Manual, 6th Edition (HCM 6th Edition) was used to conduct the level of service calculations for the signalized study intersections. This method is used to estimate the control delay experienced by motorists at an intersection. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections was calculated using the Synchro traffic analysis software and correlated to a LOS designation as shown in **Table 3-1**.

Table 3-1: Signalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay per Vehicle (seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and / or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V / C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V / C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: Highway Capacity Manual, 6th Edition.

3.1.2 Unsignalized Intersections Level of Service

Operations at unsignalized intersections were evaluated using the methods from the HCM 6th Edition. With this method, operations are defined by the average control delay per vehicle (measured in seconds) for each movement that must yield the right-of-way. At two-way or side street stop-controlled intersections, the control delay (and LOS) is calculated for each controlled movement, the left-turn movement from the major street, and the entire intersection. For controlled approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. The delays for the entire intersection and for the movement or approach with the highest delay are reported. **Table 3-2** summarizes the relationship between delay and LOS for unsignalized intersections.

Table 3-2: Unsignalized Intersection Level of Service Definitions

Level of Service	Description	Average Delay per Vehicle (seconds)
A	Little or no delay.	≤ 10.0
B	Short traffic delays.	> 10.0 to 15.0
C	Average traffic delays.	> 15.0 to 25.0
D	Long traffic delays.	> 25.0 to 35.0
E	Very long traffic delays.	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Source: Highway Capacity Manual, 6th Edition.

3.2 Intersection Substantial Adverse Effect Criteria

The determination of whether the project results in a substantial adverse effect at a study location is based on applicable policies, regulations, goals, and guidelines defined by the City of Santa Rosa's General Plan 2035 and Guidance for the Preparation of Traffic Operational Analysis (2019) and Sonoma County's General Plan 2020 and Guidelines for Traffic Impact Studies (2016). The detailed intersection operations substantial adverse effect criteria for this study are presented below. If the project results in a substantial adverse effect, improvement measures are recommended.

3.2.1 City of Santa Rosa Substantial Adverse Effect Criteria

The proposed project would have substantial adverse effects on signalized intersection operations if:

- For intersections operating acceptably (LOS A, B, C or D) prior to the implementation of the project: the project would cause intersection operations to degrade to LOS E or LOS F
- For intersections operating unacceptably (LOS E or LOS F) prior to the implementation of the project: the project would result in an increase of greater than 5.0 seconds in the average delay at the intersection and the number of project trips added to the intersection results in an increase in volume-to-capacity ratio of more than 0.02.

The City of Santa Rosa does not maintain specific criteria for use in the evaluation of unsignalized intersection operations, nor would the City's LOS D policy directly apply because, typically, the stop-controlled movements at side-street stop-controlled intersections are not major corridors.

However, while the relationship between unsignalized study intersections operations and the City's LOS D policy may be somewhat unclear, this exemption does not relieve the need for the determination of potential effects on circulations system operations at the unsignalized study intersections. Given this context, the following criteria were developed based on local state of the practice and applicable goals and policies in the City's General Plan.

The proposed project would have substantial adverse effects (requiring improvements) on unsignalized intersection operations if:

- For intersections operating acceptably (LOS A, B, C or D) prior to the implementation of the project: the project would be required to install improvements if both of the following criteria are met:
 - It would cause intersection operations to degrade to LOS E or LOS F
 - The intersection meets California MUTCD Signal Warrant 3A or Warrant 3B (commonly known as the "Peak Hour Signal Warrant")
- For intersections operating unacceptably (LOS E or LOS F) prior to the implementation of the project: the project would be required to install improvements if both of the following criteria are met:
 - The project would result in an increase of greater than 5.0 seconds in the worst approach or worst movement delay at the intersection
 - The intersection meets California MUTCD Signal Warrant 3A or Warrant 3B (commonly known as the "Peak Hour Signal Warrant")

All unsignalized intersections are within the City of Santa Rosa.

3.2.2 Sonoma County Substantial Adverse Effect Criteria

The County level of service standard for County intersection operations is to maintain a Level of Service D or better pursuant to General Plan Policy CT-4.2. The project would have substantial adverse effects (requiring improvements) on signalized intersection operations if:

A substantial adverse effect would occur if:

- For intersections operating acceptably before the addition of program-generated traffic (LOS D or better): The addition of program-generated traffic results in operations degrading from LOS A, B, C, or D to LOS E or F.

- For intersections operating unacceptably before the addition of program-generated traffic (LOS E or LOS F): The addition of program-generated traffic results in an increase in average delay of 5.0 seconds or more.

4. Circulation

4.1 Existing Street Network

The SSRSP area is oriented along the US 101 within the southern portion of the City of Santa Rosa and is served by the following roadways.

Regional

US 101 is a six lane north-south freeway that connects the project site to destinations throughout central Sonoma, Marin, and Mendocino Counties, with further connections to San Francisco, Los Angeles, and California's North Coast region. In the vicinity of the project site, US 101 includes high-occupancy vehicle lanes, which require a vehicle occupancy of two or more persons. The on-ramps are subject to ramp metering during the morning and afternoon commute periods.

Minor Arterials

Santa Rosa Avenue is a five-lane arterial with a center turn lane. The street runs in a north-south direction from 3rd Street in the north to the North Rohnert Park Trail in the south, where the roadway becomes Roberts Lake Road. Class II bicycle lanes are installed on both sides of the street. The posted speed limit in the Specific Plan Area is 40 miles per hour.

Collectors

Bellevue Avenue is a two-lane arterial road west of US 101 that extends from Stony Point Road in the west and transitions to Corby Avenue in the east. Sidewalk gaps are present along the roadway and the posted speed limit is 35 miles per hour. East of US 101, Bellevue Avenue is a two-lane road that terminates at an industrial shop in the west and vacant land in the east. Class II facilities are present east of Terrimay Lane. The posted speed limit is 25 miles per hour.

Colgan Avenue is a two-lane collector roadway that extends from US 101 ramps in the west and Petaluma Hill Road in the east. Sidewalk gaps are present along the roadway and the posted speed limit is 35 miles per hour.

Dutton Avenue/Standish Avenue is a two-to-five-lane with center turn lane arterial street that serves residential and commercial uses along the corridor. The north-south roadway connects Guerneville Road in the north and Hearn Avenue in the south. Dutton Avenue is discontinuous between [STATE ROADWAYS]. Standish Avenue extends to Todd Road in the south. The posted speed limit in the vicinity of the project is 35 to 40 miles per hour.

East Robles Avenue is a two-lane collector that extends from Robles Avenue Extension in the west to Brooks Avenue in the east. The road mainly serves residential uses (single family, apartments, and mobile

homes), and has a posted speed of 25 miles per hour. East Robles Avenue also provides access to the Todd Creek trail.

Kawana Springs Road is a three-lane arterial roadway between Santa Rosa Avenue in the west and Petaluma Hill Road in the east with a posted speed limit of 35 miles per hour. The portion of the roadway serves large retail uses such as Target and Costco, as well as residential uses. Between Petaluma Hill Road and Farmers Lane, Kawana Springs Road is a two-lane roadway with a posted speed limit of 25 miles per hour. This portion of the roadway serves residential and institutional uses, with Sonoma Academy located at the intersection of Kawana Springs Road and Farmers Lane. The roadway includes Class II bike lanes and on-street parking, however there are gaps in the bicycle network along the corridor.

Petaluma Hill Road is a two-to-three lane arterial that extends to Santa Rosa Avenue in the north and extends to Old Redwood Highway in the Sonoma County jurisdiction of Penngrove. Within the Specific Plan area, the posted speed limit is 35 miles per hour between Santa Rosa Avenue and Colgan Avenue, and Class II bike lanes are present between Barham Avenue-Pressley Street and Colgan Avenue.

Todd Road is a two-lane, east-west arterial located within Sonoma County jurisdiction. Todd Road extends west past Llano Road and changes to East Todd Road at Santa Rosa Avenue in the east. West of US 101, Todd Road has a posted speed of 35 miles per hour.

Yolanda Avenue is a two-lane arterial roadway that extends from US 101 northbound ramps in the west to Petaluma Hill Road in the east. There are missing sidewalk gaps along Yolanda Avenue with on-street parking allowed along a portion of the north side of the roadway. The posted speed limit is 35 miles per hour.

4.1.1 Currently Planned Roadway Improvements

Hearn Avenue Interchange Reconstruction plans to demolish and reconstruct the Hearn Avenue interchange overcrossing to increase vertical clearance over US 101 and widen the overcrossing to provide two vehicle lanes in each direction, a median, six-foot sidewalks, Class II bike lanes on the north side of the street, and a two-way Class IV bikeway on the south side of the street that will extend from Corby Avenue and Santa Rosa Avenue. The project will also widen US 101 southbound off-ramp and reconfigure the intersections of Hearn Avenue/Corby Avenue and Hearn Avenue/Santa Rosa Avenue to include protected intersections and upgraded pedestrian facilities.

Bellevue Avenue Improvements at US 101 is an effort with Sonoma County Transit Authority to expand bicycle, pedestrian, transit, and vehicle improvements to the SSRSP area. The full improvements for this project will not be included until the next update of the regional Comprehensive Transportation Plan (CTP). The General Plan currently identified a full interchange at Bellevue Avenue, but this may be non-compliant with Caltrans standards due to proximity to the Hearn Avenue interchange.

4.1.2 Study Intersections

The study area includes intersections along the access routes to the nearest regional facility (e.g., freeway, expressway, or major arterial). A summary of the informational, non-CEQA analysis study intersection are included on **Table 4-1** below and illustrated on **Figure 1-1**.

Table 4-1: Study Intersection

	Intersection	Jurisdiction	Existing Traffic Control ¹
1	Santa Rosa Avenue/Petaluma Hill Road	City of Santa Rosa	Signalized
2	Santa Rosa Avenue/Baker Avenue	City of Santa Rosa	Signalized
3	Santa Rosa Avenue/Colgan Avenue-US 101 Northbound Ramp	Caltrans	Signalized
4	Petaluma Hill Road/Colgan Avenue	City of Santa Rosa	Signalized
5	Petaluma Hill Road/Kawana Springs Road	City of Santa Rosa	Signalized
6	Hearn Avenue/Corby Avenue	City of Santa Rosa	Signalized
7	Hearn Avenue/Santa Rosa Avenue	City of Santa Rosa	Signalized
8	Santa Rosa Avenue/Yolanda Avenue-US 101 Northbound Ramp	City of Santa Rosa	Signalized
9	Bellevue Avenue/Moorland Avenue	City of Santa Rosa	All-Way Stop Controlled
10	Santa Rosa Avenue/Bellevue Avenue	City of Santa Rosa	Side-Street Stop-Controlled
11	Santa Rosa Avenue/East Robles Avenue	Sonoma County	Signalized
12	Todd Road/US 101 Southbound Ramp	Caltrans	Signalized
13	Todd Road/US 101 Northbound Ramp	Caltrans	Signalized
14	Santa Rosa Avenue/Todd Road	Sonoma County	Signalized

Source: Fehr & Peers, 2024.

4.2 Existing Bicycle and Pedestrian Network

4.2.1 Pedestrian Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. The pedestrian environment was evaluated within the plan, as well as the connections to transit stops and/or nearby destinations in the greater study area.

Pedestrian connectivity is discontinuous within the SSRSP area due to gaps in the pedestrian network. The City of Santa Rosa's General Plan 2035 has a goal to develop a safe, convenient, and continuous network of pedestrian sidewalks and pathways that link neighborhoods with schools, parks, shopping areas, and employment centers. The County of Sonoma's General Plan 2020 includes a strategy to ensuring that land development projects are required to provide adequate pedestrian and bicycle facilities that will eliminate gaps, improve safety conditions in the pedestrian network, and facilitate safer connections to the

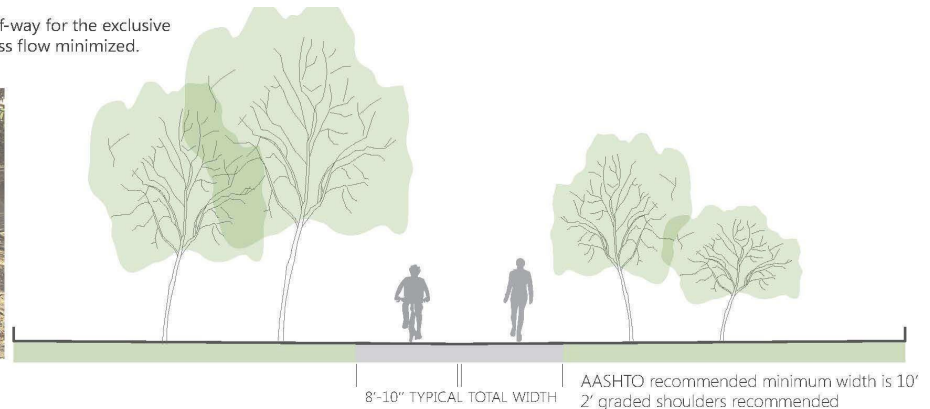
alternative mode networks from trip generators. The current mix of land uses, and ongoing development creates the need for connected and safer pedestrian facilities. Class I paths are presented on **Figure 4-1** from the Bicycle and Pedestrian Master Plan Update and detailed further in Section 3.4.2.

4.2.2 Bicycle Facilities

Chapter 1000 of the Caltrans Highway Design Manual identifies the following four bikeway classifications:

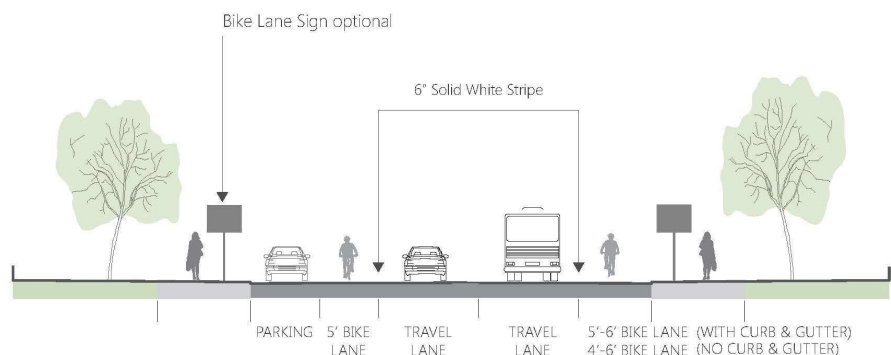
- Class I Bikeway (Bicycle Path) provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.

Provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flow minimized.



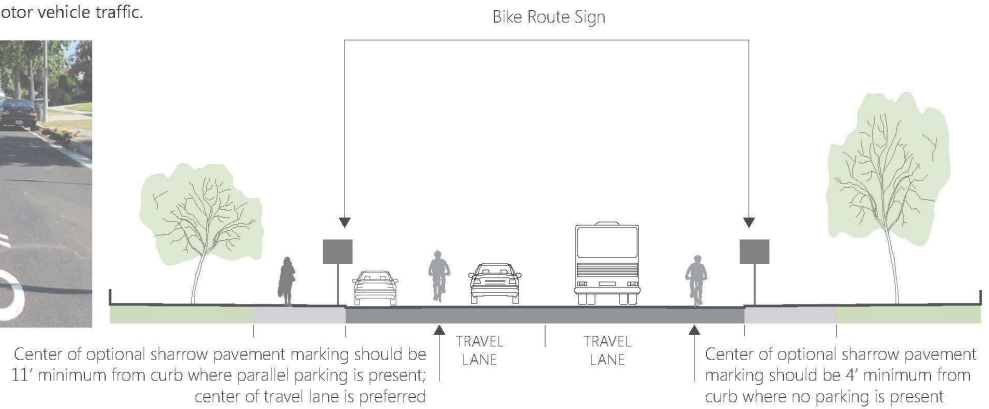
- Class II Bikeway (Bicycle Lane) provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally four to six feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.

Provides a striped lane for one-way bike travel on a street or highway.



- Class III Bikeway (Bicycle Route) provides for a right-of-way designated by signs or pavement markings (sharrows) for shared use with pedestrians or motor vehicles. Sharrows are a type of pavement marking (bike and arrow stencil) placed to guide bicyclists to the best place to ride on the road, avoid car doors, and remind drivers to share the road with cyclists.

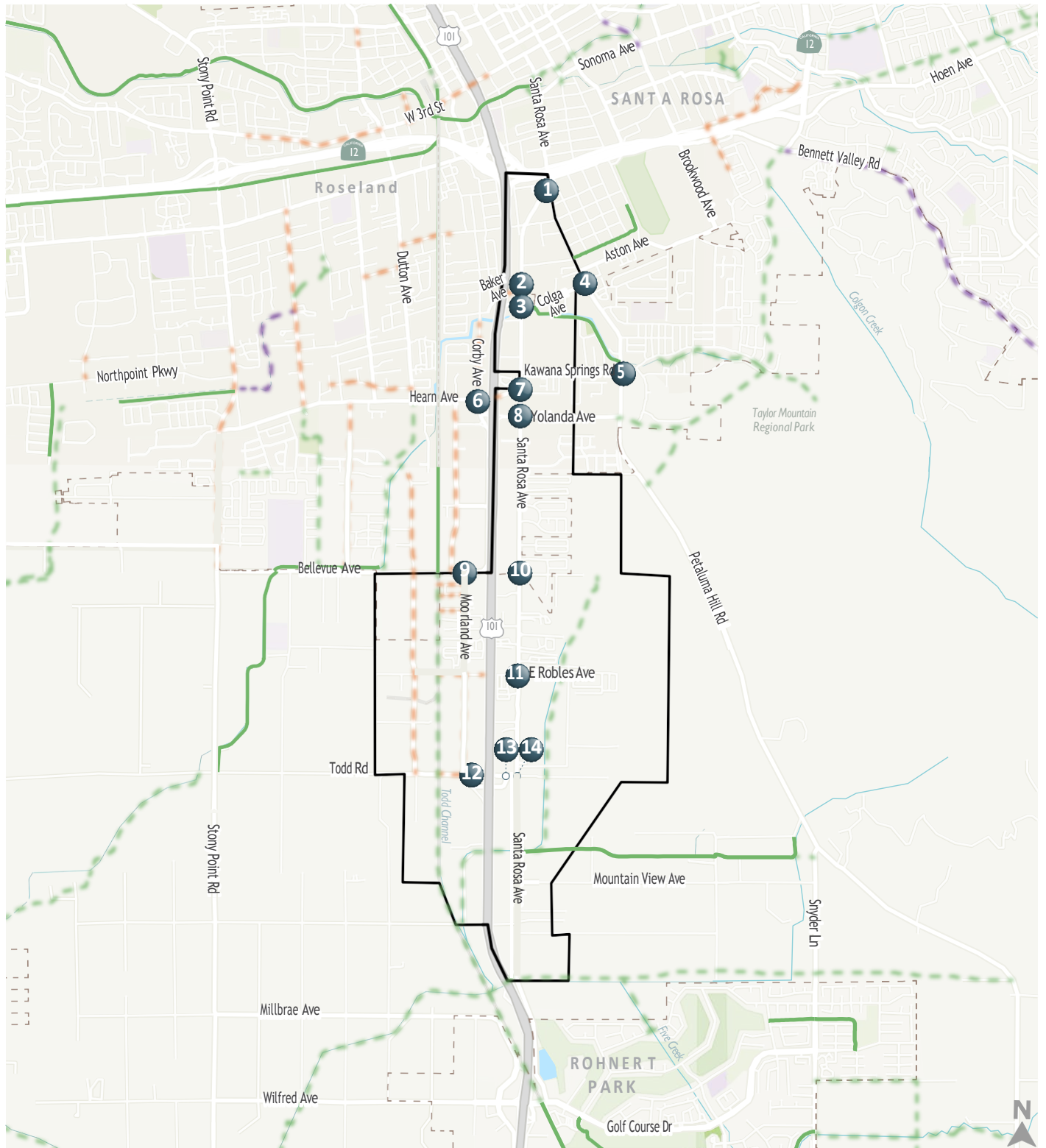
With Optional Sharrow Pavement Marking
Provides for shared use with motor vehicle traffic.



- Class IV Bikeway, also known as “cycle tracks” or “protected bike lanes,” provide a right-of-way designated exclusively for bicycle travel within a roadway and which are protected from other vehicle traffic with devices, including, but not limited to, grade separation, flexible posts, inflexible physical barriers, or parked cars.



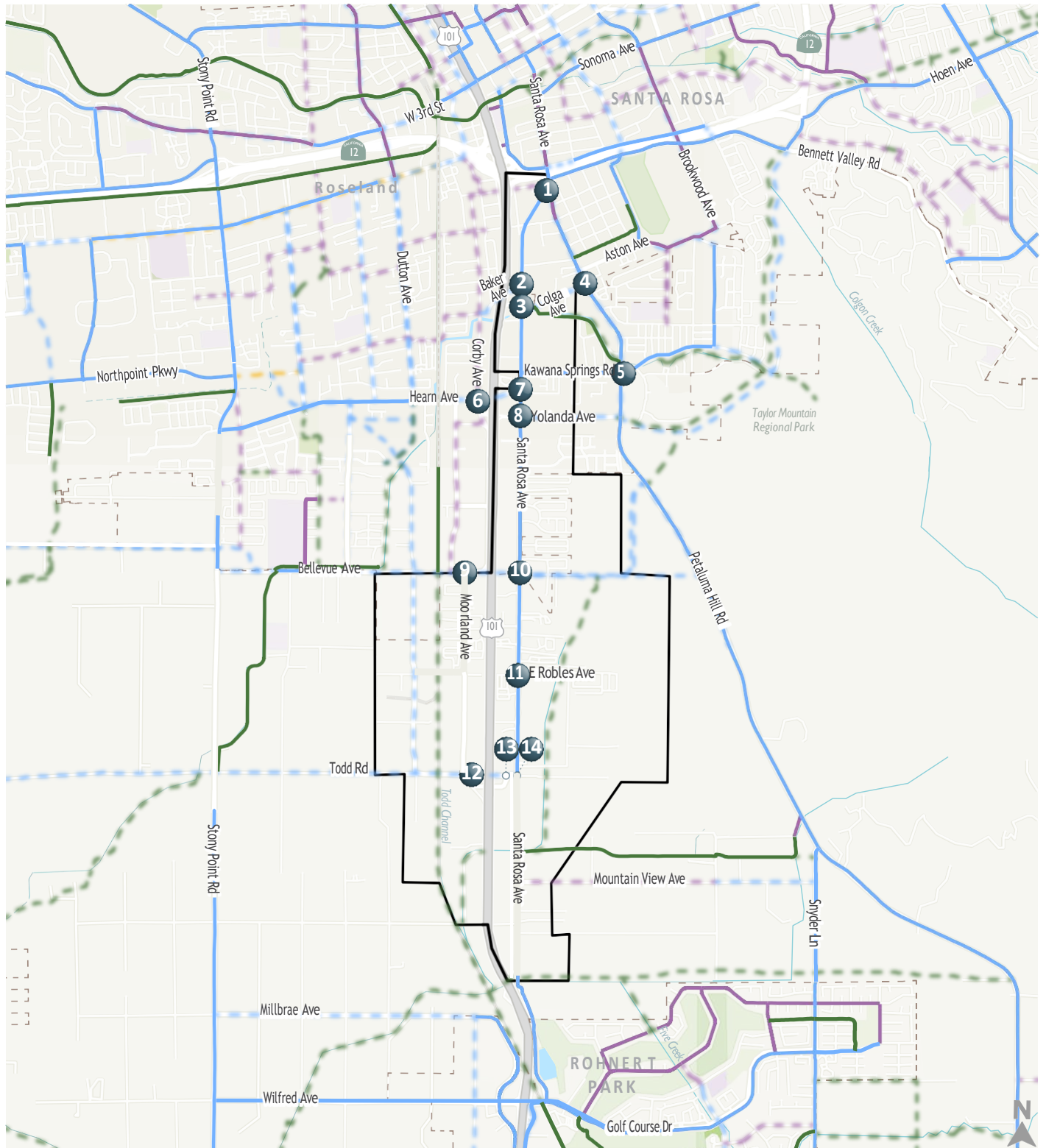
The Bicycle and Pedestrian Master Plan Update identifies existing bikeways as shown in **Figure 4-2**. Within the study area, existing Class I facilities are present along the Colgan Creek between Colgan Avenue and Petaluma Hill Road and along the Hunter Creek Trail between Scenic Avenue and Moorland Avenue and between Santa Rosa Avenue and the Plan boundary. Class II facilities are present along Santa Rosa Avenue between SR 12 and Todd Road and Kawana Springs Road between Santa Rosa Avenue and Petaluma Hill Road.



- | | | | | | |
|---|--------------------|---|----------------------------------|---|----------------------------------|
|  | Specific Plan Area |  | Existing Class 1 Shared-Use Path |  | Proposed Class 1 Shared-Use Path |
|  | City Limits | | |  | Proposed Sidewalk |
| | | | |  | Proposed Pedestrian Study |

Figure 4-1

Existing and Proposed Pedestrian Facilities



- | | | | | |
|---|--------------------|---|---|---------------------------|
|  | Specific Plan Area | Existing | Proposed | |
|  | City Limits |  |  | Class 1 Bike Path |
| | |  |  | Class 2 Bike Lane |
| | |  |  | Class 3 Bike Route |
| | |  |  | Class 4 Separated Bikeway |

Figure 4-2

Existing and Proposed Bicycle Facilities

4.3 Existing Transit Service

Significant deficiencies to transit service would occur if the Project or any part of the Project conflicts with a plan, ordinance, or policy addressing the circulation system, including transit paths.

4.3.1 Passenger Rail Service

Passenger rail service and connections for the Sonoma County/Marin County region are provided by SMART. The SMART passenger rail service connects the Sonoma County Airport station in the north to the Larkspur Ferry Terminal in the south, which provide service to scheduled passenger air travel and scheduled ferry transit connections to San Francisco, respectively.

Although the SMART trail runs through the west side of the Plan Area, the two stations in the City are located north of the Plan Area.

4.3.2 Public Bus Service

Bus service in the City of Santa Rosa is operated by Santa Rosa CityBus, and bus service in Sonoma County is operated by Sonoma County Transit (SCT).

- **Santa Rosa CityBus (CityBus):** Santa Rosa CityBus provides local bus service throughout the City of Santa Rosa. Various CityBus routes serve the plan area. Routes 3 and 5 have 60-minute headways on weekdays and weekends. All routes provide connections to other CityBus and regional transit services, as well as a connection to the North Santa Rosa and Downtown Santa Rosa SMART Stations.
- **Sonoma County Transit (SCT):** Sonoma County Transit provides regional bus service in the City of Santa Rosa, with connections to other communities throughout Sonoma County. Four Sonoma County Transit routes (42, 44, and 48) serve the plan area via transfer service at the Coddington and Santa Rosa Transit Hubs.

Table 4-2 summarizes the existing transit services within the SSRSP area. The bus routes and bus stops are illustrated in **Figure 4-3**.

Table 4-2: Existing Transit Service

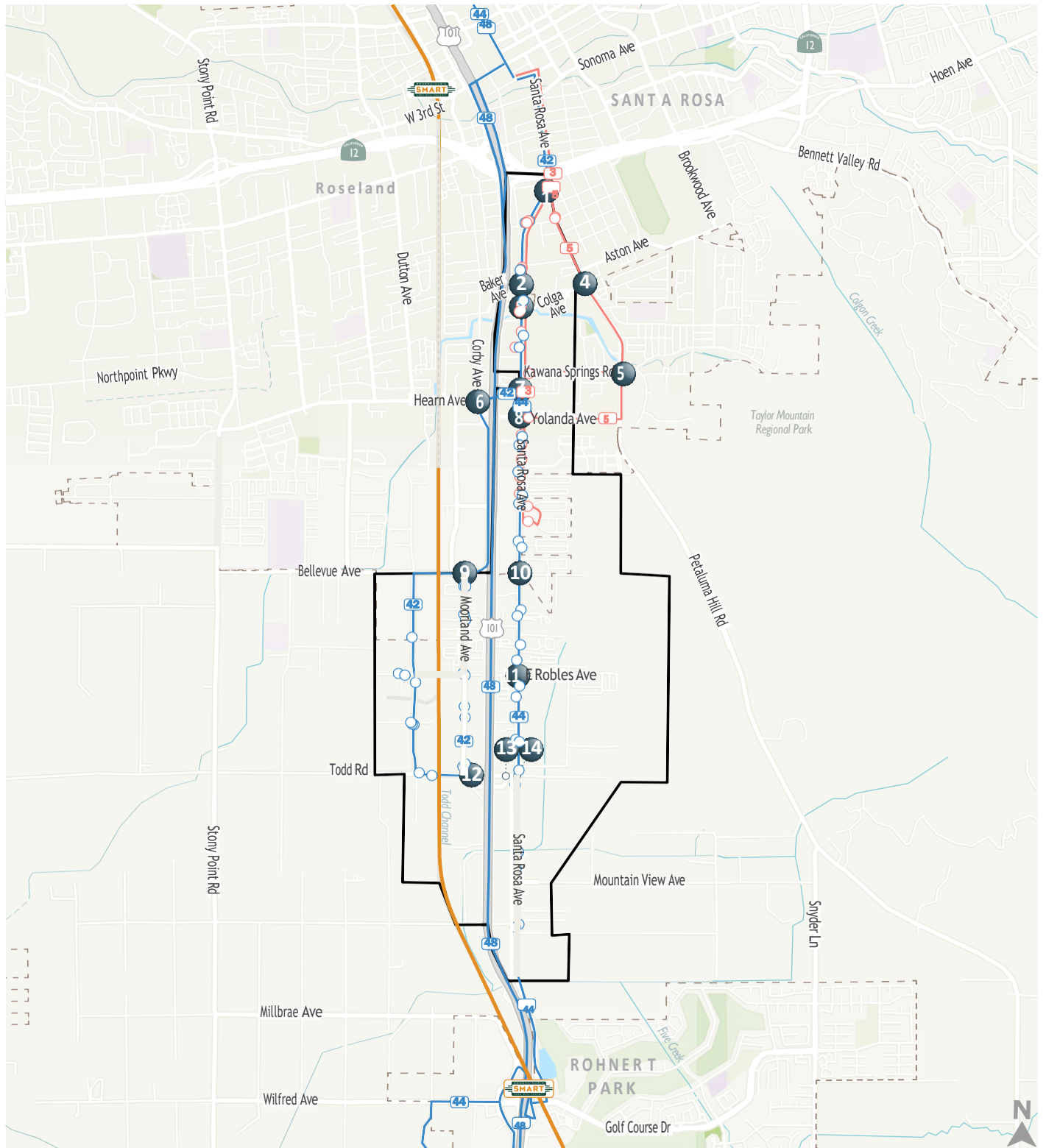
Route ¹	From	To	Weekdays		Saturdays		Sundays	
			Operating Hours	Peak Headway ² (minutes)	Operating Hours	Headway ² (minutes)	Operating Hours	Headway ² (minutes)
Santa Rosa City Bus								
3	Santa Rosa Transit Mall	Elsa Drive	6:00 AM – 7:25 PM	60	6:15 AM – 7:40 PM	60	10:30 AM – 4:55 PM	60
5	Santa Rosa Transit Mall	Yolanda Avenue	6:30 AM – 7:55 PM	60	6:40 AM – 8:05 PM	60	10:00 AM – 4:25 PM	60

Sonoma County Transit								
42	Santa Rosa Transit Mall	West Robles Avenue	7:30 AM – 5:40 PM	60	-	-	-	-
44	Coddingtontown	Petaluma Transit Mall	8:30 AM – 10:15 PM ⁴	60	7:00 AM – 9:05 PM	150	7:00 AM – 9:05 PM	150
48	Coddingtontown	Petaluma Transit Mall	6:20 AM – 10:45 PM ⁴	60	8:30 AM – 10:15 PM	150	8:30 AM – 10:15 PM	150

Notes:

1. Weekday and weekend service as of April 2024.
2. Headways are defined as the time between transit vehicles on the same route.
3. Operating hours have been rounded to the nearest tenth minute.
4. Headways are provided for the peak hour, off-peak headways vary.

Sources: Santa Rosa City Bus and Sonoma County Transit, 2024.



- Specific Plan Area
- Sonoma-Marin Area Rail Transit (SMART)
- SC Transit
- Santa Rosa City Bus
- City Limits
- SC Transit Stop
- Santa Rosa City Bus Stop



Figure 4-3

Existing Transit Service

4.4 Vehicle Miles Traveled

A common metric used to quantify the amount of motor vehicle use is Vehicle Miles Traveled (VMT). One VMT is a single motor vehicle being driven one mile. Many factors affect VMT, including the average distance residents commute to work, school, and shopping, as well as the amount of non-automobile travel. Areas that have a diverse land use mix and ample facilities for non-automobile modes, including transit, tend to generate lower VMT than auto-oriented rural and suburban areas where residents live at a distance from work, school, and other amenities.

An important CEQA consideration related to transportation is that Senate Bill (SB) 743 has changed the metric used to identify potential significant transportation impacts in CEQA analysis. SB 743 directed the California Governor's Office of Planning and Research (OPR) to identify a new metric and to recommend analysis methodology and thresholds. OPR selected VMT as the preferred metric and has finalized guidance material that went into effect in 2020. However, SB 743 does not prevent a city or county from continuing to analyze delay or LOS as part of other plans (i.e., the general plan), studies, or on-going network monitoring. However, LOS metrics may no longer constitute the sole basis for CEQA impacts. SB 743 did not change the discretion that lead agencies have to select methodology or define their own significance thresholds, but the guidance being developed by OPR should be carefully considered by lead agencies when they ultimately finalize their own recommended practices. A key factor should be how the lead agency / community values VMT reduction, especially with regards to its influence on reducing greenhouse gases, promoting active transportation, and encouraging infill development, all of which, are identified as objectives in the legislative intent of SB 743. Absent a locally established VMT threshold, the current OPR threshold guidance as contained in Technical Advisory on Evaluating Transportation Impacts in CEQA, OPR, December 2018, should be used. OPR recommends that for land use projects, VMT thresholds are set at fifteen percent (15%) below baseline VMT/capita for the city or region in suburban areas. The City of Santa Rosa has adopted guidelines related to VMT, but Sonoma County has not yet adopted guidelines related to VMT; Sonoma County Transportation Authority has created a vehicle miles traveled reduction calculator for member agencies.

Traffic counts were used to adjust the base year of the SCTA travel demand model to better account for the volumes in the study area and traffic congestion on US 101 to be more in alignment with the validation targets in the California Regional Transportation Plan guidelines. Year 2024 VMT information for the Specific Plan TAZs, the City of Santa Rosa, and Sonoma County are presented below.

- SSRSP area TAZs Total VMT per Service Population: 34.4 Total VMT per Service Population
- City of Santa Rosa Total VMT per Service Population: 23.8 Total VMT per Service Population
- Sonoma County Total VMT per Service Population: 30.0 Total VMT per Service Population

4.5 Safety Considerations

The City of Santa Rosa has adopted several safety plans in recent years as noted in Chapter 2. The Bicycle and Pedestrian Master Plan (BPMP) provides the City with a long-term vision for improving active transportation and providing policies and actions to support in decision-making processes for investments in bicycle and pedestrian facilities. Within the SSRSP area, Santa Rosa Avenue between Petaluma Hill Road and Colgan Avenue was highlighted as a part of the bicycle High Injury Network (HIN) and Santa Rosa Avenue between El Portal Way and Bellevue Avenue was highlighted as part of the pedestrian HIN. The BPMP proposed various bikeway and pedestrian projects within the SSRSP area to improve safety citywide.

The City's Local Road safety Plan (LRSP) built on the BPMP by focusing on the HIN and updating collision data to evaluate how and whether collision frequency and severity has improved in years since the BPMP was adopted. The LRSP aimed to identify additional safety countermeasures to reduce fatal and severe injuries throughout the City. The LRSP did not identify additional focus areas within the Specific Plan area; however, the LRSP includes additional countermeasures and strategies that should be considered for this effort.

In 2022, Santa Rosa City Council adopted the Sonoma County Vision Zero Action Plan (VZAP) that set a target goal of zero traffic deaths and severe injuries on roadways within the city by 2030. The VZAP identified a handful of corridors and intersections as part of the High Injury Network. The corridors include Dutton Avenue, Hearn Avenue, Kawana Springs Road, Santa Rosa Avenue, and Petaluma Hill Road. The High Injury Intersections within our study area include the Baker Avenue/Santa Rosa Avenue/Colgan Avenue intersection, the Bellevue/Dutton Avenue intersection, the Bellevue Avenue/Santa Rosa Avenue intersection, the Corby Avenue/Hearn Avenue intersection, the Kawana Springs Road/Petaluma Hill Road intersection, the Santa Rosa Avenue/driveway between Colgan Avenue & Milicent Way intersection, the Santa Rosa Avenue/Plaza Drive intersection, and the Santa Rosa Avenue/Court Street intersection. The VZAP includes goals and actions for the City of Santa Rosa and Sonoma County to consider for future improvements within the Specific Plan area.

4.6 Evacuation Considerations

After Action Reports (AAR) were prepared by the City of Santa Rosa and Sonoma County for the October 2017 Complex Wildfires. The City's AAR titled *Coming Together in Crisis: The Santa Rosa Story* (2019) and the County's was titled the *Emergency Operations Center After Action Report & Improvement Plan* (2018) highlights the story of the wildfires, limitations on City and County staff during the time of the wildfires, and improvements for wildfire response in the event of a future fire.

On October 8, 2017, a Red Flag Warning was issued by the National Weather Service for above-normal wind speeds in Santa Rosa and the surrounding areas. The Tubbs Fire ignited near SR-128 and Bennett Lane in Calistoga, and due to the high winds, the fire quickly spread towards Sonoma County and Santa Rosa. At 12:21 AM on October 9th, the City's Emergency Operations Center was activated, and a Unified Command Post was established. By 1:10 AM the fire had reached the Fountaingrove neighborhood and

jumped US 101 and 2:01 AM. At 2:06 AM, US 101 was reported closed at Mark West Spring Road. The City of Santa Rosa opened three emergency shelters– Finley Community Center, Cook Middle School, and Elsie Allen High School. Sonoma County opened shelters at the Fairgrounds Pavilion and the Veteran’s Memorial Building. Although the 2017 Complex Fires did not affect the Specific Plan area, those that were notified to evacuated due to the fires, evacuated south. The City and County’s AARs highlight improvements needed towards existing infrastructure including the communication systems, to alert the community to the need to evacuate if a similar scenario were to occur.

4.7 Existing Intersection Levels of Service

Existing intersection lane configurations, traffic controls, and peak hour traffic counts, as shown on **Figure 4-4** were used to calculate level of service and vehicle queuing at the study intersections during the morning and evening peak hours. The Existing Conditions intersection analysis results are shown in **Table 4-3**.

4.7.1 Intersection Levels of Service

Existing intersection lane configurations, signal timings, and peak hour turning movement volumes were used to calculate level of service at the study intersections during the morning and evening peak hours. Traffic counts for the study intersections were collected in April 2024 and are presented in **Appendix A**. The results of the LOS analysis for Existing Conditions are presented in **Table 4-3**. The technical calculations are shown in **Appendix B**.

Table 4-3: Existing Conditions Intersection Level of Service

Intersection	Control Type ¹	Peak Hour ²	Existing Conditions	
			Delay (sec) ³	LOS ⁴
1 Santa Rosa Avenue/Petaluma Hill Road	Signalized	AM	7.6	A
		PM	9.1	A
2 Santa Rosa Avenue/Baker Avenue	Signalized	AM	20.8	C
		PM	26.7	C
3 Santa Rosa Avenue/Colgan Avenue/US 101 Northbound Ramp	Signalized	AM	37.2	D
		PM	23.6	C
4 Petaluma Hill Road/Colgan Avenue	Signalized	AM	11.2	B
		PM	15.6	B
5 Petaluma Hill Road/Kawana Springs Road	Signalized	AM	17.7	B
		PM	19	B
6 Hearn Avenue/Corby Avenue	Signalized	AM	39.6	D
		PM	45.3	D
7 Hearn Avenue/Santa Rosa Avenue	Signalized	AM	39.8	D
		PM	60.7	E
8 Santa Rosa Avenue/Yolanda Avenue/ US 101 Northbound Ramp	Signalized	AM	33.4	C
		PM	30.7	C
9 Bellevue Avenue/Moorland Avenue	AWSC	AM	19.8	C
		PM	16.4	C
10 Santa Rosa Avenue/Bellevue Avenue	SSSC	AM	28.3 (>120)	D (F)
		PM	3.0 (43.3)	A (E)

Intersection		Control Type ¹	Peak Hour ²	Existing Conditions	
				Delay (sec) ³	LOS ⁴
11	Santa Rosa Avenue/East Robles Avenue	Signalized	AM	7.7	A
			PM	7.6	A
12	Todd Road/ US 101 Southbound Ramp	Signalized	AM	14.5	B
			PM	14.5	B
13	Todd Road/ US 101 Northbound Ramp	Signalized	AM	8.1	A
			PM	8.1	A
14	Santa Rosa Avenue/Todd Road	Signalized	AM	16.5	B
			PM	19.9	B

Notes:

1. Signalized = Traffic Signal Control, AWSC = All-Way Stop-Controlled Intersection, SSSC = Side-Street Stop-Controlled Intersection.
2. AM = morning peak hour, PM = evening peak hour.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Movement Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS = Level of Service designation per HCM 6th Edition.

Bold indicates unacceptable operations.

Source: Fehr & Peers, 2024.

4.7.2 Existing Conditions Signal Warrant Analysis

The peak-hour signal warrants (Warrant 3A and Warrant 3B) from the Manual on Uniform Traffic Control Devices (MUTCD) were used to evaluate unsignalized intersections that operate unacceptably under Existing Conditions to determine if a traffic signal is warranted (see **Appendix C**). The following unsignalized intersection operating unacceptably under Existing Conditions meet either Warrant 3A or Warrant 3B in the indicated peak hour(s):

- Intersection 10: Santa Rosa Avenue/Bellevue Avenue - weekday morning peak hour and weekday evening peak hour

This analysis is intended to examine the general correlation between the current level of development in the region and the need to install new traffic signals. It estimates current traffic compared against a subset of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated California MUTCD guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated by an experienced engineer based on field-analysis and a thorough study of traffic and roadway conditions. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The City of Santa Rosa should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants to prioritize and program intersections for signalization.

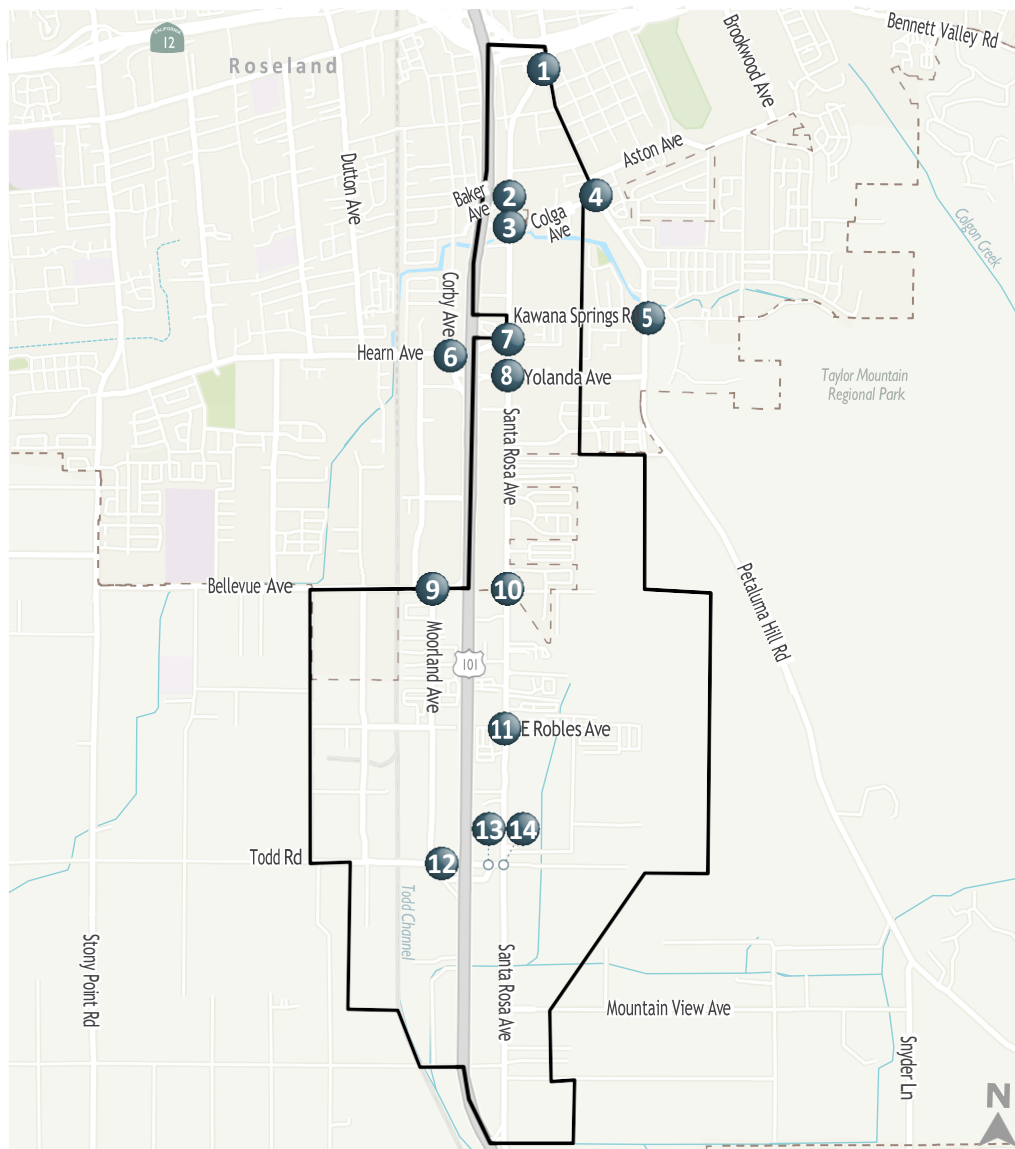


Figure 4-4

Existing Conditions Peak Hour Intersection Traffic Volumes, Lane Configurations and Traffic Controls

1. Santa Rosa Ave/Petaluma Hill Rd	2. Santa Rosa Ave/Baker Overcrossing	3. Santa Rosa Ave/Colgan Ave
4. Petaluma Hill Rd/Colgan Ave	5. Petaluma Hill Rd/Kawana Springs Rd	6. Corby Ave/Hearn Ave
7. Santa Rosa Ave/Hearn Ave	8. Santa Rosa Ave/Yolanda Ave/US-101 NB Off	9. Moorland Ave/Bellevue Ave
10. Santa Rosa Ave/Bellevue Ave	11. Santa Rosa Ave/E Robles Ave	12. S Moorland Ave/Todd Rd /US-101 SB Off
13. Todd Rd Overpass/Todd Rd /US-101 NB Off	14. Santa Rosa Ave/Todd Rd/E Todd Rd	

Appendix A:

Intersection Turning Movement Counts

Santa Rosa Ave Petaluma Hill Rd

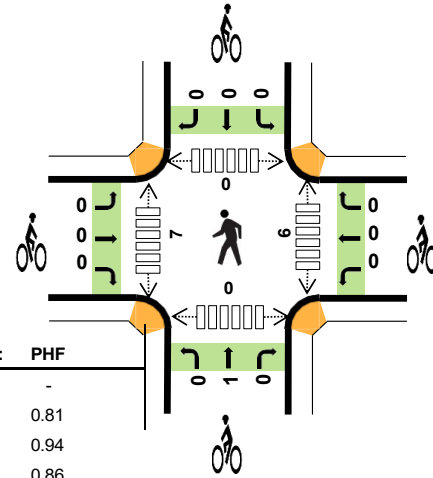
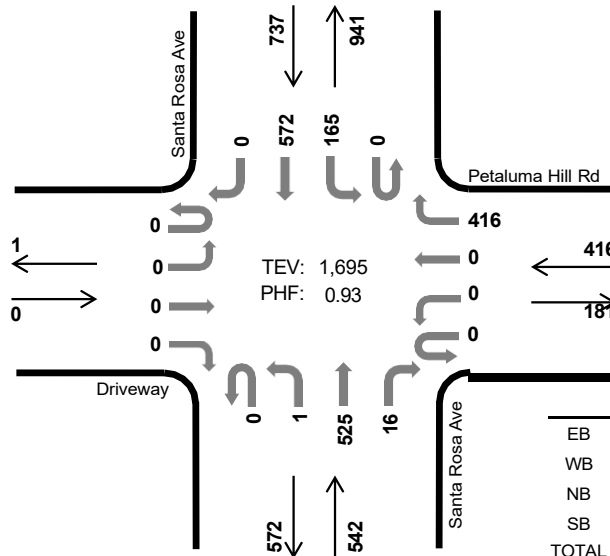


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



	HV %	PHF
EB	-	-
WB	1.9%	0.81
NB	2.2%	0.94
SB	2.0%	0.86
TOTAL	2.1%	0.93

Two-Hour Count Summaries

Interval Start		Driveway				Petaluma Hill Rd				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	0	0	42	0	0	40	0	0	22	42	0	146	0
7:15 AM		0	0	0	0	0	0	0	48	0	0	59	2	0	25	54	0	188	0
7:30 AM		0	0	0	0	0	0	0	85	0	0	71	3	0	37	87	0	283	0
7:45 AM		0	0	0	0	0	0	0	128	0	0	123	5	0	25	118	0	399	1,016
8:00 AM		0	0	0	0	0	0	0	96	0	0	127	5	0	44	136	0	408	1,278
8:15 AM		0	0	0	0	0	0	0	89	0	0	140	4	0	41	158	0	432	1,522
8:30 AM		0	0	0	0	0	0	0	103	0	1	135	2	0	55	160	0	456	1,695
8:45 AM		0	0	0	0	0	0	0	100	0	1	123	1	0	40	102	0	367	1,663
Count Total		0	0	0	0	0	0	0	691	0	2	818	22	0	289	857	0	2,679	0
Peak Hour	All	0	0	0	0	0	0	0	416	0	1	525	16	0	165	572	0	1,695	0
	HV	0	0	0	0	0	0	0	8	0	0	12	0	0	4	11	0	35	0
	HV%	-	-	-	-	-	-	-	2%	-	0%	2%	0%	-	2%	2%	-	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	4	6	2	12	0	0	0	0	0	0	3	0	0	3
7:15 AM	0	1	5	2	8	0	0	1	0	1	0	1	0	0	1
7:30 AM	0	2	1	4	7	0	0	2	1	3	1	1	0	1	3
7:45 AM	0	6	3	2	11	0	0	0	0	0	1	1	0	0	2
8:00 AM	0	1	3	8	12	0	0	1	0	1	1	2	0	0	3
8:15 AM	0	1	1	1	3	0	0	0	0	0	4	2	0	0	6
8:30 AM	0	0	5	4	9	0	0	0	0	0	0	2	0	0	2
8:45 AM	0	4	3	5	12	0	1	0	0	1	0	1	0	0	1
Count Total	0	19	27	28	74	0	1	4	1	6	7	13	0	1	21
Peak Hour	0	8	12	15	35	0	0	1	0	1	6	7	0	0	13

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Petaluma Hill Rd				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	4	0	0	6	0	0	0	2	0	12	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	5	0	0	1	1	0	8	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	0	1	3	0	7	0
7:45 AM	0	0	0	0	0	0	0	6	0	0	3	0	0	1	1	0	11	38
8:00 AM	0	0	0	0	0	0	0	1	0	0	3	0	0	1	7	0	12	38
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	3	33
8:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	2	2	0	9	35
8:45 AM	0	0	0	0	0	0	0	4	0	0	3	0	0	1	4	0	12	36
Count Total	0	0	0	0	0	0	0	19	0	0	27	0	0	7	21	0	74	0
Peak Hour	0	0	0	0	0	0	0	8	0	0	12	0	0	4	11	0	35	0

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Petaluma Hill Rd			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	5
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	2
Count Total	0	0	0	0	0	1	0	4	0	0	1	0	6	0
Peak Hour	0	0	0	0	0	0	0	1	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

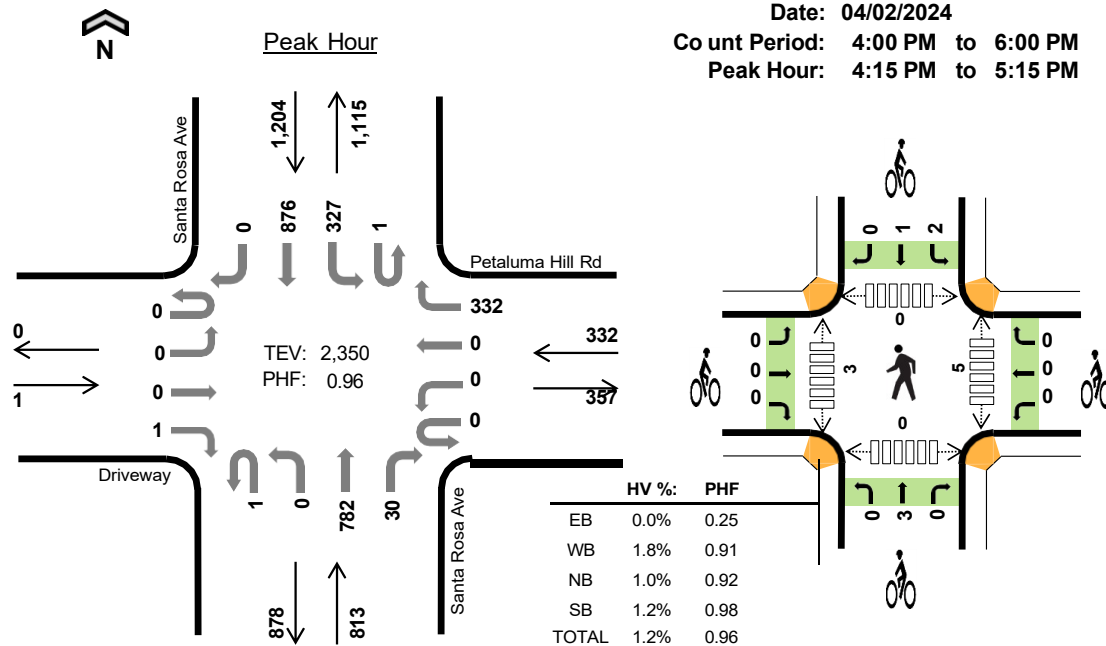
Santa Rosa Ave Petaluma Hill Rd



Date: 04/02/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:15 PM to 5:15 PM



Two-Hour Count Summaries

Interval Start		Driveway				Petaluma Hill Rd				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	0	0	82	0	0	197	9	0	88	218	0	594	0
4:15 PM		0	0	0	0	0	0	0	71	0	0	173	8	0	89	219	0	560	0
4:30 PM		0	0	0	1	0	0	0	91	1	0	214	5	0	81	220	0	613	0
4:45 PM		0	0	0	0	0	0	0	85	0	0	186	4	0	82	219	0	576	2,343
5:00 PM		0	0	0	0	0	0	0	85	0	0	209	13	1	75	218	0	601	2,350
5:15 PM		0	0	0	1	0	0	0	66	0	0	187	8	0	88	200	0	550	2,340
5:30 PM		0	0	0	0	0	0	0	67	0	0	156	5	1	105	196	0	530	2,257
5:45 PM		0	0	0	0	0	0	0	66	0	0	168	7	0	70	159	0	470	2,151
Count Total		0	0	0	2	0	0	0	613	1	0	1,490	59	2	678	1,649	0	4,494	0
Peak Hour	All	0	0	0	1	0	0	0	332	1	0	782	30	1	327	876	0	2,350	0
	HV	0	0	0	0	0	0	0	6	0	0	8	0	0	6	9	0	29	0
	HV%	-	-	-	0%	-	-	-	2%	0%	-	1%	0%	0%	2%	1%	-	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	1	5	7	0	0	0	2	2	3	1	0	0	4
4:15 PM	0	1	1	4	6	0	0	0	0	0	4	0	0	0	4
4:30 PM	0	3	3	4	10	0	0	2	0	2	0	0	0	0	0
4:45 PM	0	2	3	4	9	0	0	1	2	3	0	0	0	0	0
5:00 PM	0	0	1	3	4	0	0	0	1	1	1	3	0	0	4
5:15 PM	0	0	3	1	4	0	0	2	2	4	2	2	0	0	4
5:30 PM	0	0	2	2	4	0	0	0	0	0	3	0	0	0	3
5:45 PM	0	0	2	5	7	0	0	0	0	0	0	1	0	0	1
Count Total	0	7	16	28	51	0	0	5	7	12	13	7	0	0	20
Peak Hour	0	6	8	15	29	0	0	3	3	6	5	3	0	0	8

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Petaluma Hill Rd				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	5	0	7	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	4	0	0	6	0
4:30 PM	0	0	0	0	0	0	0	3	0	0	3	0	0	1	3	0	10	0
4:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	0	0	4	0	9	32
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	4	29
5:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	27
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	4	21
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	7	19
Count Total	0	0	0	0	0	0	0	7	0	0	16	0	0	8	20	0	51	0
Peak Hour	0	0	0	0	0	0	0	6	0	0	8	0	0	6	9	0	29	0

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Petaluma Hill Rd			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
4:45 PM	0	0	0	0	0	0	0	1	0	1	1	0	3	7
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	6
5:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4	10
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Count Total	0	0	0	0	0	0	0	5	0	2	5	0	12	0
Peak Hour	0	0	0	0	0	0	0	3	0	2	1	0	6	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

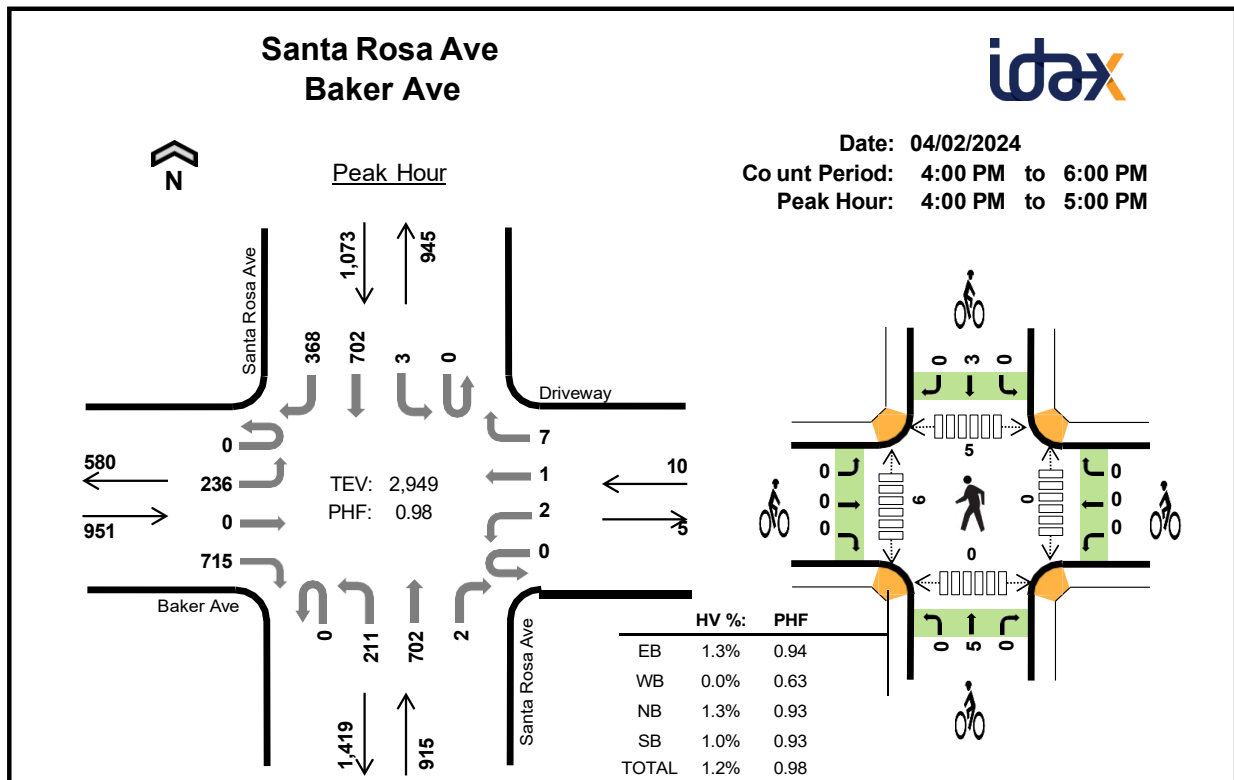
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Baker Ave				Driveway				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	1	0	0	0	0	0	0	3	0	0	0	4	4	13	0
7:15 AM	0	2	0	1	0	2	0	0	0	7	5	1	0	0	6	1	25	0
7:30 AM	0	1	0	1	0	0	0	0	0	2	2	0	0	0	8	3	17	0
7:45 AM	0	1	0	3	0	0	0	0	0	0	4	0	0	0	3	0	11	66
8:00 AM	0	1	0	0	0	0	0	0	0	2	3	0	0	0	6	1	13	66
8:15 AM	0	0	0	2	0	0	0	0	0	1	4	0	0	0	0	2	9	50
8:30 AM	0	2	0	0	0	0	0	0	0	0	6	0	0	0	3	2	13	46
8:45 AM	0	2	0	2	0	0	0	0	0	2	4	0	0	0	3	0	13	48
Count Total	0	10	0	10	0	2	0	0	0	14	31	1	0	0	33	13	114	0
Peak Hour	0	4	0	5	0	0	0	0	0	3	17	0	0	0	12	5	46	0

Two-Hour Count Summaries - Bikes

Interval Start	Baker Ave			Driveway			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	5
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	6
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	0	0	0	0	7	0	0	1	0	8	0
Peak Hour	0	0	0	0	0	0	0	4	0	0	1	0	5	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Baker Ave				Driveway				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	52	0	192	0	0	0	1	0	69	172	0	0	0	185	84	755	0
4:15 PM		0	51	0	181	0	1	1	2	0	38	157	1	0	3	174	92	701	0
4:30 PM		0	68	0	185	0	0	0	1	0	49	198	0	0	0	151	95	747	0
4:45 PM		0	65	0	157	0	1	0	3	0	55	175	1	0	0	192	97	746	2,949
5:00 PM		0	57	0	181	0	0	0	0	0	56	171	0	0	0	154	93	712	2,906
5:15 PM		0	43	1	178	0	3	0	4	0	57	159	3	0	0	183	85	716	2,921
5:30 PM		0	55	0	193	0	2	1	0	0	56	163	1	0	0	165	90	726	2,900
5:45 PM		0	39	0	173	0	0	0	5	0	53	147	1	0	1	132	56	607	2,761
Count Total		0	430	1	1,440	0	7	2	16	0	433	1,342	7	0	4	1,336	692	5,710	0
Peak Hour	All	0	236	0	715	0	2	1	7	0	211	702	2	0	3	702	368	2,949	0
	HV	0	5	0	7	0	0	0	0	0	4	8	0	0	0	6	5	35	0
	HV%	-	2%	-	1%	-	0%	0%	0%	-	2%	1%	0%	-	0%	1%	1%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	0	2	5	11	0	0	2	1	3	0	4	1	0	5
4:15 PM	3	0	5	0	8	0	0	2	0	2	0	0	4	0	4
4:30 PM	2	0	3	2	7	0	0	1	1	2	0	1	0	0	1
4:45 PM	3	0	2	4	9	0	0	0	1	1	0	1	0	0	1
5:00 PM	2	0	3	2	7	0	0	0	0	0	0	0	2	0	2
5:15 PM	3	0	3	2	8	0	0	1	0	1	0	2	0	0	2
5:30 PM	1	0	4	1	6	0	0	1	1	2	0	4	1	0	5
5:45 PM	2	0	3	3	8	0	0	2	0	2	0	0	5	0	5
Count Total	20	0	25	19	64	0	0	9	4	13	0	12	13	0	25
Peak Hour	12	0	12	11	35	0	0	5	3	8	0	6	5	0	11

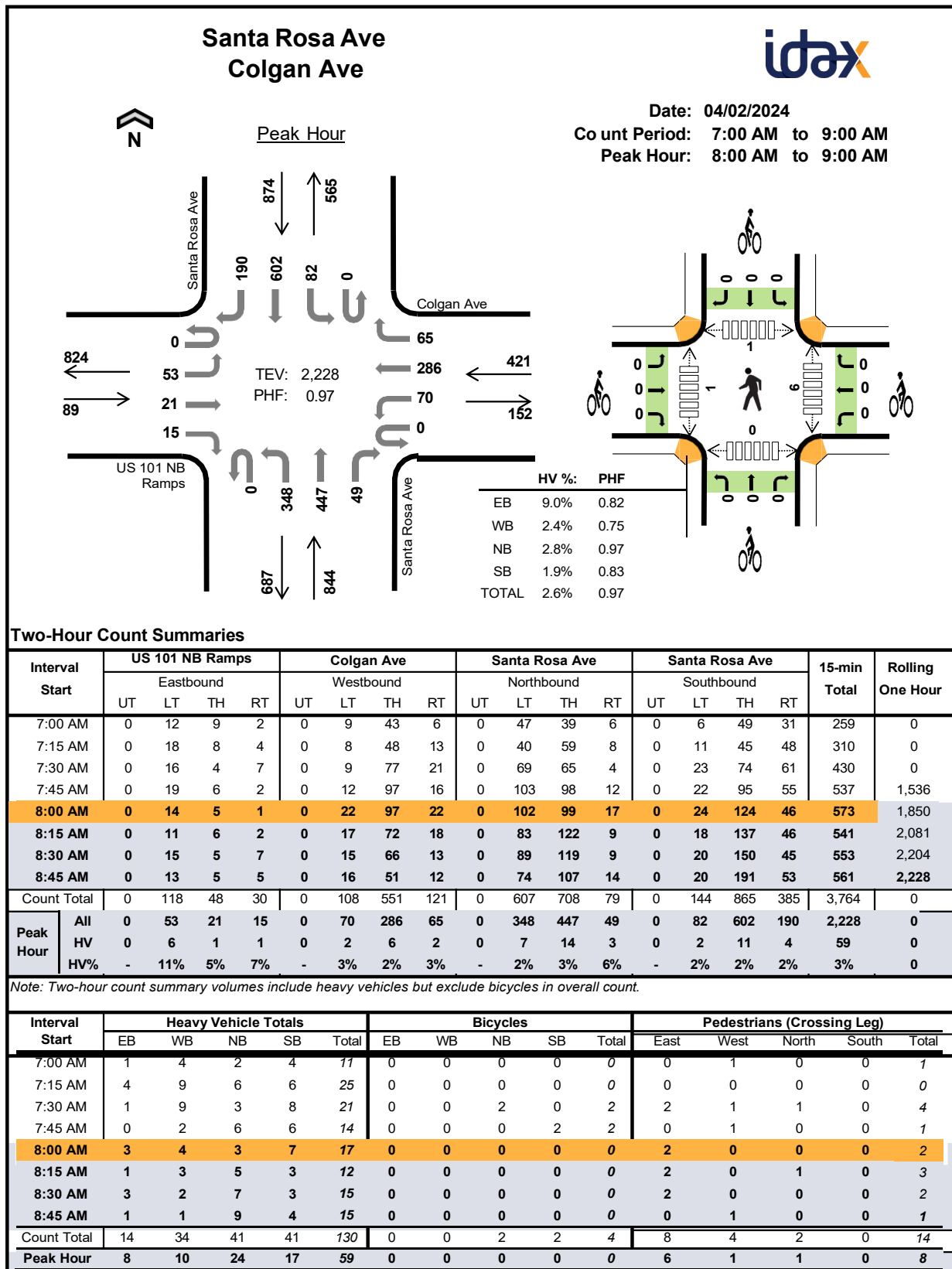
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Baker Ave				Driveway				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	1	0	3	0	0	0	0	0	2	0	0	0	0	0	4	1	11	0
4:15 PM	0	1	0	2	0	0	0	0	0	1	4	0	0	0	0	0	0	8	0
4:30 PM	0	1	0	1	0	0	0	0	0	1	2	0	0	0	0	0	2	7	0
4:45 PM	0	2	0	1	0	0	0	0	0	0	2	0	0	0	2	2	2	9	35
5:00 PM	0	0	0	2	0	0	0	0	0	1	2	0	0	0	1	1	1	7	31
5:15 PM	0	0	0	3	0	0	0	0	0	2	1	0	0	0	1	1	1	8	31
5:30 PM	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	1	1	6	30
5:45 PM	0	1	0	1	0	0	0	0	0	1	2	0	0	0	3	0	0	8	29
Count Total	0	6	0	14	0	0	0	0	0	8	17	0	0	0	11	8	8	64	0
Peak Hour	0	5	0	7	0	0	0	0	0	4	8	0	0	0	6	5	5	35	0

Two-Hour Count Summaries - Bikes

Interval Start	Baker Ave			Driveway			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4
5:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	4
5:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	5
Count Total	0	0	0	0	0	0	0	9	0	0	4	0	13	0
Peak Hour	0	0	0	0	0	0	0	5	0	0	3	0	8	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



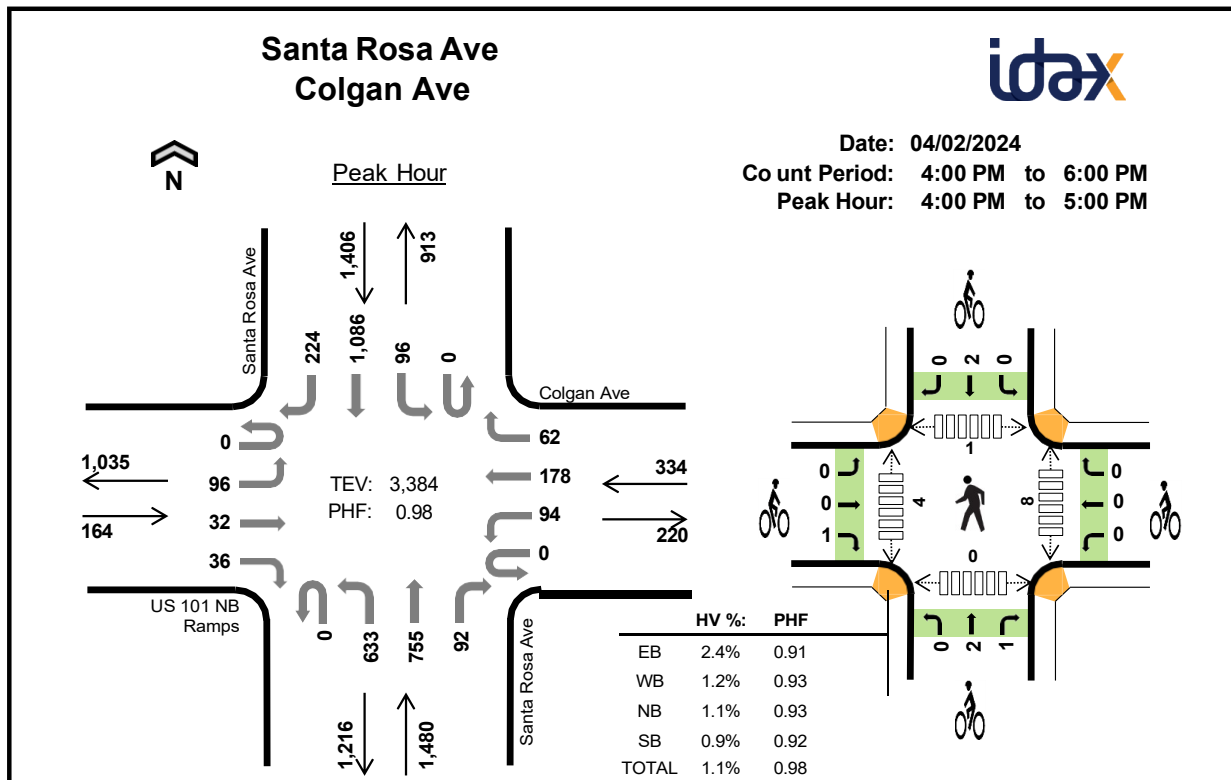
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	US 101 NB Ramps				Colgan Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	3	1	0	0	2	0	0	0	1	3	11	0
7:15 AM	0	2	2	0	0	1	3	5	0	0	4	2	0	0	1	5	25	0
7:30 AM	0	1	0	0	0	3	4	2	0	2	1	0	0	1	2	5	21	0
7:45 AM	0	0	0	0	0	1	1	0	0	3	3	0	0	1	3	2	14	71
8:00 AM	0	2	1	0	0	1	2	1	0	1	2	0	0	0	7	0	17	77
8:15 AM	0	1	0	0	0	1	1	1	0	0	4	1	0	1	1	1	12	64
8:30 AM	0	2	0	1	0	0	2	0	0	1	4	2	0	0	1	2	15	58
8:45 AM	0	1	0	0	0	0	1	0	0	5	4	0	0	1	2	1	15	59
Count Total	0	10	3	1	0	7	17	10	0	12	24	5	0	4	18	19	130	0
Peak Hour	0	6	1	1	0	2	6	2	0	7	14	3	0	2	11	4	59	0

Two-Hour Count Summaries - Bikes

Interval Start	US 101 NB Ramps			Colgan Ave			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	2	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	1	1	0	1	1	4	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		US 101 NB Ramps				Colgan Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	25	7	11	0	18	45	17	0	164	190	23	0	19	269	57	845	0
4:15 PM		0	24	13	8	0	28	45	12	0	153	173	20	0	26	294	63	859	0
4:30 PM		0	22	5	4	0	25	42	12	0	168	204	25	0	26	239	56	828	0
4:45 PM		0	25	7	13	0	23	46	21	0	148	188	24	0	25	284	48	852	3,384
5:00 PM		0	32	8	19	0	14	35	20	0	151	179	26	0	18	246	58	806	3,345
5:15 PM		0	44	17	15	0	17	27	11	0	138	152	19	0	33	297	59	829	3,315
5:30 PM		0	41	13	4	0	12	39	21	0	164	160	19	0	22	250	57	802	3,289
5:45 PM		0	31	11	6	0	15	53	19	0	117	128	19	0	24	268	44	735	3,172
Count Total		0	244	81	80	0	152	332	133	0	1,203	1,374	175	0	193	2,147	442	6,556	0
Peak Hour	All	0	96	32	36	0	94	178	62	0	633	755	92	0	96	1,086	224	3,384	0
	HV	0	3	1	0	0	0	3	1	0	5	9	2	0	2	8	3	37	0
	HV%	-	3%	3%	0%	-	0%	2%	2%	-	1%	1%	2%	-	2%	1%	1%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	2	3	6	12	0	0	1	2	3	5	3	1	0	9
4:15 PM	2	0	6	2	10	0	0	1	0	1	2	1	0	0	3
4:30 PM	0	2	5	1	8	0	0	1	0	1	1	0	0	0	1
4:45 PM	1	0	2	4	7	1	0	0	0	1	0	0	0	0	0
5:00 PM	2	0	2	1	5	0	0	0	0	0	1	0	1	0	2
5:15 PM	2	0	2	6	10	0	0	2	0	2	1	3	1	0	5
5:30 PM	2	0	4	1	7	0	0	0	0	0	1	6	2	0	9
5:45 PM	1	0	2	4	7	0	0	1	0	1	7	0	1	0	8
Count Total	11	4	26	25	66	1	0	6	2	9	18	13	6	0	37
Peak Hour	4	4	16	13	37	1	0	3	2	6	8	4	1	0	13

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	US 101 NB Ramps				Colgan Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	2	0	0	2	1	0	0	0	4	2	12	0
4:15 PM	0	2	0	0	0	0	0	0	0	1	3	2	0	1	1	0	10	0
4:30 PM	0	0	0	0	0	0	1	1	0	2	3	0	0	1	0	0	8	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	3	1	7	37
5:00 PM	0	0	1	1	0	0	0	0	0	0	2	0	0	0	1	0	5	30
5:15 PM	0	1	1	0	0	0	0	0	0	0	2	0	0	2	2	2	10	30
5:30 PM	0	2	0	0	0	0	0	0	0	1	3	0	0	0	1	0	7	29
5:45 PM	0	1	0	0	0	0	0	0	0	0	2	0	0	1	3	0	7	29
Count Total	0	7	3	1	0	0	3	1	0	6	18	2	0	5	15	5	66	0
Peak Hour	0	3	1	0	0	0	3	1	0	5	9	2	0	2	8	3	37	0

Two-Hour Count Summaries - Bikes

Interval Start	US 101 NB Ramps			Colgan Ave			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	1	0	2	0	3	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	2	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	3
Count Total	0	0	1	0	0	0	0	3	3	0	2	0	9	0
Peak Hour	0	0	1	0	0	0	0	2	1	0	2	0	6	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Petaluma Hill Rd Colgan Ave

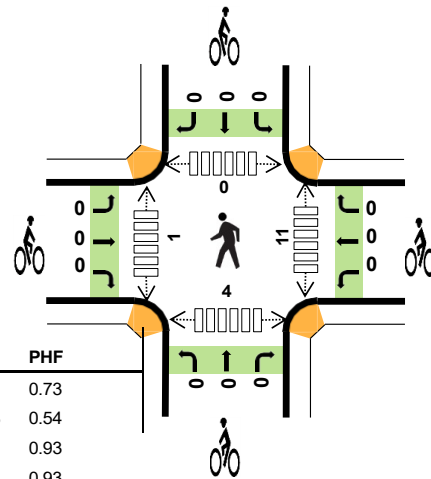
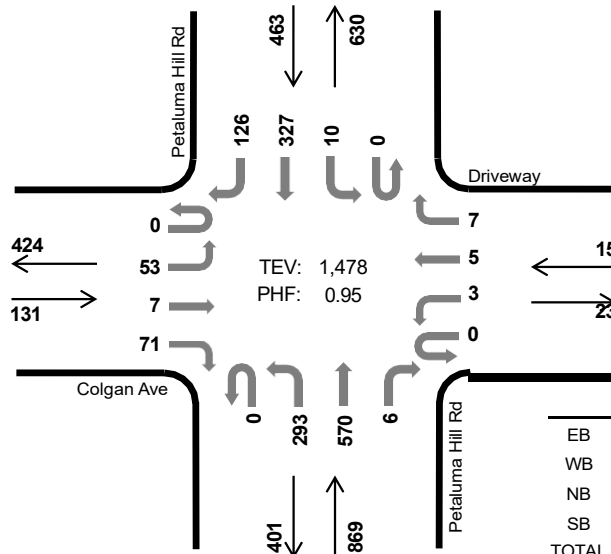


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



Two-Hour Count Summaries

Interval Start		Colgan Ave				Driveway				Petaluma Hill Rd				Petaluma Hill Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	5	3	9	0	0	1	0	0	3	48	0	0	0	33	21	123	0
7:15 AM		0	9	3	8	0	0	2	1	0	37	75	1	0	0	68	24	228	0
7:30 AM		0	15	0	16	0	1	1	1	0	65	102	0	0	0	61	31	293	0
7:45 AM		0	8	0	27	0	0	1	2	0	83	148	1	0	0	85	34	389	1,033
8:00 AM		0	19	4	22	0	0	1	0	0	83	148	3	0	2	70	37	389	1,299
8:15 AM		0	12	3	11	0	2	1	4	0	71	118	0	0	1	80	30	333	1,404
8:30 AM		0	14	0	11	0	1	2	1	0	56	156	2	0	7	92	25	367	1,478
8:45 AM		0	12	1	22	0	1	0	3	0	43	130	2	0	1	84	30	329	1,418
Count Total		0	94	14	126	0	5	9	12	0	441	925	9	0	11	573	232	2,451	0
Peak Hour	All	0	53	7	71	0	3	5	7	0	293	570	6	0	10	327	126	1,478	0
	HV	0	2	1	3	0	0	0	2	0	5	8	0	0	0	10	6	37	0
	HV%	-	4%	14%	4%	-	0%	0%	29%	-	2%	1%	0%	-	0%	3%	5%	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	1	2	3	7	0	0	1	0	1	1	0	0	0	1
7:15 AM	4	1	6	10	21	0	0	0	0	0	1	1	0	0	2
7:30 AM	2	1	7	9	19	1	0	0	1	2	1	1	0	1	3
7:45 AM	1	1	1	5	8	0	0	0	0	0	1	0	0	1	2
8:00 AM	1	0	4	6	11	0	0	0	0	0	5	0	0	1	6
8:15 AM	2	1	5	2	10	0	0	0	0	0	1	0	0	0	1
8:30 AM	2	0	3	3	8	0	0	0	0	0	4	1	0	2	7
8:45 AM	1	0	4	4	9	0	0	0	0	0	1	0	0	0	1
Count Total	14	5	32	42	93	1	0	1	1	3	15	3	0	5	23
Peak Hour	6	2	13	16	37	0	0	0	0	0	11	1	0	4	16

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Colgan Ave				Driveway				Petaluma Hill Rd				Petaluma Hill Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	1	0	0	0	2	0	0	0	1	2	7	0
7:15 AM	0	3	1	0	0	0	1	0	0	2	4	0	0	0	4	6	21	0
7:30 AM	0	1	0	1	0	0	1	0	0	3	4	0	0	0	4	5	19	0
7:45 AM	0	0	0	1	0	0	0	1	0	0	1	0	0	0	3	2	8	55
8:00 AM	0	0	1	0	0	0	0	0	0	1	3	0	0	0	3	3	11	59
8:15 AM	0	1	0	1	0	0	0	1	0	2	3	0	0	0	1	1	10	48
8:30 AM	0	1	0	1	0	0	0	0	0	2	1	0	0	0	3	0	8	37
8:45 AM	0	0	0	1	0	0	0	0	0	0	4	0	0	0	3	1	9	38
Count Total	0	6	3	5	0	0	3	2	0	10	22	0	0	0	22	20	93	0
Peak Hour	0	2	1	3	0	0	0	2	0	5	8	0	0	0	10	6	37	0

Two-Hour Count Summaries - Bikes

Interval Start	Colgan Ave			Driveway			Petaluma Hill Rd			Petaluma Hill Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	1	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	1	0	0	0	0	0	0	1	0	0	0	1	3	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Petaluma Hill Rd Colgan Ave

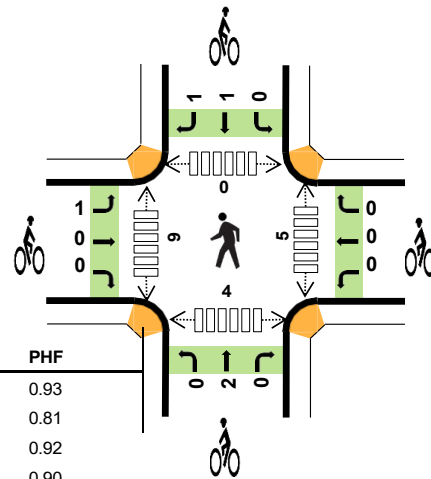
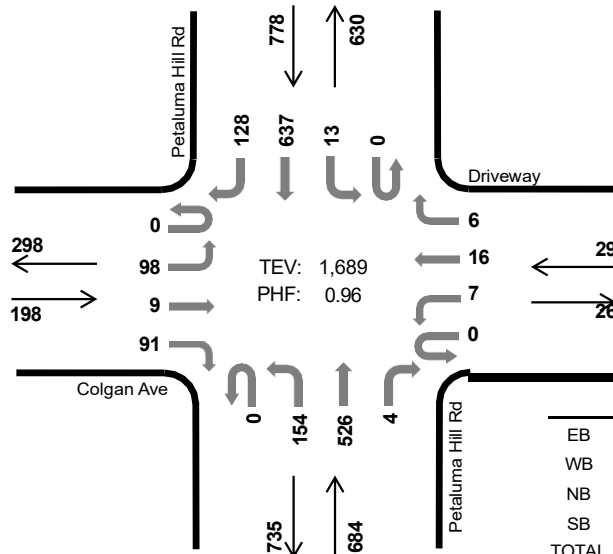


Peak Hour

Date: 04/02/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	1.5%	0.93
WB	0.0%	0.81
NB	1.0%	0.92
SB	1.8%	0.90
TOTAL	1.4%	0.96

Two-Hour Count Summaries

Interval Start		Colgan Ave				Driveway				Petaluma Hill Rd				Petaluma Hill Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	28	4	21	0	1	4	1	0	34	126	0	0	3	173	39	434	0
4:15 PM		0	24	3	20	0	2	5	2	0	40	113	4	0	1	158	34	406	0
4:30 PM		0	19	1	27	0	3	5	1	0	36	150	0	0	4	161	31	438	0
4:45 PM		0	27	1	23	0	1	2	2	0	44	137	0	0	5	145	24	411	1,689
5:00 PM		0	27	6	20	0	5	1	5	0	30	149	0	0	2	151	22	418	1,673
5:15 PM		0	27	5	24	0	1	3	2	0	34	105	3	0	1	180	28	413	1,680
5:30 PM		0	26	4	22	0	1	0	2	0	39	119	2	0	1	169	31	416	1,658
5:45 PM		0	22	4	20	0	1	0	5	0	47	101	6	0	5	143	27	381	1,628
Count Total		0	200	28	177	0	15	20	20	0	304	1,000	15	0	22	1,280	236	3,317	0
Peak Hour	All	0	98	9	91	0	7	16	6	0	154	526	4	0	13	637	128	1,689	0
	HV	0	3	0	0	0	0	0	0	0	3	4	0	0	0	11	3	24	0
	HV%	-	3%	0%	0%	-	0%	0%	0%	-	2%	1%	0%	-	0%	2%	2%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	2	2	4	1	0	1	0	2	2	4	0	0	6
4:15 PM	2	0	1	6	9	0	0	1	1	2	1	0	0	1	2
4:30 PM	0	0	2	4	6	0	0	0	0	0	0	4	0	3	7
4:45 PM	1	0	2	2	5	0	0	0	1	1	2	1	0	0	3
5:00 PM	1	0	0	2	3	0	0	1	0	1	3	1	0	5	9
5:15 PM	0	0	1	1	2	0	0	2	1	3	0	0	0	5	5
5:30 PM	0	0	0	2	2	0	0	0	0	0	6	0	0	3	9
5:45 PM	0	0	1	0	1	1	0	0	1	2	2	0	0	2	4
Count Total	4	0	9	19	32	2	0	5	4	11	16	10	0	19	45
Peak Hour	3	0	7	14	24	1	0	2	2	5	5	9	0	4	18

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Colgan Ave				Driveway				Petaluma Hill Rd				Petaluma Hill Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	1	4	0
4:15 PM	0	2	0	0	0	0	0	0	0	0	1	0	0	0	5	1	9	0	
4:30 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	4	0	6	0	
4:45 PM	0	1	0	0	0	0	0	0	0	0	2	0	0	0	1	1	5	24	
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	23	
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	16	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	12	
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	8	
Count Total	0	4	0	0	0	0	0	0	0	3	6	0	0	0	15	4	32	0	
Peak Hour	0	3	0	0	0	0	0	0	0	3	4	0	0	0	11	3	24	0	

Two-Hour Count Summaries - Bikes

Interval Start	Colgan Ave			Driveway			Petaluma Hill Rd			Petaluma Hill Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	1	0	0	0	0	0	0	1	0	0	0	0	2	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	5
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4
5:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:45 PM	1	0	0	0	0	0	0	0	0	0	1	0	2	6
Count Total	2	0	0	0	0	0	0	5	0	0	3	1	11	0
Peak Hour	1	0	0	0	0	0	0	2	0	0	1	1	5	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Petaluma Hill Rd Kawana Springs Rd

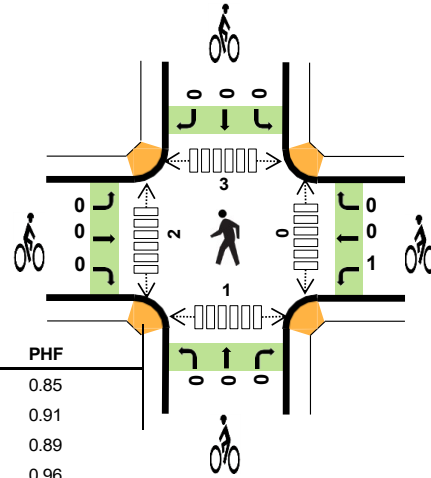
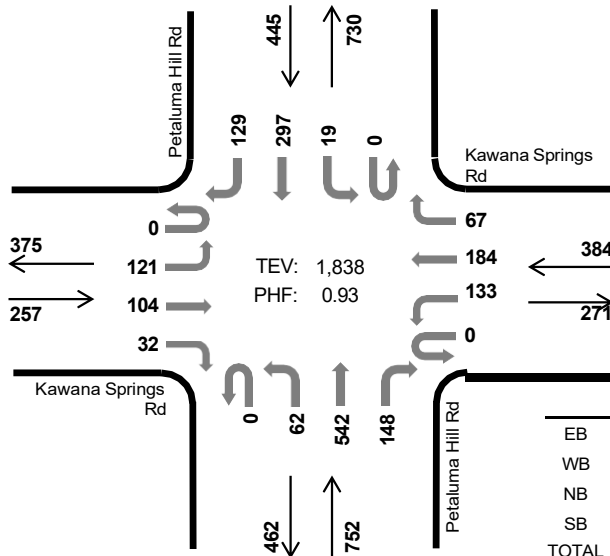


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	3.9%	0.85
WB	1.8%	0.91
NB	1.3%	0.89
SB	3.6%	0.96
TOTAL	2.3%	0.93

Two-Hour Count Summaries

Interval Start		Kawana Springs Rd				Kawana Springs Rd				Petaluma Hill Rd				Petaluma Hill Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	9	7	3	0	16	35	9	0	11	41	16	0	0	36	21	204	0
7:15 AM		0	15	7	6	0	23	22	7	0	10	66	16	0	1	56	18	247	0
7:30 AM		0	25	9	7	0	30	39	11	0	21	106	30	0	1	77	26	382	0
7:45 AM		0	35	19	8	0	42	47	16	0	24	156	31	0	1	81	34	494	1,327
8:00 AM		0	36	32	4	0	34	45	19	0	12	131	50	0	5	70	34	472	1,595
8:15 AM		0	27	40	9	0	30	49	20	0	8	111	41	0	9	70	32	446	1,794
8:30 AM		0	23	13	11	0	27	43	12	0	18	144	26	0	4	76	29	426	1,838
8:45 AM		0	27	9	6	0	28	37	10	0	15	114	20	0	9	58	28	361	1,705
Count Total		0	197	136	54	0	230	317	104	0	119	869	230	0	30	524	222	3,032	0
Peak Hour	All	0	121	104	32	0	133	184	67	0	62	542	148	0	19	297	129	1,838	0
	HV	0	8	1	1	0	1	5	1	0	2	8	0	0	3	6	7	43	0
	HV%	-	7%	1%	3%	-	1%	3%	1%	-	3%	1%	0%	-	16%	2%	5%	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	1	2	1	8	0	1	0	0	1	1	0	0	1	2
7:15 AM	3	1	4	3	11	0	1	0	0	1	1	0	0	0	1
7:30 AM	4	2	3	5	14	0	0	0	0	0	0	0	0	0	0
7:45 AM	3	0	2	8	13	0	0	0	0	0	0	0	1	0	1
8:00 AM	3	1	4	1	9	0	0	0	0	0	0	0	1	0	1
8:15 AM	4	3	2	4	13	0	1	0	0	1	0	0	1	0	1
8:30 AM	0	3	2	3	8	0	0	0	0	0	0	2	0	1	3
8:45 AM	2	1	4	3	10	0	0	0	0	0	1	0	0	0	1
Count Total	23	12	23	28	86	0	3	0	0	3	3	2	3	2	10
Peak Hour	10	7	10	16	43	0	1	0	0	1	0	2	3	1	6

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Kawana Springs Rd				Kawana Springs Rd				Petaluma Hill Rd				Petaluma Hill Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	1	0	0	0	1	0	0	1	1	0	0	0	1	0	8	0
7:15 AM	0	2	0	1	0	0	1	0	0	0	3	1	0	0	3	0	11	0
7:30 AM	0	4	0	0	0	0	2	0	0	1	1	1	0	0	5	0	14	0
7:45 AM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	4	4	13	46
8:00 AM	0	3	0	0	0	0	1	0	0	0	4	0	0	1	0	0	9	47
8:15 AM	0	2	1	1	0	0	2	1	0	0	2	0	0	1	1	2	13	49
8:30 AM	0	0	0	0	0	1	2	0	0	0	2	0	0	1	1	1	8	43
8:45 AM	0	2	0	0	0	1	0	0	0	0	3	1	0	1	1	1	10	40
Count Total	0	19	2	2	0	2	9	1	0	4	16	3	0	4	16	8	86	0
Peak Hour	0	8	1	1	0	1	5	1	0	2	8	0	0	3	6	7	43	0

Two-Hour Count Summaries - Bikes

Interval Start	Kawana Springs Rd			Kawana Springs Rd			Petaluma Hill Rd			Petaluma Hill Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	1	1	1	0	0	0	0	0	0	3	0
Peak Hour	0	0	0	1	0	0	0	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Petaluma Hill Rd Kawana Springs Rd

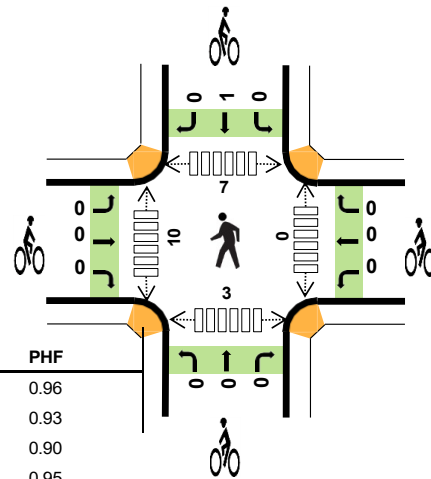
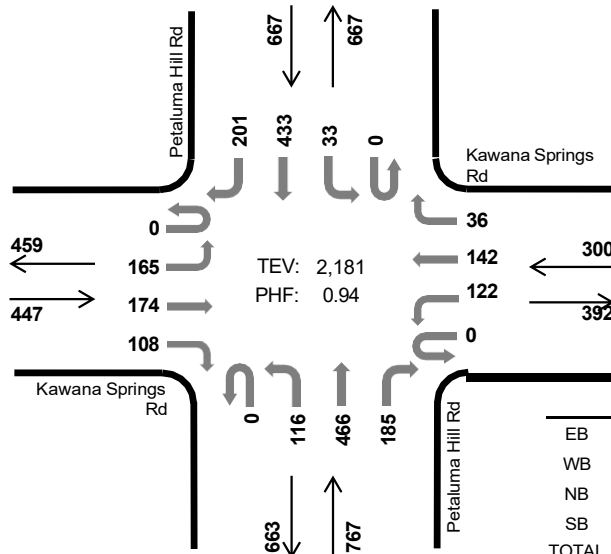


Peak Hour

Date: 04/02/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	0.2%	0.96
WB	0.7%	0.93
NB	0.4%	0.90
SB	1.5%	0.95
TOTAL	0.7%	0.94

Two-Hour Count Summaries

Interval Start		Kawana Springs Rd				Kawana Springs Rd				Petaluma Hill Rd				Petaluma Hill Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	4:00 PM	0	42	40	24	0	31	38	12	0	22	105	33	0	8	105	56	516	0
	4:15 PM	0	30	40	27	0	23	39	7	0	26	116	33	0	9	116	52	518	0
	4:30 PM	0	50	39	28	0	34	29	9	0	37	112	42	0	12	107	42	541	0
	4:45 PM	0	41	40	18	0	28	35	8	0	17	135	49	0	7	109	49	536	2,111
	5:00 PM	0	44	43	30	0	31	42	8	0	28	131	55	0	6	112	47	577	2,172
	5:15 PM	0	30	52	32	0	29	36	11	0	34	88	39	0	8	105	63	527	2,181
	5:30 PM	0	39	39	31	0	34	43	19	0	28	96	31	0	5	100	59	524	2,164
	5:45 PM	0	35	43	40	0	28	34	11	0	27	74	35	0	6	115	55	503	2,131
Count Total		0	311	336	230	0	238	296	85	0	219	857	317	0	61	869	423	4,242	0
Peak Hour	All	0	165	174	108	0	122	142	36	0	116	466	185	0	33	433	201	2,181	0
	HV	0	1	0	0	0	0	2	0	0	0	2	1	0	0	8	2	16	0
	HV%	-	1%	0%	0%	-	0%	1%	0%	-	0%	0%	1%	-	0%	2%	1%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	2	4	2	8	1	0	0	0	1	0	0	6	1	7
4:15 PM	1	2	3	7	13	0	0	0	0	0	1	0	4	0	5
4:30 PM	0	1	2	5	8	0	0	0	1	1	0	0	1	3	4
4:45 PM	1	1	1	2	5	0	0	0	0	0	0	7	1	0	8
5:00 PM	0	0	0	2	2	0	0	0	0	0	0	1	4	0	5
5:15 PM	0	0	0	1	1	0	0	0	0	0	0	2	1	0	3
5:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	5	0	5
5:45 PM	0	0	1	2	3	0	0	0	0	0	0	3	4	3	10
Count Total	2	6	11	22	41	1	0	0	1	2	1	13	26	7	47
Peak Hour	1	2	3	10	16	0	0	0	1	1	0	10	7	3	20

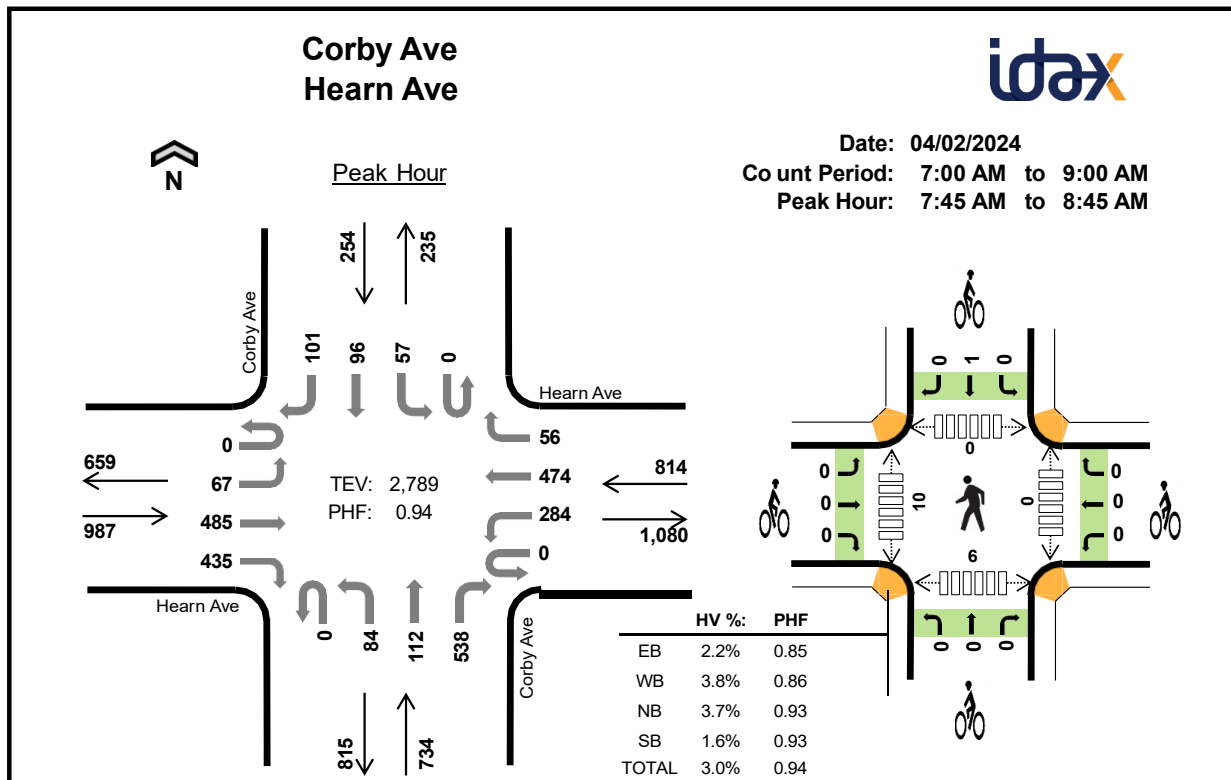
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Kawana Springs Rd				Kawana Springs Rd				Petaluma Hill Rd				Petaluma Hill Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	2	0	0	0	2	2	0	0	0	1	1	8	0
4:15 PM	0	0	0	1	0	0	2	0	0	0	1	2	0	0	5	2	13	0
4:30 PM	0	0	0	0	0	0	1	0	0	0	1	1	0	0	4	1	8	0
4:45 PM	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1	1	5	34
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	28
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	16
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3	7
Count Total	0	1	0	1	0	2	4	0	0	2	5	4	0	1	16	5	41	0
Peak Hour	0	1	0	0	0	0	2	0	0	0	2	1	0	0	8	2	16	0

Two-Hour Count Summaries - Bikes

Interval Start	Kawana Springs Rd			Kawana Springs Rd			Petaluma Hill Rd			Petaluma Hill Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	1	0	0	0	0	0	0	0	0	0	1	0	2	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Hearn Ave				Hearn Ave				Corby Ave				Corby Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	4	70	49	0	62	58	5	0	13	7	88	0	9	8	8	381	0
7:15 AM		0	8	91	70	0	71	71	14	0	21	9	97	0	7	11	9	479	0
7:30 AM		0	14	118	73	0	74	86	6	0	26	17	121	0	6	18	19	578	0
7:45 AM		0	18	117	67	0	71	148	17	0	21	31	129	0	8	24	23	674	2,112
8:00 AM		0	14	139	139	0	64	127	11	0	17	34	131	0	12	23	31	742	2,473
8:15 AM		0	17	121	121	0	84	116	14	0	23	26	148	0	16	28	24	738	2,732
8:30 AM		0	18	108	108	0	65	83	14	0	23	21	130	0	21	21	23	635	2,789
8:45 AM		0	9	112	112	0	57	68	13	0	28	27	142	0	16	23	17	624	2,739
Count Total		0	102	876	739	0	548	757	94	0	172	172	986	0	95	156	154	4,851	0
Peak Hour	All	0	67	485	435	0	284	474	56	0	84	112	538	0	57	96	101	2,789	0
	HV	0	0	12	10	0	21	9	1	0	7	1	19	0	0	2	2	84	0
	HV%	-	0%	2%	2%	-	7%	2%	2%	-	8%	1%	4%	-	0%	2%	2%	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	7	5	1	18	0	0	0	0	0	0	1	0	1	2
7:15 AM	6	6	6	5	23	0	0	0	0	0	0	0	0	0	0
7:30 AM	9	5	7	2	23	0	0	0	0	0	0	2	0	2	4
7:45 AM	4	4	7	1	16	0	0	0	1	1	0	2	0	1	3
8:00 AM	8	8	5	1	22	0	0	0	0	0	0	0	0	0	0
8:15 AM	6	9	1	1	17	0	0	0	0	0	0	2	0	1	3
8:30 AM	4	10	14	1	29	0	0	0	0	0	0	6	0	4	10
8:45 AM	5	7	6	5	23	0	0	0	0	0	0	4	0	2	6
Count Total	47	56	51	17	171	0	0	0	1	1	0	17	0	11	28
Peak Hour	22	31	27	4	84	0	0	0	1	1	0	10	0	6	16

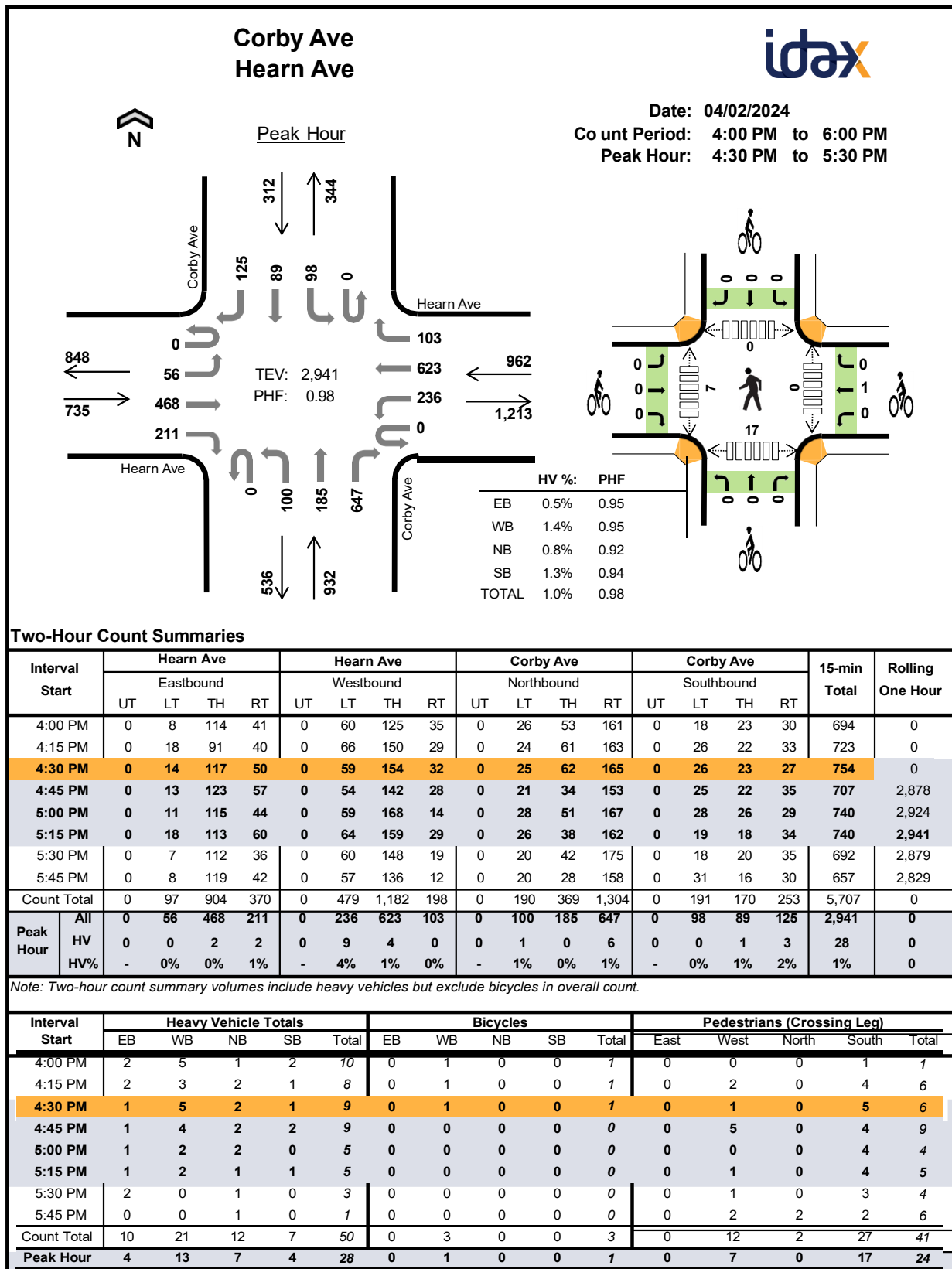
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hearn Ave				Hearn Ave				Corby Ave				Corby Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	3	0	3	4	0	0	0	0	5	0	0	0	1	18	0
7:15 AM	0	1	2	3	0	3	1	2	0	1	0	5	0	1	2	2	23	0
7:30 AM	0	1	6	2	0	5	0	0	0	2	0	5	0	0	0	2	23	0
7:45 AM	0	0	3	1	0	3	1	0	0	2	0	5	0	0	0	1	16	80
8:00 AM	0	0	4	4	0	4	3	1	0	2	0	3	0	0	1	0	22	84
8:15 AM	0	0	3	3	0	7	2	0	0	0	0	1	0	0	0	1	17	78
8:30 AM	0	0	2	2	0	7	3	0	0	3	1	10	0	0	1	0	29	84
8:45 AM	0	1	2	2	0	3	2	2	0	2	0	4	0	2	1	2	23	91
Count Total	0	3	24	20	0	35	16	5	0	12	1	38	0	3	5	9	171	0
Peak Hour	0	0	12	10	0	21	9	1	0	7	1	19	0	0	2	2	84	0

Two-Hour Count Summaries - Bikes

Interval Start	Hearn Ave			Hearn Ave			Corby Ave			Corby Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hearn Ave				Hearn Ave				Corby Ave				Corby Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	1	0	2	3	0	0	0	0	1	0	0	0	2	10	0
4:15 PM	0	0	1	1	0	2	1	0	0	0	0	2	0	1	0	0	8	0
4:30 PM	0	0	1	0	0	3	2	0	0	0	0	2	0	0	0	1	9	0
4:45 PM	0	0	0	1	0	4	0	0	0	0	0	2	0	0	1	1	9	36
5:00 PM	0	0	0	1	0	1	1	0	0	1	0	1	0	0	0	0	5	31
5:15 PM	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	1	5	28
5:30 PM	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	3	22
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	14
Count Total	0	0	6	4	0	13	8	0	0	1	0	11	0	1	1	5	50	0
Peak Hour	0	0	2	2	0	9	4	0	0	1	0	6	0	0	1	3	28	0

Two-Hour Count Summaries - Bikes

Interval Start	Hearn Ave			Hearn Ave			Corby Ave			Corby Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	3	0	0	0	0	0	0	0	3	0
Peak Hour	0	0	0	0	1	0	0	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Santa Rosa Ave Hearn Ave

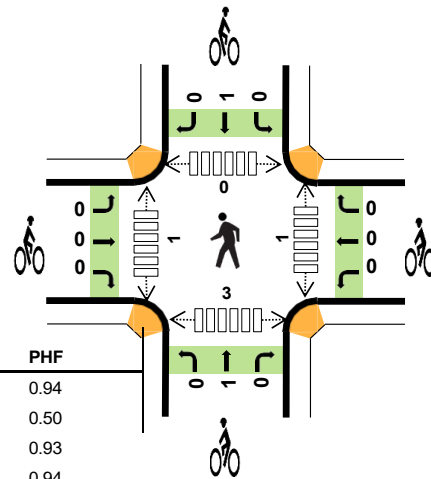
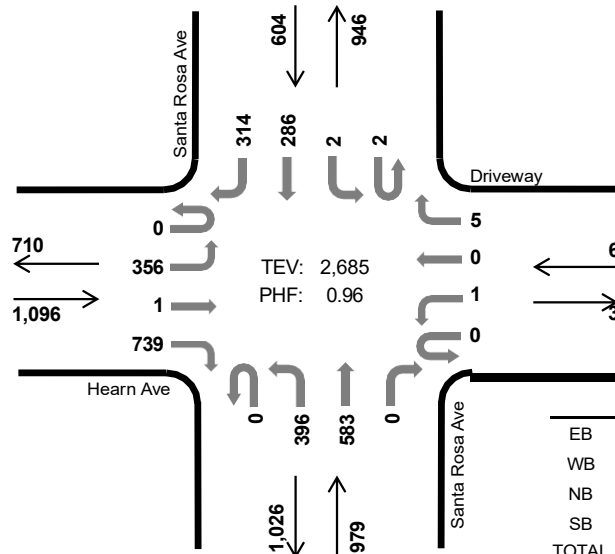


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	2.9%	0.94
WB	0.0%	0.50
NB	4.5%	0.93
SB	4.0%	0.94
TOTAL	3.7%	0.96

Two-Hour Count Summaries

Interval Start		Hearn Ave				Driveway				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	88	0	188	0	0	0	0	0	122	140	0	0	1	63	97	699	0
7:15 AM		0	91	1	200	0	0	0	3	0	109	141	0	0	0	69	85	699	0
7:30 AM		0	82	0	182	0	1	0	1	0	95	146	0	0	0	86	70	663	0
7:45 AM		0	95	0	169	0	0	0	1	0	70	156	0	2	1	68	62	624	2,685
8:00 AM		0	82	0	189	0	1	0	0	0	75	94	0	1	0	76	64	582	2,568
8:15 AM		0	102	0	161	0	0	0	3	1	72	87	1	0	1	79	63	570	2,439
8:30 AM		0	107	1	172	0	0	0	1	0	84	92	0	2	2	79	71	611	2,387
8:45 AM		0	76	0	183	0	0	0	5	0	68	109	1	0	1	67	86	596	2,359
Count Total		0	723	2	1,444	0	2	0	14	1	695	965	2	5	6	587	598	5,044	0
Peak Hour	All	0	356	1	739	0	1	0	5	0	396	583	0	2	2	286	314	2,685	0
	HV	0	9	0	23	0	0	0	0	0	23	21	0	0	0	14	10	100	0
	HV%	-	3%	0%	3%	-	0%	-	0%	-	6%	4%	-	0%	0%	5%	3%	4%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	7	0	8	10	25	0	0	1	1	2	0	0	0	1	1
7:15 AM	4	0	13	6	23	0	0	0	0	0	0	0	0	1	1
7:30 AM	12	0	12	6	30	0	0	0	0	0	0	0	0	0	0
7:45 AM	9	0	11	2	22	0	0	0	0	0	1	1	0	1	3
8:00 AM	9	0	14	8	31	0	0	2	0	2	2	1	0	0	3
8:15 AM	9	0	7	3	19	0	0	0	0	0	4	1	0	6	11
8:30 AM	11	0	6	7	24	0	0	0	0	0	4	1	0	2	7
8:45 AM	8	0	3	4	15	0	0	0	1	1	2	1	0	1	4
Count Total	69	0	74	46	189	0	0	3	2	5	13	5	0	12	30
Peak Hour	32	0	44	24	100	0	0	1	1	2	1	1	0	3	5

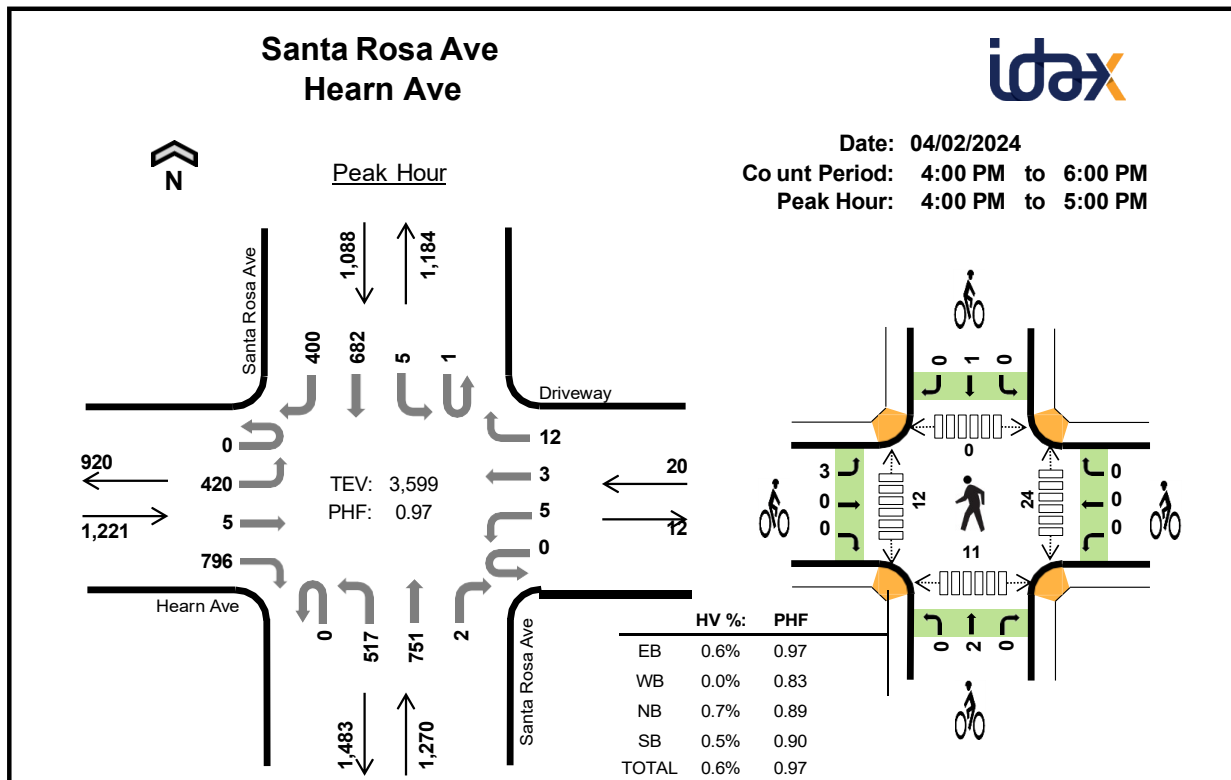
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hearn Ave				Driveway				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	0	4	0	0	0	0	0	7	1	0	0	0	7	3	25	0
7:15 AM	0	2	0	2	0	0	0	0	0	5	8	0	0	0	4	2	23	0
7:30 AM	0	1	0	11	0	0	0	0	0	6	6	0	0	0	1	5	30	0
7:45 AM	0	3	0	6	0	0	0	0	0	5	6	0	0	0	2	0	22	100
8:00 AM	0	2	0	7	0	0	0	0	0	7	7	0	0	0	4	4	31	106
8:15 AM	0	1	0	8	0	0	0	0	0	3	4	0	0	0	2	1	19	102
8:30 AM	0	4	0	7	0	0	0	0	0	3	3	0	0	0	5	2	24	96
8:45 AM	0	1	0	7	0	0	0	0	0	2	1	0	0	0	3	1	15	89
Count Total	0	17	0	52	0	0	0	0	0	38	36	0	0	0	28	18	189	0
Peak Hour	0	9	0	23	0	0	0	0	0	23	21	0	0	0	14	10	100	0

Two-Hour Count Summaries - Bikes

Interval Start	Hearn Ave			Driveway			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Count Total	0	0	0	0	0	0	0	3	0	0	2	0	5	0
Peak Hour	0	0	0	0	0	0	0	1	0	0	1	0	2	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Hearn Ave				Driveway				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	102	2	212	0	0	2	3	0	144	212	1	1	4	155	91	929	0
4:15 PM		0	102	1	184	0	2	0	4	0	147	182	0	0	1	195	107	925	0
4:30 PM		0	108	1	196	0	2	0	4	0	115	189	1	0	0	170	107	893	0
4:45 PM		0	108	1	204	0	1	1	1	0	111	168	0	0	0	162	95	852	3,599
5:00 PM		0	125	1	196	0	0	0	6	0	118	149	0	0	4	145	90	834	3,504
5:15 PM		0	113	0	190	0	2	3	5	0	96	136	0	1	1	125	91	763	3,342
5:30 PM		0	87	0	170	0	1	2	3	0	94	141	0	0	0	80	93	671	3,120
5:45 PM		0	94	1	193	0	1	0	1	0	100	140	1	0	1	111	97	740	3,008
Count Total		0	839	7	1,545	0	9	8	27	0	925	1,317	3	2	11	1,143	771	6,607	0
Peak Hour	All	0	420	5	796	0	5	3	12	0	517	751	2	1	5	682	400	3,599	0
	HV	0	3	0	4	0	0	0	0	0	2	7	0	0	0	3	2	21	0
	HV%	-	1%	0%	1%	-	0%	0%	0%	-	0%	1%	0%	0%	0%	1%	1%	0	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	1	3	5	0	0	1	0	1	3	2	0	6	11
4:15 PM	2	0	4	1	7	1	0	1	0	2	1	2	0	2	5
4:30 PM	3	0	2	0	5	2	0	0	1	3	6	4	0	3	13
4:45 PM	1	0	2	1	4	0	0	0	0	0	14	4	0	0	18
5:00 PM	1	0	3	4	8	0	0	0	0	0	3	4	0	0	7
5:15 PM	2	0	2	5	9	0	0	2	0	2	0	1	0	0	1
5:30 PM	0	0	2	1	3	0	0	0	0	0	2	1	0	0	3
5:45 PM	0	0	1	0	1	0	0	1	0	1	1	0	0	1	2
Count Total	10	0	17	15	42	3	0	5	1	9	30	18	0	12	60
Peak Hour	7	0	9	5	21	3	0	2	1	6	24	12	0	11	47

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hearn Ave				Driveway				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2	5	0
4:15 PM	0	1	0	1	0	0	0	0	0	2	2	0	0	0	1	0	7	0
4:30 PM	0	2	0	1	0	0	0	0	0	0	2	0	0	0	0	0	5	0
4:45 PM	0	0	0	1	0	0	0	0	0	0	2	0	0	0	1	0	4	21
5:00 PM	0	1	0	0	0	0	0	0	0	1	2	0	0	0	3	1	8	24
5:15 PM	0	0	0	2	0	0	0	0	0	1	1	0	0	0	4	1	9	26
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	24
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	21
Count Total	0	4	0	6	0	0	0	0	0	4	13	0	0	0	11	4	42	0
Peak Hour	0	3	0	4	0	0	0	0	0	2	7	0	0	0	3	2	21	0

Two-Hour Count Summaries - Bikes

Interval Start	Hearn Ave			Driveway			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:15 PM	1	0	0	0	0	0	0	1	0	0	0	0	2	0
4:30 PM	2	0	0	0	0	0	0	0	0	0	1	0	3	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	3
Count Total	3	0	0	0	0	0	0	5	0	0	1	0	9	0
Peak Hour	3	0	0	0	0	0	0	2	0	0	1	0	6	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Moorland Ave Bellevue Ave

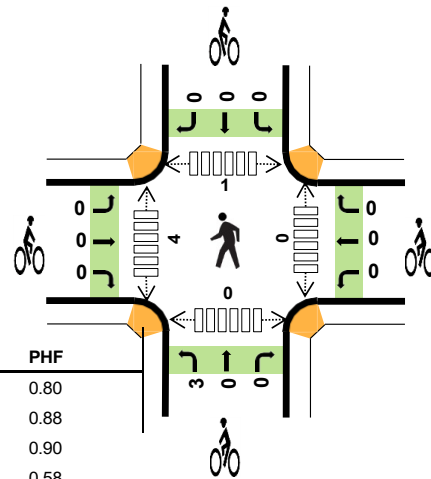
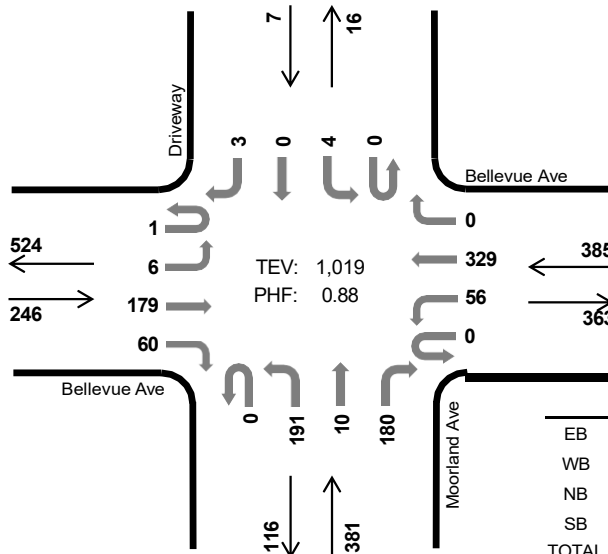


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	7.7%	0.80
WB	2.9%	0.88
NB	2.4%	0.90
SB	28.6%	0.58
TOTAL	4.0%	0.88

Two-Hour Count Summaries

Interval Start		Bellevue Ave				Bellevue Ave				Moorland Ave				Driveway				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	4	20	2	0	13	39	0	0	19	1	27	0	0	0	0	125	0
7:15 AM		0	3	35	9	0	7	55	0	0	18	2	25	0	0	0	2	156	0
7:30 AM		0	3	28	13	0	13	59	0	0	37	3	53	0	0	0	0	209	0
7:45 AM		0	2	64	11	0	13	90	0	0	54	5	47	0	3	0	0	289	779
8:00 AM		0	1	37	13	0	13	97	0	0	52	2	41	0	0	0	1	257	911
8:15 AM		1	0	50	23	0	17	83	0	0	48	0	39	0	1	0	2	264	1,019
8:30 AM		0	1	52	22	0	11	54	0	0	30	4	25	0	0	1	0	200	1,010
8:45 AM		0	0	48	17	0	18	83	1	0	20	2	31	0	0	0	1	221	942
Count Total		1	14	334	110	0	105	560	1	0	278	19	288	0	4	1	6	1,721	0
Peak Hour	All	1	6	179	60	0	56	329	0	0	191	10	180	0	4	0	3	1,019	0
	HV	0	0	15	4	0	2	9	0	0	7	0	2	0	2	0	0	41	0
	HV%	0%	0%	8%	7%	-	4%	3%	-	-	4%	0%	1%	-	50%	-	0%	4%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	1	1	0	5	0	0	0	0	0	0	0	0	0	0
7:15 AM	8	0	1	0	9	0	0	0	0	0	0	0	0	0	0
7:30 AM	6	4	3	0	13	0	0	2	0	2	0	2	0	0	2
7:45 AM	7	2	4	2	15	0	0	1	0	1	0	2	0	0	2
8:00 AM	4	3	0	0	7	0	0	0	0	0	0	0	1	0	1
8:15 AM	2	2	2	0	6	0	0	0	0	0	0	0	0	0	0
8:30 AM	8	7	2	0	17	0	0	0	0	0	0	0	0	0	0
8:45 AM	5	7	1	0	13	1	0	0	0	1	0	0	0	0	0
Count Total	43	26	14	2	85	1	0	3	0	4	0	4	1	0	5
Peak Hour	19	11	9	2	41	0	0	3	0	3	0	4	1	0	5

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Bellevue Ave				Bellevue Ave				Moorland Ave				Driveway				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0	5	0
7:15 AM	0	0	5	3	0	0	0	0	0	0	0	1	0	0	0	0	9	0
7:30 AM	0	0	6	0	0	2	2	0	0	1	0	2	0	0	0	0	13	0
7:45 AM	0	0	5	2	0	0	2	0	0	4	0	0	0	2	0	0	15	42
8:00 AM	0	0	2	2	0	0	3	0	0	0	0	0	0	0	0	0	7	44
8:15 AM	0	0	2	0	0	0	2	0	0	2	0	0	0	0	0	0	6	41
8:30 AM	0	0	8	0	0	0	7	0	0	1	0	1	0	0	0	0	17	45
8:45 AM	0	0	5	0	0	0	7	0	0	0	0	1	0	0	0	0	13	43
Count Total	0	0	36	7	0	2	24	0	0	8	0	6	0	2	0	0	85	0
Peak Hour	0	0	15	4	0	2	9	0	0	7	0	2	0	2	0	0	41	0

Two-Hour Count Summaries - Bikes

Interval Start	Bellevue Ave			Bellevue Ave			Moorland Ave			Driveway			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	2	0
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Count Total	0	0	1	0	0	0	3	0	0	0	0	0	4	0
Peak Hour	0	0	0	0	0	0	3	0	0	0	0	0	3	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Moorland Ave Bellevue Ave

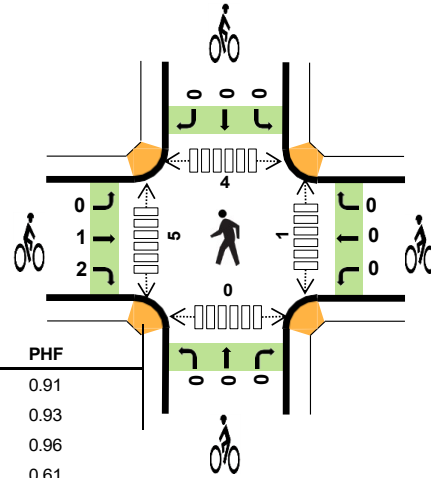
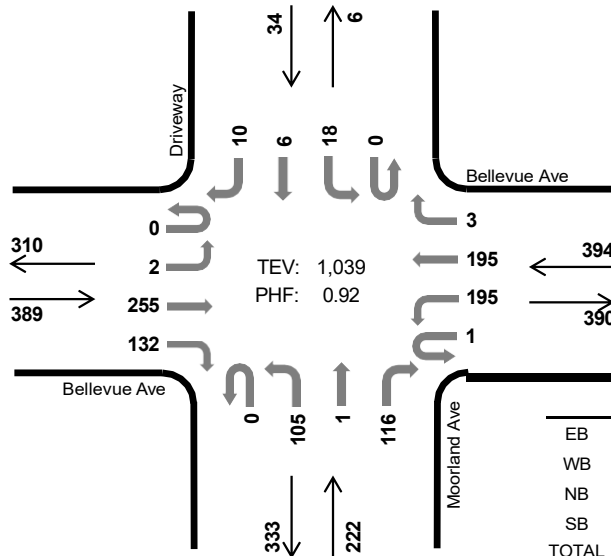


Peak Hour

Date: 04/02/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	0.8%	0.91
WB	4.3%	0.93
NB	0.5%	0.96
SB	0.0%	0.61
TOTAL	2.0%	0.92

Two-Hour Count Summaries

Interval Start		Bellevue Ave				Bellevue Ave				Moorland Ave				Driveway				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	80	18	0	24	53	0	0	22	1	27	0	7	2	3	237	0
4:15 PM		0	1	61	39	0	41	57	1	0	26	0	29	0	2	2	2	261	0
4:30 PM		0	0	64	34	0	51	41	0	0	22	0	30	0	9	1	4	256	0
4:45 PM		0	0	57	26	1	42	53	1	0	30	0	28	0	3	0	0	241	995
5:00 PM		0	1	73	33	0	61	44	1	0	27	1	29	0	4	3	4	281	1,039
5:15 PM		0	0	45	27	0	39	36	0	0	32	0	24	0	2	1	3	209	987
5:30 PM		0	0	47	27	0	33	38	0	0	24	0	30	0	3	0	3	205	936
5:45 PM		0	0	40	29	0	30	32	0	0	18	0	30	0	0	0	0	179	874
Count Total		0	2	467	233	1	321	354	3	0	201	2	227	0	30	9	19	1,869	0
Peak Hour	All	0	2	255	132	1	195	195	3	0	105	1	116	0	18	6	10	1,039	0
	HV	0	0	3	0	0	2	14	1	0	1	0	0	0	0	0	0	21	0
	HV%	-	0%	1%	0%	0%	1%	7%	33%	-	1%	0%	0%	-	0%	0%	0%	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	4	2	0	10	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	7	1	0	8	0	0	0	0	0	1	1	0	0	2
4:30 PM	1	3	0	0	4	0	0	0	0	0	0	3	2	0	5
4:45 PM	2	3	0	0	5	0	0	0	0	0	0	1	2	0	3
5:00 PM	0	4	0	0	4	3	0	0	0	3	0	0	0	0	0
5:15 PM	1	2	1	0	4	0	0	0	0	0	1	2	1	0	4
5:30 PM	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Count Total	8	24	5	0	37	5	0	0	0	5	2	7	5	0	14
Peak Hour	3	17	1	0	21	3	0	0	0	3	1	5	4	0	10

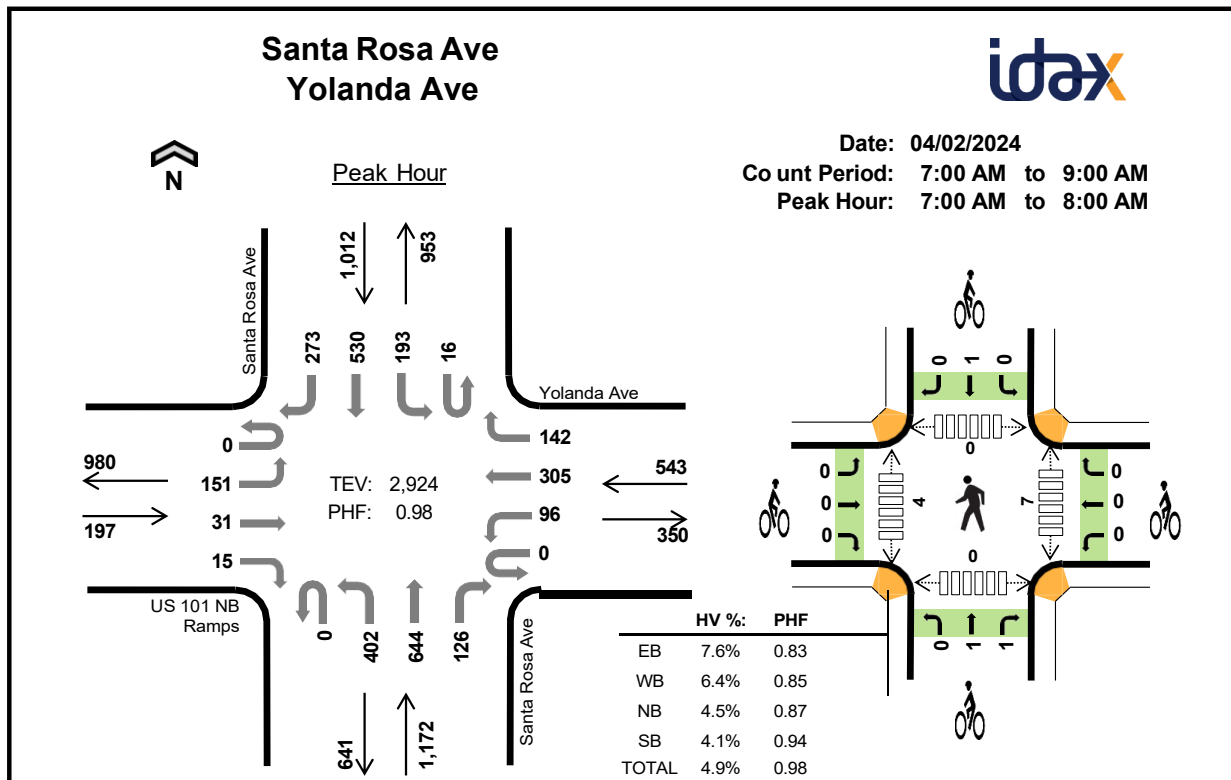
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Bellevue Ave				Bellevue Ave				Moorland Ave				Driveway				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	4	0	0	2	2	0	0	1	1	0	0	0	0	0	10	0
4:15 PM	0	0	0	0	0	1	5	1	0	1	0	0	0	0	0	0	8	0
4:30 PM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	0
4:45 PM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	27
5:00 PM	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	4	21
5:15 PM	0	0	1	0	0	0	2	0	0	1	0	0	0	0	0	0	4	17
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	15
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Count Total	0	0	8	0	0	4	19	1	0	3	1	1	0	0	0	0	37	0
Peak Hour	0	0	3	0	0	2	14	1	0	1	0	0	0	0	0	0	21	0

Two-Hour Count Summaries - Bikes

Interval Start	Bellevue Ave			Bellevue Ave			Moorland Ave			Driveway			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	3	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	4
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	5
Count Total	0	1	4	0	0	0	0	0	0	0	0	0	5	0
Peak Hour	0	1	2	0	0	0	0	0	0	0	0	0	3	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		US 101 NB Ramps				Yolanda Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	45	12	2	0	17	66	25	0	119	184	33	5	45	111	74	738	0
7:15 AM		0	38	7	6	0	35	76	48	0	77	162	28	3	53	143	70	746	0
7:30 AM		0	37	4	3	0	27	89	36	0	107	146	37	5	39	145	67	742	0
7:45 AM		0	31	8	4	0	17	74	33	0	99	152	28	3	56	131	62	698	2,924
8:00 AM		0	61	16	7	0	29	54	15	0	56	91	20	5	34	149	68	605	2,791
8:15 AM		0	53	15	2	0	21	39	17	0	74	79	19	4	44	123	65	555	2,600
8:30 AM		0	54	10	12	0	21	70	25	0	80	94	22	1	38	128	65	620	2,478
8:45 AM		0	56	15	6	0	26	37	23	0	62	90	23	3	29	148	82	600	2,380
Count Total		0	375	87	42	0	193	505	222	0	674	998	210	29	338	1,078	553	5,304	0
Peak Hour	All	0	151	31	15	0	96	305	142	0	402	644	126	16	193	530	273	2,924	0
	HV	0	11	3	1	0	4	17	14	0	19	28	6	0	9	12	20	144	0
	HV%	-	7%	10%	7%	-	4%	6%	10%	-	5%	4%	5%	0%	5%	2%	7%	5%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	7	10	12	31	0	0	1	1	2	1	0	0	0	1
7:15 AM	6	12	10	7	35	0	0	0	0	0	2	1	0	0	3
7:30 AM	3	10	19	12	44	0	0	1	0	1	2	2	0	0	4
7:45 AM	4	6	14	10	34	0	0	0	0	0	2	1	0	0	3
8:00 AM	6	5	13	13	37	0	0	3	0	3	2	1	0	0	3
8:15 AM	3	5	11	11	30	0	0	0	0	0	2	0	0	0	2
8:30 AM	4	9	4	8	25	0	0	0	0	0	5	1	0	0	6
8:45 AM	8	1	3	8	20	0	0	1	0	1	1	1	0	0	2
Count Total	36	55	84	81	256	0	0	6	1	7	17	7	0	0	24
Peak Hour	15	35	53	41	144	0	0	2	1	3	7	4	0	0	11

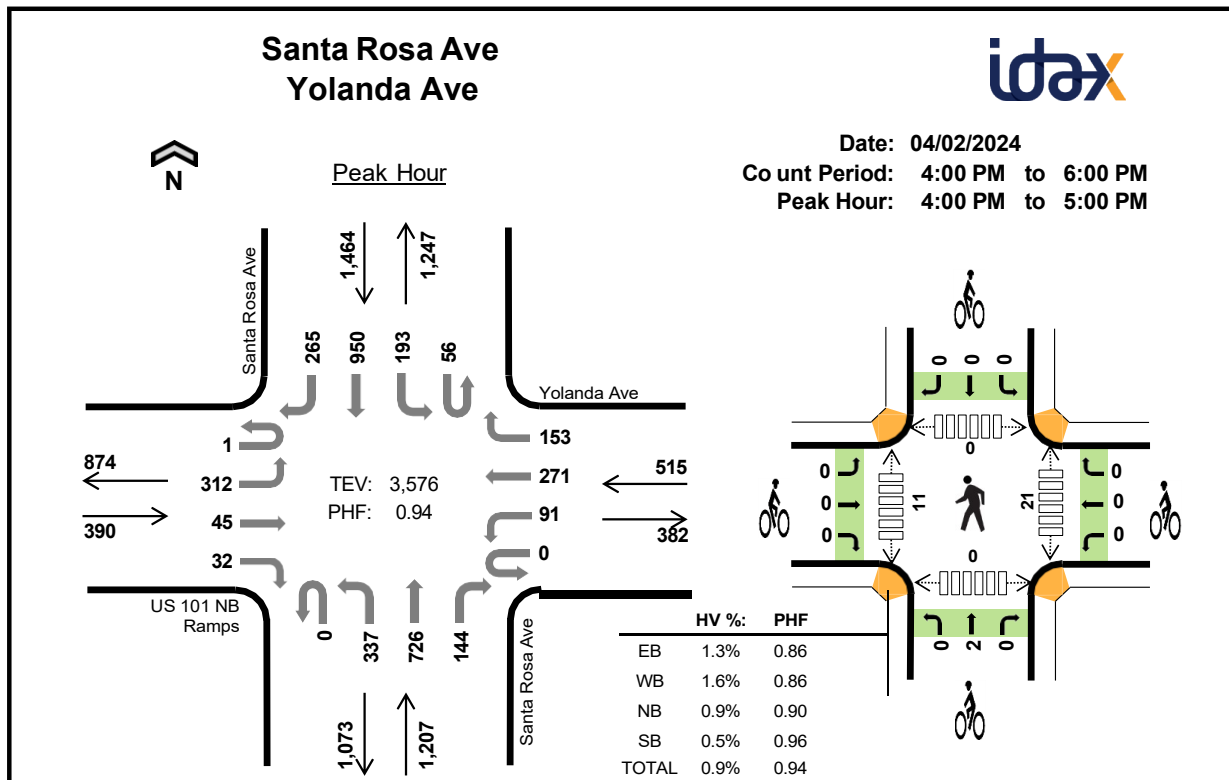
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	US 101 NB Ramps				Yolanda Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	0	0	0	2	2	3	0	4	5	1	0	3	3	6	31	0
7:15 AM	0	4	1	1	0	2	6	4	0	2	7	1	0	2	3	2	35	0
7:30 AM	0	3	0	0	0	0	5	5	0	10	7	2	0	1	2	9	44	0
7:45 AM	0	2	2	0	0	0	4	2	0	3	9	2	0	3	4	3	34	144
8:00 AM	0	4	2	0	0	0	5	0	0	4	8	1	0	2	4	7	37	150
8:15 AM	0	0	3	0	0	0	3	2	0	6	4	1	0	2	4	5	30	145
8:30 AM	0	3	0	1	0	0	7	2	0	2	1	1	0	0	3	5	25	126
8:45 AM	0	4	3	1	0	0	1	0	0	1	2	0	0	1	4	3	20	112
Count Total	0	22	11	3	0	4	33	18	0	32	43	9	0	14	27	40	256	0
Peak Hour	0	11	3	1	0	4	17	14	0	19	28	6	0	9	12	20	144	0

Two-Hour Count Summaries - Bikes

Interval Start	US 101 NB Ramps			Yolanda Ave			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	4
Count Total	0	0	0	0	0	0	0	5	1	0	1	0	7	0
Peak Hour	0	0	0	0	0	0	0	1	1	0	1	0	3	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		US 101 NB Ramps				Yolanda Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	74	10	6	0	18	76	49	0	78	217	42	17	52	240	73	952	0
4:15 PM		0	87	9	4	0	30	78	42	0	87	165	32	11	43	233	66	887	0
4:30 PM		1	69	10	6	0	24	58	29	0	82	182	37	18	47	244	61	868	0
4:45 PM		0	82	16	16	0	19	59	33	0	90	162	33	10	51	233	65	869	3,576
5:00 PM		1	82	18	15	0	30	48	26	0	64	126	34	17	46	228	51	786	3,410
5:15 PM		0	64	14	15	0	26	41	22	0	89	127	26	21	53	187	62	747	3,270
5:30 PM		1	73	22	12	0	14	36	28	0	70	116	20	9	33	148	50	632	3,034
5:45 PM		0	65	14	8	0	13	36	22	0	80	125	18	18	31	197	56	683	2,848
Count Total		3	596	113	82	0	174	432	251	0	640	1,220	242	121	356	1,710	484	6,424	0
Peak Hour	All	1	312	45	32	0	91	271	153	0	337	726	144	56	193	950	265	3,576	0
	HV	0	3	1	1	0	1	6	1	0	4	6	1	0	1	4	2	31	0
	HV%	0%	1%	2%	3%	-	1%	2%	1%	-	1%	1%	1%	0%	1%	0%	1%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	2	2	5	0	0	1	0	1	2	6	0	0	8
4:15 PM	2	2	3	2	9	0	0	1	0	1	1	1	0	0	2
4:30 PM	0	4	3	1	8	0	0	0	0	0	8	3	0	0	11
4:45 PM	2	2	3	2	9	0	0	0	0	0	10	1	0	0	11
5:00 PM	3	0	0	3	6	0	0	1	0	1	2	3	0	0	5
5:15 PM	1	0	4	6	11	0	0	0	0	0	3	3	0	0	6
5:30 PM	0	2	1	1	4	0	0	0	0	0	2	2	0	0	4
5:45 PM	2	2	0	0	4	0	0	2	0	2	11	2	0	0	13
Count Total	11	12	16	17	56	0	0	5	0	5	39	21	0	0	60
Peak Hour	5	8	11	7	31	0	0	2	0	2	21	11	0	0	32

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	US 101 NB Ramps				Yolanda Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	1	0	0	0	0	0	1	1	0	0	1	1	0	5	0
4:15 PM	0	2	0	0	0	1	1	0	0	1	2	0	0	0	1	1	9	0
4:30 PM	0	0	0	0	0	0	3	1	0	1	2	0	0	0	0	1	8	0
4:45 PM	0	1	1	0	0	0	2	0	0	1	1	1	0	0	2	0	9	31
5:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	1	2	0	6	32
5:15 PM	0	1	0	0	0	0	0	0	0	3	1	0	0	2	3	1	11	34
5:30 PM	0	0	0	0	0	0	1	1	0	0	1	0	0	0	1	0	4	30
5:45 PM	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	4	25
Count Total	0	8	2	1	0	1	9	2	0	7	8	1	0	4	10	3	56	0
Peak Hour	0	3	1	1	0	1	6	1	0	4	6	1	0	1	4	2	31	0

Two-Hour Count Summaries - Bikes

Interval Start	US 101 NB Ramps			Yolanda Ave			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	2	3
Count Total	0	0	0	0	0	0	0	3	2	0	0	0	5	0
Peak Hour	0	0	0	0	0	0	0	2	0	0	0	0	2	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Santa Rosa Ave Bellevue Ave

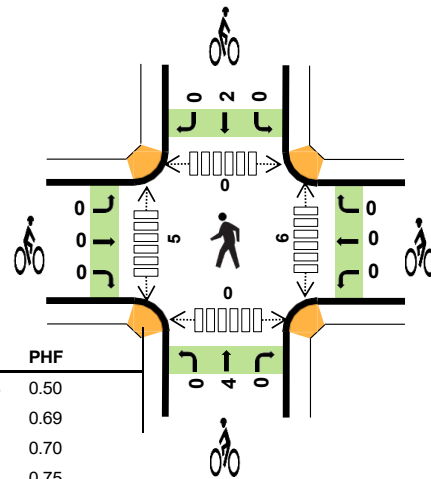
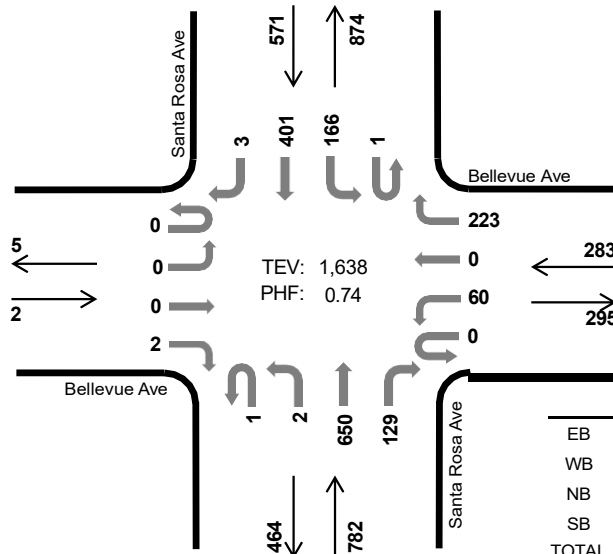


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	50.0%	0.50
WB	1.1%	0.69
NB	4.1%	0.70
SB	3.9%	0.75
TOTAL	3.5%	0.74

Two-Hour Count Summaries

Interval Start		Bellevue Ave				Bellevue Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	3	0	10	0	0	65	7	0	8	68	0	161	0
7:15 AM		0	0	0	1	1	13	0	15	0	0	92	11	0	18	61	0	212	0
7:30 AM		0	0	0	1	0	14	0	53	0	1	112	30	0	55	82	2	350	0
7:45 AM		0	0	0	1	0	10	0	73	0	0	201	78	0	76	115	0	554	1,277
8:00 AM		0	0	0	0	0	25	0	78	1	0	157	12	0	23	98	0	394	1,510
8:15 AM		0	0	0	0	0	11	0	19	0	1	180	9	1	12	106	1	340	1,638
8:30 AM		0	1	0	1	0	3	0	12	0	2	188	8	0	11	87	0	313	1,601
8:45 AM		0	1	0	1	0	6	0	17	0	1	193	8	0	11	96	1	335	1,382
Count Total		0	2	0	5	1	85	0	277	1	5	1,188	163	1	214	713	4	2,659	0
Peak Hour	All	0	0	0	2	0	60	0	223	1	2	650	129	1	166	401	3	1,638	0
	HV	0	0	0	1	0	3	0	0	0	1	30	1	0	0	22	0	58	0
	HV%	-	-	-	50%	-	5%	-	0%	0%	50%	5%	1%	0%	0%	5%	0%	4%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	1	6	3	10	0	0	0	0	0	2	2	2	0	6
7:15 AM	0	0	9	2	11	0	0	0	1	1	2	2	0	0	4
7:30 AM	0	3	6	8	17	0	0	1	0	1	2	1	0	0	3
7:45 AM	1	0	5	3	9	0	0	1	1	2	1	1	0	0	2
8:00 AM	0	0	8	7	15	0	0	2	1	3	0	2	0	0	2
8:15 AM	0	0	13	4	17	0	0	0	0	0	3	1	0	0	4
8:30 AM	1	0	12	5	18	0	0	0	0	0	6	1	0	0	7
8:45 AM	1	0	4	5	10	0	0	1	1	2	1	0	0	0	1
Count Total	3	4	63	37	107	0	0	5	4	9	17	10	2	0	29
Peak Hour	1	3	32	22	58	0	0	4	2	6	6	5	0	0	11

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Bellevue Ave				Bellevue Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	5	1	0	0	3	0	10	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	8	1	0	1	1	0	11	0
7:30 AM	0	0	0	0	0	3	0	0	0	1	4	1	0	0	8	0	17	0
7:45 AM	0	0	0	1	0	0	0	0	0	0	5	0	0	0	3	0	9	47
8:00 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	7	0	15	52
8:15 AM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	4	0	17	58
8:30 AM	0	1	0	0	0	0	0	0	0	2	10	0	0	0	5	0	18	59
8:45 AM	0	1	0	0	0	0	0	0	0	0	4	0	0	0	5	0	10	60
Count Total	0	2	0	1	0	3	0	1	0	3	57	3	0	1	36	0	107	0
Peak Hour	0	0	0	1	0	3	0	0	0	1	30	1	0	0	22	0	58	0

Two-Hour Count Summaries - Bikes

Interval Start	Bellevue Ave			Bellevue Ave			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	4
8:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3	7
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	1	0	0	0	1	0	2	5
Count Total	0	0	0	0	0	0	1	4	0	0	4	0	9	0
Peak Hour	0	0	0	0	0	0	0	4	0	0	2	0	6	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Santa Rosa Ave Bellevue Ave

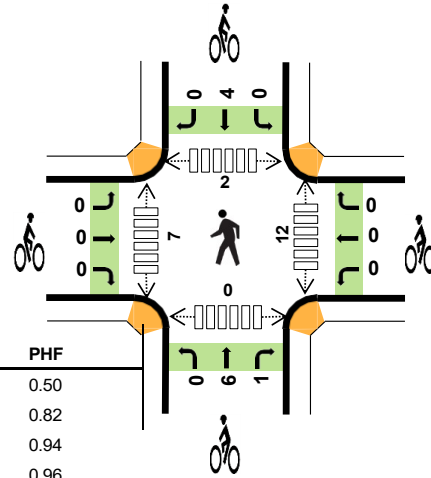
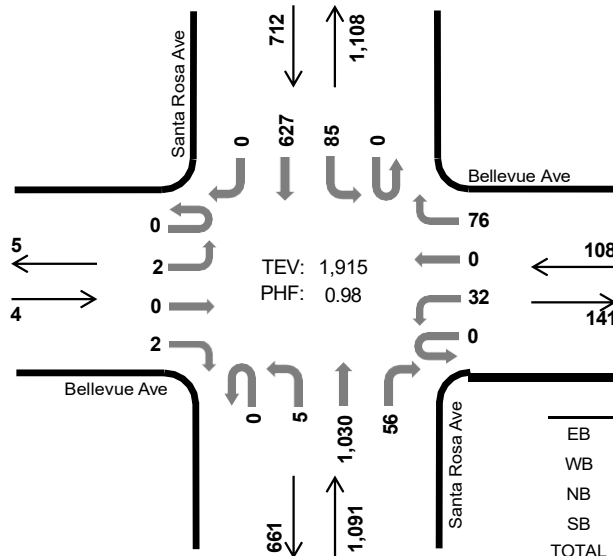


Peak Hour

Date: 04/02/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	0.0%	0.50
WB	1.9%	0.82
NB	1.1%	0.94
SB	1.5%	0.96
TOTAL	1.3%	0.98

Two-Hour Count Summaries

Interval Start		Bellevue Ave				Bellevue Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	1	0	5	0	18	0	1	272	16	0	23	144	0	480	0
4:15 PM		0	1	0	1	0	9	0	24	0	1	258	16	0	22	158	0	490	0
4:30 PM		0	0	0	0	0	6	0	19	0	3	254	14	0	18	167	0	481	0
4:45 PM		0	1	0	0	0	12	0	15	0	0	246	10	0	22	158	0	464	1,915
5:00 PM		0	0	0	1	0	8	0	16	0	1	246	22	0	16	149	0	459	1,894
5:15 PM		0	0	0	0	0	6	0	23	0	0	232	12	0	29	172	0	474	1,878
5:30 PM		0	0	0	1	0	13	0	21	0	0	212	12	0	18	160	0	437	1,834
5:45 PM		0	0	0	0	0	7	0	13	0	2	173	9	0	17	146	0	367	1,737
Count Total		0	2	0	4	0	66	0	149	0	8	1,893	111	0	165	1,254	0	3,652	0
Peak Hour	All	0	2	0	2	0	32	0	76	0	5	1,030	56	0	85	627	0	1,915	0
	HV	0	0	0	0	0	1	0	1	0	1	9	2	0	1	10	0	25	0
	HV%	-	0%	-	0%	-	3%	-	1%	-	20%	1%	4%	-	1%	2%	-	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	7	3	11	0	0	3	2	5	2	2	1	0	5
4:15 PM	0	1	2	2	5	0	0	2	1	3	2	0	0	0	2
4:30 PM	0	0	1	1	2	0	0	1	1	2	6	2	1	0	9
4:45 PM	0	0	2	5	7	0	0	1	0	1	2	3	0	0	5
5:00 PM	0	0	3	2	5	0	0	1	0	1	17	4	2	0	23
5:15 PM	0	0	1	5	6	0	0	4	0	4	5	2	1	0	8
5:30 PM	0	0	2	2	4	0	0	0	0	0	2	0	1	0	3
5:45 PM	0	0	2	1	3	0	0	1	0	1	6	1	0	0	7
Count Total	0	2	20	21	43	0	0	13	4	17	42	14	6	0	62
Peak Hour	0	2	12	11	25	0	0	7	4	11	12	7	2	0	21

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Bellevue Ave				Bellevue Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	1	4	2	0	0	3	0	11	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	2	0	0	1	1	0	5	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	7	25
5:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	19
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	6	20
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	22
5:45 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	3	18
Count Total	0	0	0	0	0	1	0	1	0	2	16	2	0	1	20	0	43	0
Peak Hour	0	0	0	0	0	1	0	1	0	1	9	2	0	1	10	0	25	0

Two-Hour Count Summaries - Bikes

Interval Start	Bellevue Ave			Bellevue Ave			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	3	0	0	2	0	5	0
4:15 PM	0	0	0	0	0	0	0	1	1	0	1	0	3	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	11
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	7
5:15 PM	0	0	0	0	0	0	0	3	1	0	0	0	4	8
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	6
Count Total	0	0	0	0	0	0	0	11	2	0	4	0	17	0
Peak Hour	0	0	0	0	0	0	0	6	1	0	4	0	11	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Santa Rosa Ave Robles Ave

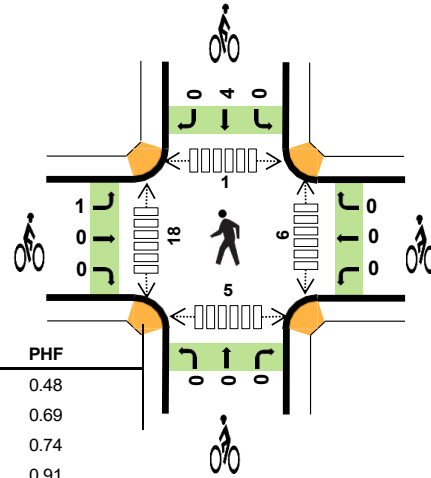
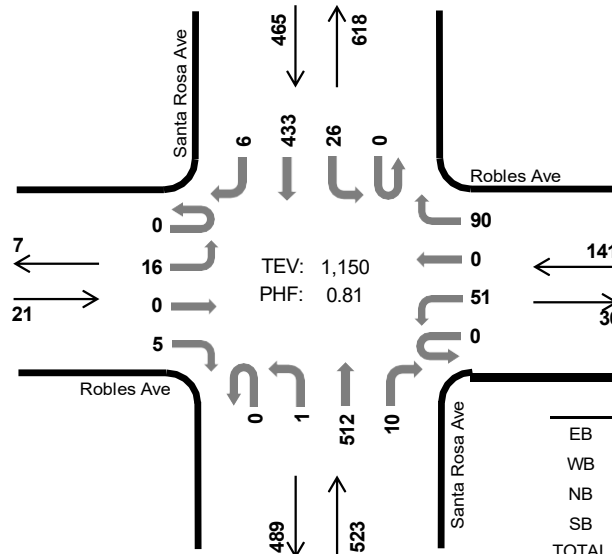


Peak Hour

Date: 04/09/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	0.0%	0.48
WB	1.4%	0.69
NB	5.2%	0.74
SB	7.1%	0.91
TOTAL	5.4%	0.81

Two-Hour Count Summaries

Interval Start		Robles Ave				Robles Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	2	0	3	0	11	0	14	0	1	55	4	0	2	72	1	165	0
7:15 AM		0	2	0	2	0	6	0	10	0	1	58	3	0	5	77	0	164	0
7:30 AM		0	3	0	1	0	15	0	29	0	0	97	3	0	9	101	0	258	0
7:45 AM		0	9	0	2	0	18	0	33	0	0	174	2	0	6	109	3	356	943
8:00 AM		0	2	0	1	0	9	0	17	0	0	89	1	0	7	120	1	247	1,025
8:15 AM		0	2	0	1	0	9	0	11	0	1	152	4	0	4	103	2	289	1,150
8:30 AM		0	2	1	1	0	11	1	4	0	0	122	4	0	10	90	5	251	1,143
8:45 AM		0	1	0	1	0	6	1	7	0	2	131	4	0	3	77	6	239	1,026
Count Total		0	23	1	12	0	85	2	125	0	5	878	25	0	46	749	18	1,969	0
Peak Hour	All	0	16	0	5	0	51	0	90	0	1	512	10	0	26	433	6	1,150	0
	HV	0	0	0	0	0	2	0	0	0	0	26	1	0	1	32	0	62	0
	HV%	-	0%	-	0%	-	4%	-	0%	-	0%	5%	10%	-	4%	7%	0%	5%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	4	6	10	20	0	0	0	0	0	4	1	0	6	11
7:15 AM	2	3	10	4	19	0	0	0	1	1	3	0	0	2	5
7:30 AM	0	1	6	9	16	0	0	0	0	0	0	2	0	1	3
7:45 AM	0	0	8	3	11	0	0	0	1	1	1	7	0	1	9
8:00 AM	0	1	8	13	22	1	0	0	2	3	3	4	0	3	10
8:15 AM	0	0	5	8	13	0	0	0	1	1	2	5	1	0	8
8:30 AM	0	0	11	6	17	0	0	0	0	0	4	3	3	1	11
8:45 AM	1	1	8	4	14	0	0	1	0	1	1	6	0	6	13
Count Total	3	10	62	57	132	1	0	1	5	7	18	28	4	20	70
Peak Hour	0	2	27	33	62	1	0	0	4	5	6	18	1	5	30

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Robles Ave				Robles Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	1	0	3	0	0	5	1	0	0	10	0	20	0
7:15 AM	0	0	0	2	0	0	0	3	0	0	10	0	0	0	4	0	19	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	6	0	0	0	9	0	16	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	1	2	0	11	66
8:00 AM	0	0	0	0	0	1	0	0	0	0	8	0	0	0	13	0	22	68
8:15 AM	0	0	0	0	0	0	0	0	0	0	4	1	0	0	8	0	13	62
8:30 AM	0	0	0	0	0	0	0	0	0	0	10	1	0	0	6	0	17	63
8:45 AM	0	0	0	1	0	0	0	1	0	0	7	1	0	0	4	0	14	66
Count Total	0	0	0	3	0	3	0	7	0	0	58	4	0	1	56	0	132	0
Peak Hour	0	0	0	0	0	2	0	0	0	0	26	1	0	1	32	0	62	0

Two-Hour Count Summaries - Bikes

Interval Start	Robles Ave			Robles Ave			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	2
8:00 AM	1	0	0	0	0	0	0	0	0	0	2	0	3	5
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	5
Count Total	1	0	0	0	0	0	0	1	0	1	4	0	7	0
Peak Hour	1	0	0	0	0	0	0	0	0	0	4	0	5	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Santa Rosa Ave Robles Ave

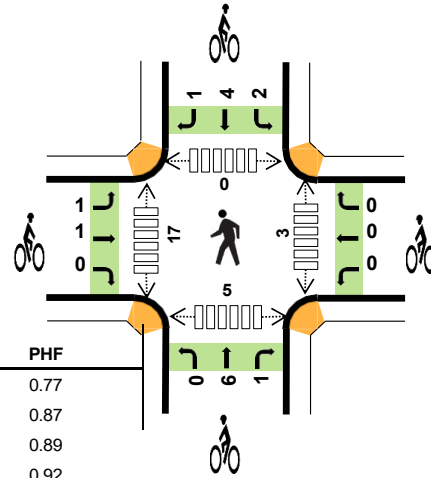
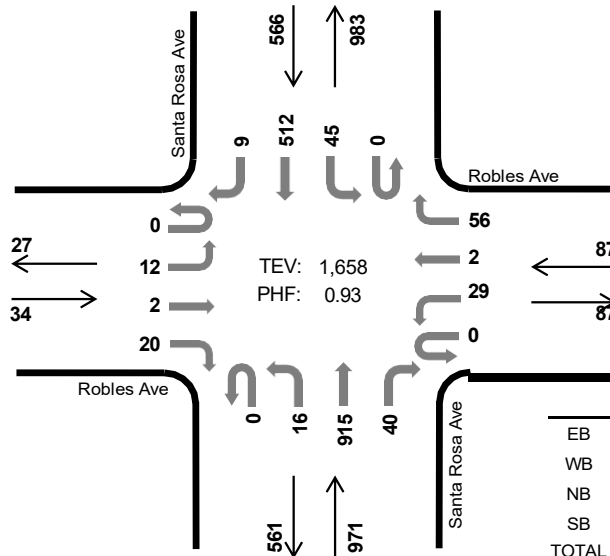


Peak Hour

Date: 04/09/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	0.0%	0.77
WB	2.3%	0.87
NB	2.4%	0.89
SB	2.1%	0.92
TOTAL	2.2%	0.93

Two-Hour Count Summaries

Interval Start		Robles Ave				Robles Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	3	0	4	0	10	1	14	0	3	259	10	0	12	129	0	445	0
4:15 PM		0	5	1	5	0	2	0	19	0	3	240	7	0	16	133	4	435	0
4:30 PM		0	3	1	4	0	6	0	12	0	6	210	9	0	6	125	5	387	0
4:45 PM		0	1	0	7	0	11	1	11	0	4	206	14	0	11	125	0	391	1,658
5:00 PM		0	6	0	3	0	6	0	12	0	3	231	11	0	10	129	2	413	1,626
5:15 PM		0	7	0	1	0	3	0	14	0	5	207	12	0	17	135	6	407	1,598
5:30 PM		0	5	0	3	0	7	0	11	0	1	164	8	0	16	116	2	333	1,544
5:45 PM		0	1	0	3	0	8	0	13	1	3	152	14	0	12	105	1	313	1,466
Count Total		0	31	2	30	0	53	2	106	1	28	1,669	85	0	100	997	20	3,124	0
Peak Hour	All	0	12	2	20	0	29	2	56	0	16	915	40	0	45	512	9	1,658	0
	HV	0	0	0	0	0	1	0	1	0	1	22	0	0	1	11	0	37	0
	HV%	-	0%	0%	0%	-	3%	0%	2%	-	6%	2%	0%	-	2%	2%	0%	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	6	3	10	1	0	2	3	6	1	7	0	1	9
4:15 PM	0	1	5	4	10	0	0	0	2	2	1	0	0	0	1
4:30 PM	0	0	9	2	11	1	0	3	1	5	0	4	0	1	5
4:45 PM	0	0	3	3	6	0	0	2	1	3	1	6	0	3	10
5:00 PM	0	1	4	2	7	0	1	0	0	1	1	3	0	1	5
5:15 PM	0	0	0	7	7	0	0	1	0	1	1	2	0	3	6
5:30 PM	0	0	3	0	3	0	0	2	0	2	3	7	0	2	12
5:45 PM	0	0	1	1	2	0	0	0	2	2	1	10	0	4	15
Count Total	0	3	31	22	56	2	1	10	9	22	9	39	0	15	63
Peak Hour	0	2	23	12	37	2	0	7	7	16	3	17	0	5	25

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Robles Ave				Robles Ave				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	6	0	0	1	2	0	10	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	4	0	10	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	8	0	0	0	2	0	11	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6	37
5:00 PM	0	0	0	0	0	1	0	0	0	0	1	3	0	0	0	2	0	7	34
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	31
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	23
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	19
Count Total	0	0	0	0	0	2	0	1	0	0	3	28	0	0	1	21	0	56	0
Peak Hour	0	0	0	0	0	1	0	1	0	0	1	22	0	0	1	11	0	37	0

Two-Hour Count Summaries - Bikes

Interval Start	Robles Ave			Robles Ave			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	1	0	0	0	0	0	0	2	0	2	1	0	6	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0
4:30 PM	0	1	0	0	0	0	0	2	1	0	1	0	5	0
4:45 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	16
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	11
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	10
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	7
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	6
Count Total	1	1	0	0	0	1	0	9	1	2	6	1	22	0
Peak Hour	1	1	0	0	0	0	0	6	1	2	4	1	16	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Moorland Ave Todd Rd

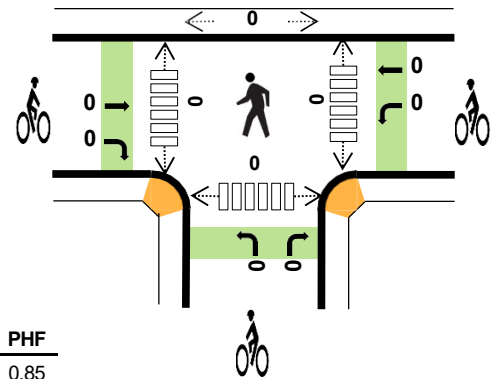
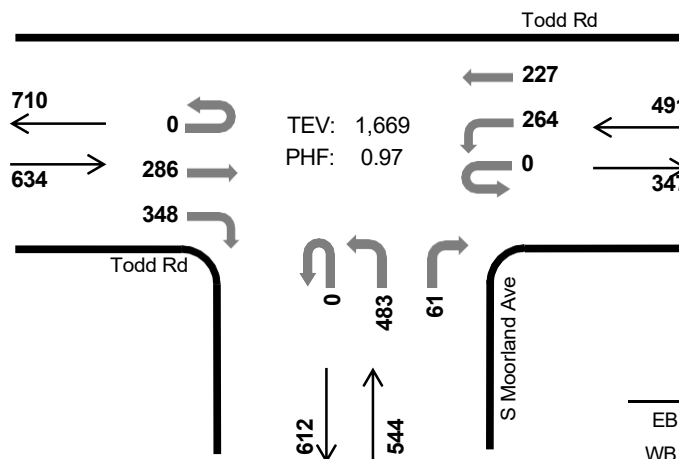


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	12.5%	0.85
WB	7.5%	0.91
NB	8.1%	0.92
SB	-	-
TOTAL	9.6%	0.97

Two-Hour Count Summaries

Interval Start	Todd Rd Eastbound				Todd Rd Westbound				S Moorland Ave Northbound				S Moorland Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	58	61	0	73	40	0	0	84	0	27	0	0	0	0	343	0
7:15 AM	0	0	57	70	0	63	57	0	0	102	0	22	0	0	0	0	371	0
7:30 AM	0	0	72	74	0	76	59	0	0	110	0	23	0	0	0	0	414	0
7:45 AM	0	0	74	113	0	52	54	0	0	125	0	11	0	0	0	0	429	1,557
8:00 AM	0	0	76	77	0	76	53	0	0	117	0	10	0	0	0	0	409	1,623
8:15 AM	0	0	64	84	0	60	61	0	0	131	0	17	0	0	0	0	417	1,669
8:30 AM	0	0	68	89	0	56	31	0	0	102	0	7	0	0	0	0	353	1,608
8:45 AM	0	0	49	79	0	58	36	0	0	97	0	15	0	0	0	0	334	1,513
Count Total	0	0	518	647	0	514	391	0	0	868	0	132	0	0	0	0	3,070	0
Peak Hour	All	0	0	286	348	0	264	227	0	0	483	0	61	0	0	0	1,669	0
	HV	0	0	30	49	0	13	24	0	0	40	0	4	0	0	0	160	0
	HV%	-	-	10%	14%	-	5%	11%	-	-	8%	-	7%	-	-	-	10%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	30	4	7	0	41	0	0	0	0	0	0	0	0	0	0
7:15 AM	31	11	11	0	53	0	0	0	0	0	0	0	0	0	0
7:30 AM	18	16	16	0	50	0	0	0	0	0	0	0	0	0	0
7:45 AM	25	9	10	0	44	0	0	0	0	0	0	0	0	0	0
8:00 AM	23	5	6	0	34	0	0	0	0	0	0	0	0	0	0
8:15 AM	13	7	12	0	32	0	0	0	0	0	0	0	0	0	0
8:30 AM	14	9	8	0	31	0	0	1	0	1	0	0	0	0	0
8:45 AM	16	12	14	0	42	0	0	0	0	0	0	0	0	0	0
Count Total	170	73	84	0	327	0	0	1	0	1	0	0	0	0	0
Peak Hr	79	37	44	0	160	0	0	0	0	0	0	0	0	0	0

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Todd Rd				Todd Rd				S Moorland Ave				N/A				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	15	15	0	3	1	0	0	7	0	0	0	0	0	0	0	41	0
7:15 AM	0	0	8	23	0	5	6	0	0	8	0	3	0	0	0	0	0	53	0
7:30 AM	0	0	9	9	0	10	6	0	0	14	0	2	0	0	0	0	0	50	0
7:45 AM	0	0	5	20	0	1	8	0	0	10	0	0	0	0	0	0	0	44	188
8:00 AM	0	0	13	10	0	2	3	0	0	5	0	1	0	0	0	0	0	34	181
8:15 AM	0	0	3	10	0	0	7	0	0	11	0	1	0	0	0	0	0	32	160
8:30 AM	0	0	6	8	0	4	5	0	0	8	0	0	0	0	0	0	0	31	141
8:45 AM	0	0	5	11	0	5	7	0	0	13	0	1	0	0	0	0	0	42	139
Count Total	0	0	64	106	0	30	43	0	0	76	0	8	0	0	0	0	0	327	0
Peak Hour	0	0	30	49	0	13	24	0	0	40	0	4	0	0	0	0	0	160	0

Two-Hour Count Summaries - Bikes

Interval Start	Todd Rd			Todd Rd			S Moorland Ave			N/A			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Moorland Ave Todd Rd

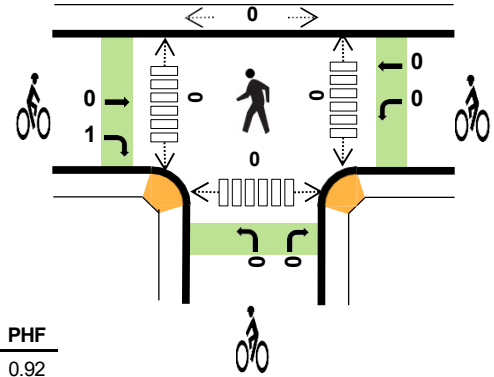
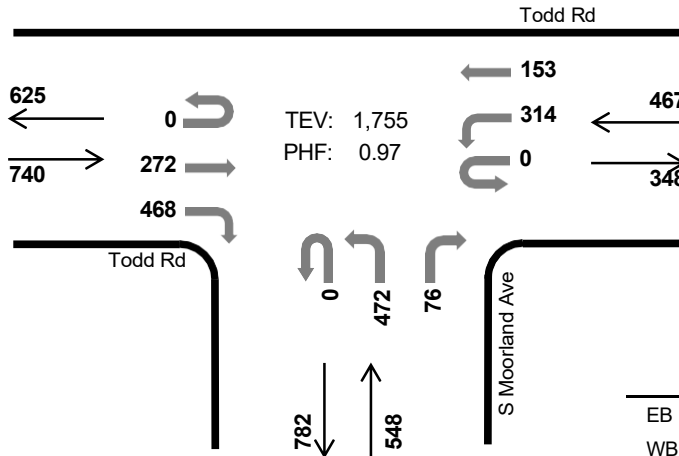


Peak Hour

Date: 04/02/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	5.0%	0.92
WB	10.5%	0.88
NB	8.8%	0.94
SB	-	-
TOTAL	7.6%	0.97

Two-Hour Count Summaries

Interval Start	Todd Rd Eastbound				Todd Rd Westbound				S Moorland Ave Northbound				S Moorland Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	70	132	0	70	36	0	0	120	0	25	0	0	0	0	453	0
4:15 PM	0	0	67	111	0	89	44	0	0	120	0	18	0	0	0	0	449	0
4:30 PM	0	0	66	115	0	80	34	0	0	114	0	14	0	0	0	0	423	0
4:45 PM	0	0	69	110	0	75	39	0	0	118	0	19	0	0	0	0	430	1,755
5:00 PM	0	0	69	134	0	76	36	0	0	105	0	29	0	0	0	0	449	1,751
5:15 PM	0	0	64	123	0	56	24	0	0	120	0	21	0	0	0	0	408	1,710
5:30 PM	0	0	65	88	0	79	47	0	0	96	0	25	0	0	0	0	400	1,687
5:45 PM	0	0	69	80	0	56	28	0	0	101	0	24	0	0	0	0	358	1,615
Count Total	0	0	539	893	0	581	288	0	0	894	0	175	0	0	0	0	3,370	0
Peak Hour	All	0	0	272	468	0	314	153	0	0	472	0	76	0	0	0	1,755	0
	HV	0	0	17	20	0	15	34	0	0	48	0	0	0	0	0	134	0
	HV%	-	-	6%	4%	-	5%	22%	-	-	10%	-	0%	-	-	-	8%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	13	12	11	0	36	0	0	0	0	0	0	0	0	0	0
4:15 PM	11	12	16	0	39	0	0	0	0	0	0	0	0	0	0
4:30 PM	6	12	10	0	28	0	0	0	0	0	0	0	0	0	0
4:45 PM	7	13	11	0	31	1	0	0	0	1	0	0	0	0	0
5:00 PM	7	12	6	0	25	0	0	0	0	0	0	0	0	0	0
5:15 PM	5	4	17	0	26	0	0	0	0	0	0	0	0	0	0
5:30 PM	3	12	5	0	20	1	0	0	0	1	0	2	2	0	4
5:45 PM	3	10	3	0	16	0	0	0	0	0	0	0	0	0	0
Count Total	55	87	79	0	221	2	0	0	0	2	0	2	2	0	4
Peak Hr	37	49	48	0	134	1	0	0	0	1	0	0	0	0	0

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Todd Rd				Todd Rd				S Moorland Ave				N/A				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	4	9	0	5	7	0	0	11	0	0	0	0	0	0	36	0
4:15 PM	0	0	5	6	0	4	8	0	0	16	0	0	0	0	0	0	39	0
4:30 PM	0	0	5	1	0	4	8	0	0	10	0	0	0	0	0	0	28	0
4:45 PM	0	0	3	4	0	2	11	0	0	11	0	0	0	0	0	0	31	134
5:00 PM	0	0	3	4	0	5	7	0	0	6	0	0	0	0	0	0	25	123
5:15 PM	0	0	2	3	0	1	3	0	0	14	0	3	0	0	0	0	26	110
5:30 PM	0	0	2	1	0	3	9	0	0	5	0	0	0	0	0	0	20	102
5:45 PM	0	0	2	1	0	5	5	0	0	1	0	2	0	0	0	0	16	87
Count Total	0	0	26	29	0	29	58	0	0	74	0	5	0	0	0	0	221	0
Peak Hour	0	0	17	20	0	15	34	0	0	48	0	0	0	0	0	0	134	0

Two-Hour Count Summaries - Bikes

Interval Start	Todd Rd			Todd Rd			S Moorland Ave			N/A			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	2	0	0	0	0	0	0	0	0	0	2	0
Peak Hour	0	0	1	0	0	0	0	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Todd Rd Overpass Todd Rd

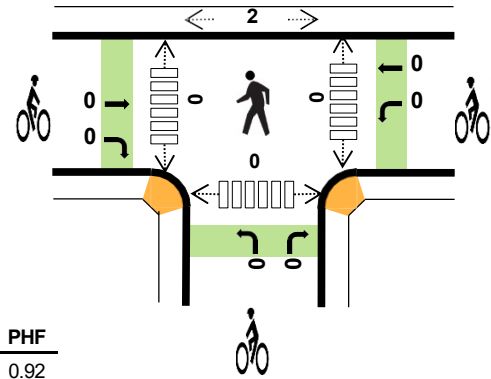
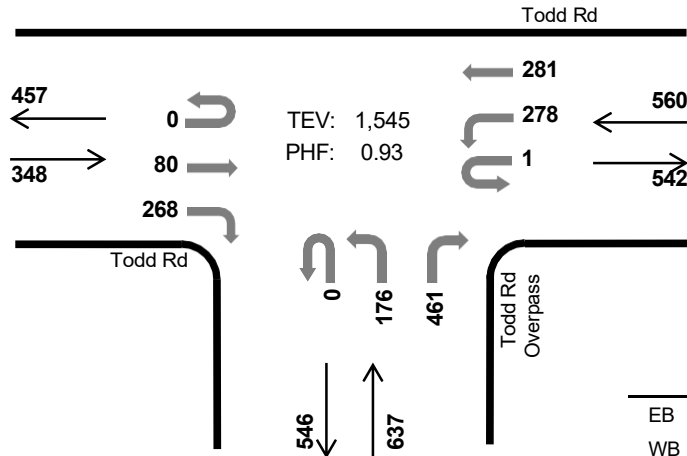


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	8.0%	0.92
WB	12.0%	0.90
NB	8.2%	0.95
SB	-	-
TOTAL	9.5%	0.93

Two-Hour Count Summaries

Interval Start	Todd Rd Eastbound				Todd Rd Westbound				Todd Rd Overpass Northbound				N/A Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	24	65	0	55	61	0	0	39	0	93	0	0	0	0	337	0
7:15 AM	0	0	22	57	0	63	60	0	0	52	0	87	0	0	0	0	341	0
7:30 AM	0	0	10	74	0	79	76	0	0	52	0	104	0	0	0	0	395	0
7:45 AM	0	0	26	69	0	76	77	0	0	53	0	114	0	0	0	0	415	1,488
8:00 AM	0	0	23	60	0	65	73	0	0	37	0	129	0	0	0	0	387	1,538
8:15 AM	0	0	21	65	1	58	55	0	0	34	0	114	0	0	0	0	348	1,545
8:30 AM	0	0	22	47	0	52	60	0	0	41	0	114	0	0	0	0	336	1,486
8:45 AM	0	0	19	70	0	61	47	0	0	30	0	100	0	0	0	0	327	1,398
Count Total	0	0	167	507	1	509	509	0	0	338	0	855	0	0	0	0	2,886	0
Peak Hour	All	0	0	80	268	1	278	281	0	0	176	0	461	0	0	0	1,545	0
	HV	0	0	6	22	0	19	48	0	0	19	0	33	0	0	0	147	0
	HV%	-	-	8%	8%	0%	7%	17%	-	-	11%	-	7%	-	-	-	10%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	8	12	21	0	41	0	0	0	0	0	0	0	0	0	0
7:15 AM	9	11	27	0	47	0	0	0	0	0	0	0	0	0	0
7:30 AM	8	24	16	0	48	0	0	0	0	0	0	0	2	0	2
7:45 AM	10	19	16	0	45	0	0	0	0	0	0	0	0	0	0
8:00 AM	3	15	10	0	28	0	0	0	0	0	0	0	0	0	0
8:15 AM	7	9	10	0	26	0	0	0	0	0	0	0	0	0	0
8:30 AM	5	8	10	0	23	1	1	0	0	2	0	0	1	0	1
8:45 AM	10	15	8	0	33	0	0	1	0	1	0	0	1	0	1
Count Total	60	113	118	0	291	1	1	1	0	3	0	0	4	0	4
Peak Hr	28	67	52	0	147	0	0	0	0	0	0	0	2	0	2

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Todd Rd				Todd Rd				Todd Rd Overpass				N/A				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	7	0	2	10	0	0	17	0	4	0	0	0	0	41	0
7:15 AM	0	0	2	7	0	2	9	0	0	14	0	13	0	0	0	0	47	0
7:30 AM	0	0	1	7	0	11	13	0	0	4	0	12	0	0	0	0	48	0
7:45 AM	0	0	5	5	0	1	18	0	0	9	0	7	0	0	0	0	45	181
8:00 AM	0	0	0	3	0	4	11	0	0	4	0	6	0	0	0	0	28	168
8:15 AM	0	0	0	7	0	3	6	0	0	2	0	8	0	0	0	0	26	147
8:30 AM	0	0	0	5	0	2	6	0	0	5	0	5	0	0	0	0	23	122
8:45 AM	0	0	1	9	0	6	9	0	0	1	0	7	0	0	0	0	33	110
Count Total	0	0	10	50	0	31	82	0	0	56	0	62	0	0	0	0	291	0
Peak Hour	0	0	6	22	0	19	48	0	0	19	0	33	0	0	0	0	147	0

Two-Hour Count Summaries - Bikes

Interval Start	Todd Rd			Todd Rd			Todd Rd Overpass			N/A			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	2	2
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	3
Count Total	0	0	1	1	0	0	0	0	1	0	0	0	3	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Todd Rd Overpass Todd Rd

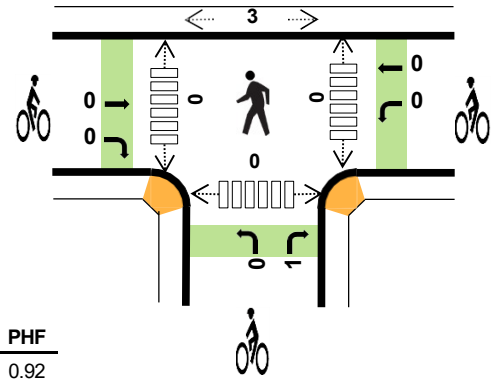
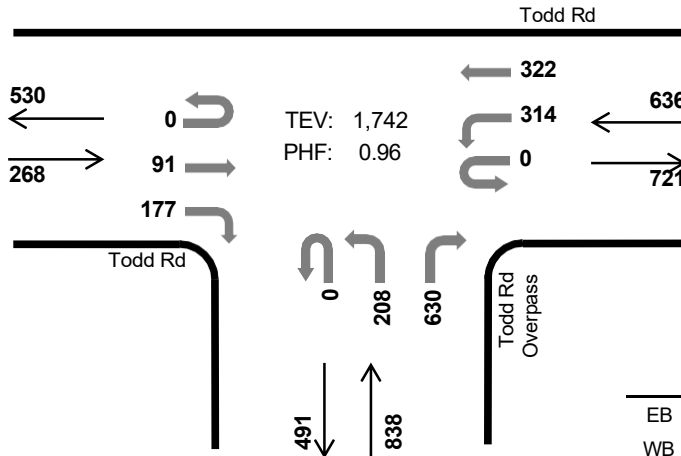


Peak Hour

Date: 04/02/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	4.5%	0.92
WB	5.2%	0.93
NB	2.7%	0.90
SB	-	-
TOTAL	3.9%	0.96

Two-Hour Count Summaries

Interval Start		Todd Rd				Todd Rd				Todd Rd Overpass				N/A				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	30	58	0	78	55	0	0	57	0	145	0	0	0	0	423	0
4:15 PM		0	0	16	45	0	83	76	0	0	45	0	169	0	0	0	0	434	0
4:30 PM		0	0	23	50	0	78	93	0	0	47	0	161	0	0	0	0	452	0
4:45 PM		0	0	23	46	0	71	79	0	0	52	0	132	0	0	0	0	403	1,712
5:00 PM		0	0	29	36	0	82	74	0	0	64	0	168	0	0	0	0	453	1,742
5:15 PM		0	0	23	47	0	76	59	0	0	50	0	137	0	0	0	0	392	1,700
5:30 PM		0	0	26	55	0	58	60	0	0	48	0	116	0	0	0	0	363	1,611
5:45 PM		0	0	32	45	0	79	33	0	0	32	0	110	0	0	0	0	331	1,539
Count Total		0	0	202	382	0	605	529	0	0	395	0	1,138	0	0	0	0	3,251	0
Peak Hour	All	0	0	91	177	0	314	322	0	0	208	0	630	0	0	0	0	1,742	0
	HV	0	0	2	10	0	23	10	0	0	8	0	15	0	0	0	0	68	0
	HV%	-	-	2%	6%	-	7%	3%	-	-	4%	-	2%	-	-	-	-	4%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	7	6	7	0	20	0	0	0	0	0	0	0	0	0	0
4:15 PM	4	11	7	0	22	0	0	1	0	1	0	0	2	0	2
4:30 PM	2	6	3	0	11	0	0	0	0	0	0	0	1	0	1
4:45 PM	1	6	4	0	11	0	0	0	0	0	0	0	0	0	0
5:00 PM	5	10	9	0	24	0	0	0	0	0	0	0	0	0	0
5:15 PM	6	12	7	0	25	0	0	0	0	0	0	0	0	0	0
5:30 PM	2	2	2	0	6	0	0	1	0	1	0	0	0	0	0
5:45 PM	3	3	7	0	13	0	0	0	0	0	0	0	0	0	0
Count Total	30	56	46	0	132	0	0	2	0	2	0	0	3	0	3
Peak Hr	12	33	23	0	68	0	0	1	0	1	0	0	3	0	3

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Todd Rd				Todd Rd				Todd Rd Overpass				N/A				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	6	0	5	1	0	0	2	0	5	0	0	0	0	20	0
4:15 PM	0	0	0	4	0	8	3	0	0	1	0	6	0	0	0	0	22	0
4:30 PM	0	0	0	2	0	5	1	0	0	0	0	3	0	0	0	0	11	0
4:45 PM	0	0	0	1	0	4	2	0	0	2	0	2	0	0	0	0	11	64
5:00 PM	0	0	2	3	0	6	4	0	0	5	0	4	0	0	0	0	24	68
5:15 PM	0	0	1	5	0	8	4	0	0	3	0	4	0	0	0	0	25	71
5:30 PM	0	0	2	0	0	1	1	0	0	2	0	0	0	0	0	0	6	66
5:45 PM	0	0	2	1	0	2	1	0	0	3	0	4	0	0	0	0	13	68
Count Total	0	0	8	22	0	39	17	0	0	18	0	28	0	0	0	0	132	0
Peak Hour	0	0	2	10	0	23	10	0	0	8	0	15	0	0	0	0	68	0

Two-Hour Count Summaries - Bikes

Interval Start	Todd Rd			Todd Rd			Todd Rd Overpass			N/A			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	2	0	0	0	2	0
Peak Hour	0	0	0	0	0	0	0	0	1	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Santa Rosa Ave Todd Rd

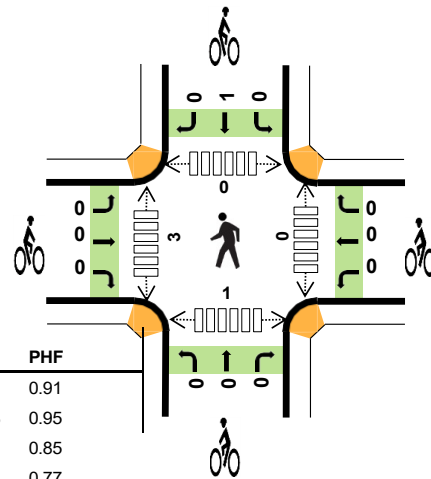
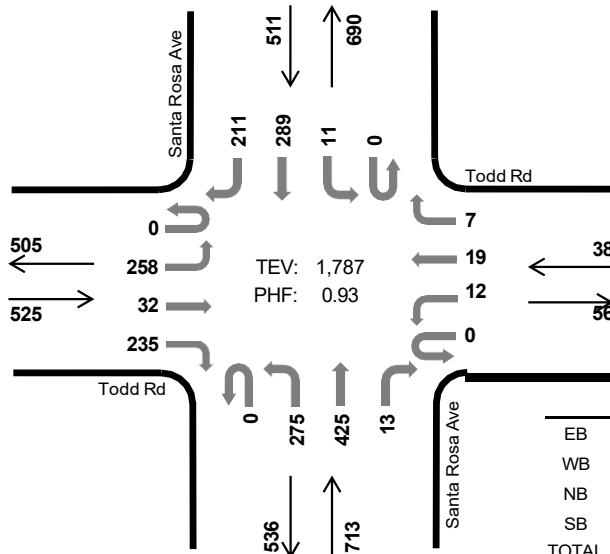


Peak Hour

Date: 04/02/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	6.3%	0.91
WB	21.1%	0.95
NB	7.9%	0.85
SB	7.2%	0.77
TOTAL	7.5%	0.93

Two-Hour Count Summaries

Interval Start		Todd Rd				Todd Rd				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	54	8	46	0	4	5	0	0	51	42	5	0	2	37	44	298	0
7:15 AM		0	32	8	53	0	4	7	1	0	56	35	8	0	0	52	62	318	0
7:30 AM		0	44	8	58	0	4	4	1	0	73	52	5	0	5	61	61	376	0
7:45 AM		0	59	10	59	0	2	8	0	0	79	97	2	0	5	90	71	482	1,474
8:00 AM		0	72	11	62	0	4	3	2	0	70	81	2	0	1	77	56	441	1,617
8:15 AM		0	60	7	54	0	2	5	3	0	62	105	6	0	5	69	44	422	1,721
8:30 AM		0	67	4	60	0	4	3	2	0	64	142	3	0	0	53	40	442	1,787
8:45 AM		0	52	5	52	0	4	3	4	0	70	123	2	0	3	64	33	415	1,720
Count Total		0	440	61	444	0	28	38	13	0	525	677	33	0	21	503	411	3,194	0
Peak Hour	All	0	258	32	235	0	12	19	7	0	275	425	13	0	11	289	211	1,787	0
	HV	0	9	1	23	0	4	4	0	0	32	24	0	0	1	21	15	134	0
	HV%	-	3%	3%	10%	-	33%	21%	0%	-	12%	6%	0%	-	9%	7%	7%	7%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	1	13	4	23	0	0	0	0	0	0	1	0	0	1
7:15 AM	13	0	14	7	34	0	0	0	1	1	0	2	0	1	3
7:30 AM	12	1	18	13	44	0	0	0	0	0	1	0	0	0	1
7:45 AM	11	4	13	11	39	0	0	0	1	1	0	1	0	0	1
8:00 AM	6	1	18	9	34	0	0	0	0	0	0	0	0	0	0
8:15 AM	9	1	13	11	34	0	0	0	0	0	0	0	0	1	1
8:30 AM	7	2	12	6	27	0	0	0	0	0	0	2	0	0	2
8:45 AM	8	0	24	7	39	0	0	0	0	0	2	0	0	1	3
Count Total	71	10	125	68	274	0	0	0	2	2	3	6	0	3	12
Peak Hour	33	8	56	37	134	0	0	0	1	1	0	3	0	1	4

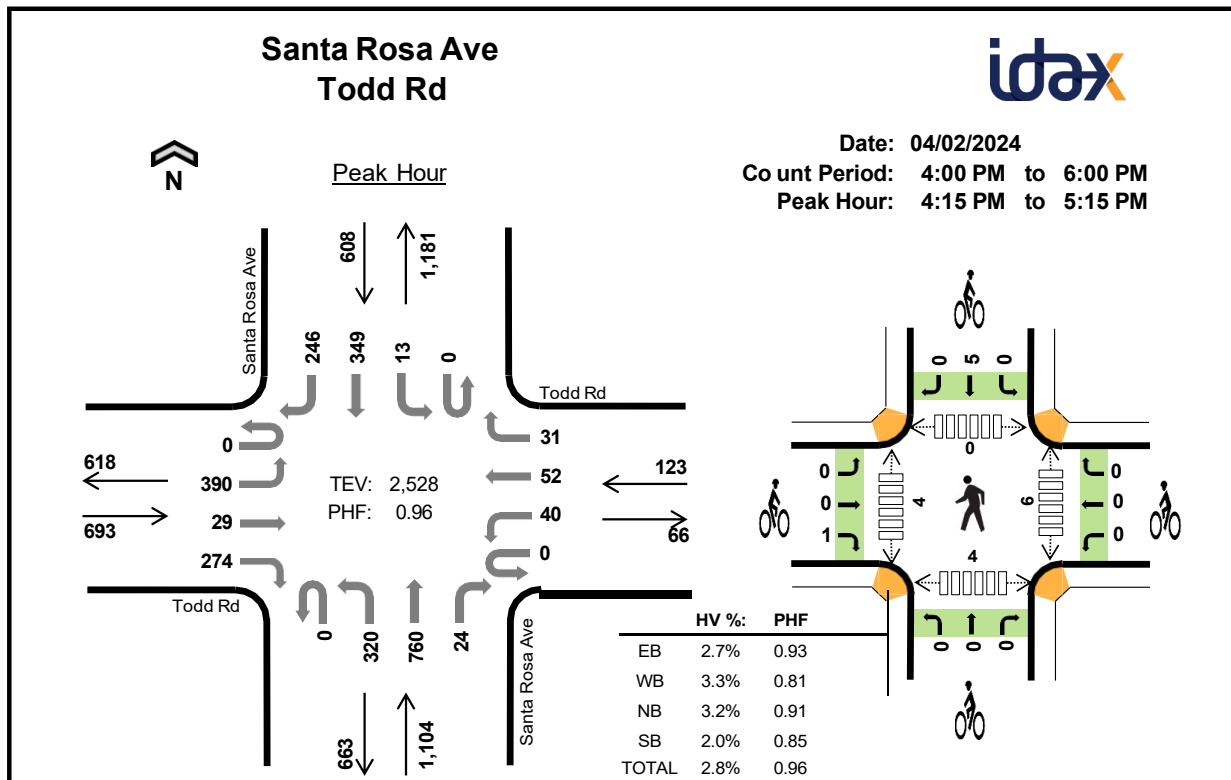
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Todd Rd				Todd Rd				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	4	0	1	0	0	1	0	0	11	2	0	0	0	4	0	23	0
7:15 AM	0	2	1	10	0	0	0	0	0	10	4	0	0	0	4	3	34	0
7:30 AM	0	4	1	7	0	1	0	0	0	15	2	1	0	1	4	8	44	0
7:45 AM	0	3	0	8	0	0	4	0	0	12	1	0	0	0	6	5	39	140
8:00 AM	0	2	0	4	0	1	0	0	0	11	7	0	0	0	4	5	34	151
8:15 AM	0	2	0	7	0	1	0	0	0	5	8	0	0	1	6	4	34	151
8:30 AM	0	2	1	4	0	2	0	0	0	4	8	0	0	0	5	1	27	134
8:45 AM	0	3	0	5	0	0	0	0	0	15	8	1	0	0	4	3	39	134
Count Total	0	22	3	46	0	5	5	0	0	83	40	2	0	2	37	29	274	0
Peak Hour	0	9	1	23	0	4	4	0	0	32	24	0	0	1	21	15	134	0

Two-Hour Count Summaries - Bikes

Interval Start	Todd Rd			Todd Rd			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	2	0	2	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Todd Rd				Todd Rd				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	105	8	61	0	9	12	4	0	67	188	7	0	4	99	52	616	0
4:15 PM		0	102	11	66	0	10	13	4	0	85	211	8	0	2	89	57	658	0
4:30 PM		0	88	5	88	0	11	15	6	0	75	179	6	0	4	99	76	652	0
4:45 PM		0	87	9	50	0	5	9	12	0	87	194	7	0	2	83	54	599	2,525
5:00 PM		0	113	4	70	0	14	15	9	0	73	176	3	0	5	78	59	619	2,528
5:15 PM		0	77	3	65	0	9	5	2	0	70	170	9	0	4	100	58	572	2,442
5:30 PM		0	88	5	46	0	10	6	3	0	52	133	4	0	1	86	52	486	2,276
5:45 PM		0	73	6	49	0	4	6	2	0	50	86	0	0	3	106	53	438	2,115
Count Total		0	733	51	495	0	72	81	42	0	559	1,337	44	0	25	740	461	4,640	0
Peak Hour	All	0	390	29	274	0	40	52	31	0	320	760	24	0	13	349	246	2,528	0
	HV	0	6	1	12	0	0	2	2	0	23	9	3	0	1	3	8	70	0
	HV%	-	2%	3%	4%	-	0%	4%	6%	-	7%	1%	13%	-	8%	1%	3%	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	8	1	10	2	21	0	0	0	0	0	0	0	0	0	0
4:15 PM	9	0	10	4	23	0	0	0	2	2	2	2	0	0	4
4:30 PM	3	1	8	2	14	0	0	0	0	0	0	0	0	0	0
4:45 PM	2	1	11	4	18	0	0	0	2	2	1	1	0	0	2
5:00 PM	5	2	6	2	15	1	0	0	1	2	3	1	0	4	8
5:15 PM	2	0	10	4	16	0	0	0	0	0	5	3	0	4	12
5:30 PM	4	1	4	1	10	1	0	0	0	1	1	1	0	1	3
5:45 PM	2	0	2	3	7	0	0	1	0	1	0	0	0	0	0
Count Total	35	6	61	22	124	2	0	1	5	8	12	8	0	9	29
Peak Hour	19	4	35	12	70	1	0	0	5	6	6	4	0	4	14

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Todd Rd				Todd Rd				Santa Rosa Ave				Santa Rosa Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	0	3	0	1	0	0	0	5	5	0	0	0	1	1	21	0
4:15 PM	0	3	1	5	0	0	0	0	0	6	4	0	0	0	0	4	23	0
4:30 PM	0	1	0	2	0	0	1	0	0	5	3	0	0	1	0	1	14	0
4:45 PM	0	0	0	2	0	0	0	1	0	6	2	3	0	0	3	1	18	76
5:00 PM	0	2	0	3	0	0	1	1	0	6	0	0	0	0	0	2	15	70
5:15 PM	0	1	0	1	0	0	0	0	0	9	1	0	0	0	2	2	16	63
5:30 PM	0	4	0	0	0	1	0	0	0	1	1	2	0	0	0	1	10	59
5:45 PM	0	1	0	1	0	0	0	0	0	1	1	0	0	0	2	1	7	48
Count Total	0	17	1	17	0	2	2	2	0	39	17	5	0	1	8	13	124	0
Peak Hour	0	6	1	12	0	0	2	2	0	23	9	3	0	1	3	8	70	0

Two-Hour Count Summaries - Bikes

Interval Start	Todd Rd			Todd Rd			Santa Rosa Ave			Santa Rosa Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	4
5:00 PM	0	0	1	0	0	0	0	0	0	0	1	0	2	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	5
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4
Count Total	0	0	2	0	0	0	0	1	0	0	5	0	8	0
Peak Hour	0	0	1	0	0	0	0	0	0	0	5	0	6	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix B:

Intersection LOS Worksheets

HCM 6th Signalized Intersection Summary

1: Santa Rosa Ave & Petaluma Hill Rd

South Santa Rosa Specific Plan

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑↑	↑	↑↑		↑	↑↑	
Traffic Volume (veh/h)	0	0	0	0	0	416	1	525	16	165	572	0
Future Volume (veh/h)	0	0	0	0	0	416	1	525	16	165	572	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				0	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h				0	0	447	1	565	16	177	615	0
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				0	2	2	2	2	2	2	2	0
Cap, veh/h				0	0	0	700	2729	77	217	3368	0
Arrive On Green				0.00	0.00	0.00	0.77	0.77	0.77	0.12	0.95	0.00
Sat Flow, veh/h				0			806	3526	100	1781	3647	0
Grp Volume(v), veh/h				0.0			1	284	297	177	615	0
Grp Sat Flow(s),veh/h/ln							806	1777	1849	1781	1777	0
Q Serve(g_s), s							0.0	4.1	4.1	9.1	1.0	0.0
Cycle Q Clear(g_c), s							0.0	4.1	4.1	9.1	1.0	0.0
Prop In Lane							1.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h							700	1375	1431	217	3368	0
V/C Ratio(X)							0.00	0.21	0.21	0.81	0.18	0.00
Avail Cap(c_a), veh/h							700	1375	1431	701	3368	0
HCM Platoon Ratio							1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)							0.98	0.98	0.98	1.00	1.00	0.00
Uniform Delay (d), s/veh							2.4	2.9	2.9	40.2	0.2	0.0
Incr Delay (d2), s/veh							0.0	0.3	0.3	7.2	0.1	0.0
Initial Q Delay(d3), s/veh							0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln							0.0	1.1	1.1	4.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh							2.4	3.2	3.2	47.5	0.3	0.0
LnGrp LOS							A	A	A	D	A	
Approach Vol, veh/h								582			792	
Approach Delay, s/veh								3.2			10.8	
Approach LOS								A			B	
Timer - Assigned Phs				4			7	8				
Phs Duration (G+Y+Rc), s				94.0			16.4	77.6				
Change Period (Y+Rc), s				4.9			4.9	4.9				
Max Green Setting (Gmax), s				85.1			37.0	43.2				
Max Q Clear Time (g_c+l1), s				3.0			11.1	6.1				
Green Ext Time (p_c), s				4.7			0.5	3.7				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh				7.6								
HCM 6th LOS				A								

HCM 6th Signalized Intersection Summary

2: Santa Rosa Ave & Baker Overcrossing

South Santa Rosa Specific Plan
Existing AM

																				
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR								
Lane Configurations																				
Traffic Volume (veh/h)	265	7	444	2	1	1	102	471	6	1	375	297								
Future Volume (veh/h)	265	7	444	2	1	1	102	471	6	1	375	297								
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0								
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00								
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Work Zone On Approach	No			No			No			No										
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870								
Adj Flow Rate, veh/h	273	0	90	2	1	0	103	476	6	1	379	0								
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99								
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2								
Cap, veh/h	365	0	575	8	4	0	141	2460	31	2	3101									
Arrive On Green	0.10	0.00	0.10	0.01	0.01	0.00	0.11	0.91	0.91	0.00	0.61	0.00								
Sat Flow, veh/h	3563	0	3161	1207	603	0	1781	3593	45	1781	5274	0								
Grp Volume(v), veh/h	273	0	90	3	0	0	103	235	247	1	379	0								
Grp Sat Flow(s),veh/h/ln	1781	0	1580	1810	0	0	1781	1777	1861	1781	1702	0								
Q Serve(g_s), s	6.7	0.0	0.0	0.1	0.0	0.0	5.0	1.3	1.3	0.1	2.8	0.0								
Cycle Q Clear(g_c), s	6.7	0.0	0.0	0.1	0.0	0.0	5.0	1.3	1.3	0.1	2.8	0.0								
Prop In Lane	1.00		1.00	0.67		0.00	1.00		0.02	1.00		0.00								
Lane Grp Cap(c), veh/h	365	0	575	12	0	0	141	1217	1274	2	3101									
V/C Ratio(X)	0.75	0.00	0.16	0.25	0.00	0.00	0.73	0.19	0.19	0.41	0.12									
Avail Cap(c_a), veh/h	689	0	862	396	0	0	299	1217	1274	146	3101									
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00								
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.94	0.94	0.94	0.99	0.99	0.00								
Uniform Delay (d), s/veh	39.2	0.0	31.0	44.5	0.0	0.0	39.3	1.3	1.3	44.9	7.5	0.0								
Incr Delay (d2), s/veh	1.2	0.0	0.0	3.8	0.0	0.0	2.6	0.3	0.3	35.7	0.1	0.0								
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.8	0.1	0.0	0.0	2.2	0.4	0.5	0.0	0.9	0.0								
Unsig. Movement Delay, s/veh																				
LnGrp Delay(d), s/veh	40.4	0.0	31.1	48.3	0.0	0.0	41.9	1.7	1.6	80.6	7.6	0.0								
LnGrp LOS	D		C	D			D	A	A	F	A									
Approach Vol, veh/h	363			3			585			380										
Approach Delay, s/veh	38.1			48.3			8.7			7.8										
Approach LOS	D			D			A			A										
Timer - Assigned Phs	2		3	4		6		7	8											
Phs Duration (G+Y+Rc), s	13.8		12.0	59.6		4.6		5.0	66.5											
Change Period (Y+Rc), s	4.6		4.9	4.9		4.0		4.9	4.9											
Max Green Setting (Gmax), s	17.4		15.1	19.4		19.7		7.4	27.1											
Max Q Clear Time (g_c+I1), s	8.7		7.0	4.8		2.1		2.1	3.3											
Green Ext Time (p_c), s	0.5		0.1	2.1		0.0		0.0	2.8											
Intersection Summary																				
HCM 6th Ctrl Delay, s/veh	16.6																			
HCM 6th LOS	B																			
Notes																				
User approved pedestrian interval to be less than phase max green.																				
User approved volume balancing among the lanes for turning movement.																				
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.																				

HCM 6th Signalized Intersection Summary

3: Santa Rosa Ave & Colgan Ave

South Santa Rosa Specific Plan
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 						 	 		   		
Traffic Volume (veh/h)	53	21	15	70	286	65	348	447	49	82	602	190
Future Volume (veh/h)	53	21	15	70	286	65	348	447	49	82	602	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	55	22	0	72	295	67	359	461	30	85	621	196
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	142	44	0	429	329	75	464	1511	98	109	1441	446
Arrive On Green	0.04	0.02	0.00	0.24	0.22	0.22	0.04	0.15	0.15	0.02	0.12	0.12
Sat Flow, veh/h	3428	1856	0	1767	1463	332	3428	3359	218	1767	3829	1184
Grp Volume(v), veh/h	55	22	0	72	0	362	359	241	250	85	546	271
Grp Sat Flow(s),veh/h/ln	1714	1856	0	1767	0	1795	1714	1763	1815	1767	1689	1636
Q Serve(g_s), s	1.4	1.1	0.0	2.9	0.0	17.6	9.3	11.0	11.0	4.3	13.5	13.8
Cycle Q Clear(g_c), s	1.4	1.1	0.0	2.9	0.0	17.6	9.3	11.0	11.0	4.3	13.5	13.8
Prop In Lane	1.00		0.00	1.00		0.19	1.00		0.12	1.00		0.72
Lane Grp Cap(c), veh/h	142	44	0	429	0	403	464	793	816	109	1271	616
V/C Ratio(X)	0.39	0.50	0.00	0.17	0.00	0.90	0.77	0.30	0.31	0.78	0.43	0.44
Avail Cap(c_a), veh/h	423	229	0	440	0	447	766	793	816	145	1271	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	0.96	0.00	0.96	0.97	0.97	0.97	0.96	0.96	0.96
Uniform Delay (d), s/veh	42.0	43.4	0.0	26.9	0.0	33.9	41.6	25.8	25.8	43.5	30.5	30.6
Incr Delay (d2), s/veh	2.4	8.7	0.0	0.2	0.0	18.8	2.7	1.0	0.9	16.5	0.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.0	1.2	0.0	9.5	4.3	5.3	5.4	2.4	6.1	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.4	52.2	0.0	27.1	0.0	52.7	44.3	26.7	26.7	60.0	30.7	31.1
LnGrp LOS	D	D		C		D	D	C	C	E	C	C
Approach Vol, veh/h	77			434			850			902		
Approach Delay, s/veh	46.7			48.4			34.2			33.6		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), 2s	6.7	17.1	39.8	8.3	24.8	11.5	45.4					
Change Period (Y+Rc), s	4.6	4.9	5.9	4.6	4.6	5.9	4.9					
Max Green Setting (Gma2x2), 4s	11.1	20.1	16.4	11.1	22.4	7.4	29.1					
Max Q Clear Time (g_c+I14), 9s	3.1	11.3	15.8	3.4	19.6	6.3	13.0					
Green Ext Time (p_c), s	0.1	0.0	0.9	0.3	0.1	0.6	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	37.1											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary 4: Petaluma Hill Rd & Colgan Ave

South Santa Rosa Specific Plan
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱		↰	↱	↱
Traffic Volume (veh/h)	53	7	71	3	5	7	293	570	6	10	327	126
Future Volume (veh/h)	53	7	71	3	5	7	293	570	6	10	327	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	56	7	17	3	5	0	308	600	6	11	344	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	96	12	204	8	13	0	763	1347	13	576	1256	1151
Arrive On Green	0.06	0.06	0.06	0.01	0.01	0.00	0.07	0.73	0.73	0.01	0.68	0.68
Sat Flow, veh/h	1579	197	1521	683	1138	0	1767	1834	18	1767	1856	1560
Grp Volume(v), veh/h	63	0	17	8	0	0	308	0	606	11	344	86
Grp Sat Flow(s),veh/h/ln1777	0	1521	1821	0	0	0	1767	0	1852	1767	1856	1560
Q Serve(g_s), s	3.8	0.0	1.1	0.5	0.0	0.0	5.4	0.0	14.2	0.2	8.1	1.7
Cycle Q Clear(g_c), s	3.8	0.0	1.1	0.5	0.0	0.0	5.4	0.0	14.2	0.2	8.1	1.7
Prop In Lane	0.89		1.00	0.37		0.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	108	0	204	22	0	0	763	0	1361	576	1256	1151
V/C Ratio(X)	0.59	0.00	0.08	0.37	0.00	0.00	0.40	0.00	0.45	0.02	0.27	0.07
Avail Cap(c_a), veh/h	394	0	449	106	0	0	825	0	1361	645	1256	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.00	0.90	1.00	0.00	0.00	0.79	0.00	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	0.0	42.0	53.9	0.0	0.0	4.3	0.0	5.8	5.6	7.1	4.0
Incr Delay (d2), s/veh	4.5	0.0	0.2	10.3	0.0	0.0	0.3	0.0	0.8	0.0	0.5	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln1.8	0.0	0.4	0.3	0.0	0.0	0.0	1.5	0.0	4.6	0.1	3.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	0.0	42.1	64.2	0.0	0.0	4.6	0.0	6.6	5.6	7.6	4.1
LnGrp LOS	D		D	E			A		A	A	A	A
Approach Vol, veh/h	80				8			914			441	
Approach Delay, s/veh	52.1				64.2			5.9			6.9	
Approach LOS	D				E			A			A	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.3	13.1	79.7		5.9	6.7	86.1				
Change Period (Y+Rc), s		4.6	5.3	5.3		4.6	5.3	5.3				
Max Green Setting (Gmax), s		24.4	11.7	47.7		6.4	5.7	53.7				
Max Q Clear Time (g_c+l1), s		5.8	7.4	10.1		2.5	2.2	16.2				
Green Ext Time (p_c), s		0.3	0.4	2.4		0.0	0.0	4.2				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			9.1									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary 5: Petaluma Hill Rd & Kawana Springs Rd

South Santa Rosa Specific Plan
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	104	32	133	184	67	62	542	148	19	297	129
Future Volume (veh/h)	121	104	32	133	184	67	62	542	148	19	297	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	112	7	143	198	63	67	583	136	20	319	38
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	348	294	498	279	89	348	800	186	256	433	365
Arrive On Green	0.08	0.19	0.19	0.10	0.21	0.21	0.07	0.28	0.28	0.02	0.23	0.23
Sat Flow, veh/h	1781	1870	1577	1781	1357	432	1781	2859	665	1781	1870	1578
Grp Volume(v), veh/h	130	112	7	143	0	261	67	362	357	20	319	38
Grp Sat Flow(s),veh/h/ln	1781	1870	1577	1781	0	1789	1781	1777	1748	1781	1870	1578
Q Serve(g_s), s	2.9	2.6	0.2	3.1	0.0	6.8	1.4	9.2	9.3	0.4	7.9	1.0
Cycle Q Clear(g_c), s	2.9	2.6	0.2	3.1	0.0	6.8	1.4	9.2	9.3	0.4	7.9	1.0
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	371	348	294	498	0	368	348	497	489	256	433	365
V/C Ratio(X)	0.35	0.32	0.02	0.29	0.00	0.71	0.19	0.73	0.73	0.08	0.74	0.10
Avail Cap(c_a), veh/h	931	932	786	846	0	713	751	1770	1741	745	1863	1572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	17.7	16.7	13.9	0.0	18.5	13.3	16.3	16.4	14.5	17.9	15.2
Incr Delay (d2), s/veh	0.2	0.5	0.0	0.1	0.0	2.5	0.1	0.8	0.8	0.0	0.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.0	0.1	1.1	0.0	2.8	0.4	3.0	3.0	0.1	2.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.0	18.2	16.7	14.0	0.0	21.1	13.4	17.1	17.2	14.6	18.8	15.2
LnGrp LOS	B	B	B	B		C	B	B	B	B	B	B
Approach Vol, veh/h	249			404			786			377		
Approach Delay, s/veh	16.5			18.5			16.8			18.2		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), 1s	0.1	14.2	8.9	16.9	9.1	15.2	6.5	19.3				
Change Period (Y+Rc), s	4.9	4.9	5.3	5.3	4.9	4.9	5.3	5.3				
Max Green Setting (Gma1x5),0s	25.0	15.0	50.0	20.0	20.0	15.0	50.0					
Max Q Clear Time (g_c+I15),.1s	4.6	3.4	9.9	4.9	8.8	2.4	11.3					
Green Ext Time (p_c), s	0.1	0.5	0.0	1.2	0.1	1.1	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	17.4											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

6: Corby Ave & Hearn Ave

South Santa Rosa Specific Plan
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	493	435	284	474	56	84	112	552	61	96	101
Future Volume (veh/h)	67	493	435	284	474	56	84	112	552	61	96	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	71	524	187	302	504	54	89	119	480	65	102	67
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	91	634	533	328	1528	163	112	479	690	83	250	164
Arrive On Green	0.05	0.34	0.34	0.19	0.48	0.48	0.06	0.26	0.26	0.05	0.24	0.24
Sat Flow, veh/h	1767	1856	1559	1767	3211	343	1767	1856	1542	1767	1034	679
Grp Volume(v), veh/h	71	524	187	302	276	282	89	119	480	65	0	169
Grp Sat Flow(s),veh/h/ln	1767	1856	1559	1767	1763	1791	1767	1856	1542	1767	0	1713
Q Serve(g_s), s	4.4	28.5	9.9	18.5	10.7	10.8	5.5	5.6	27.7	4.0	0.0	9.1
Cycle Q Clear(g_c), s	4.4	28.5	9.9	18.5	10.7	10.8	5.5	5.6	27.7	4.0	0.0	9.1
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	91	634	533	328	839	853	112	479	690	83	0	414
V/C Ratio(X)	0.78	0.83	0.35	0.92	0.33	0.33	0.79	0.25	0.70	0.78	0.00	0.41
Avail Cap(c_a), veh/h	151	634	533	328	839	853	151	479	690	151	0	442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.6	33.2	27.1	44.0	17.9	17.9	50.8	32.3	24.7	51.8	0.0	35.1
Incr Delay (d2), s/veh	5.4	11.7	1.8	26.9	0.9	0.9	13.2	0.1	2.6	5.8	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	14.6	3.9	10.5	4.5	4.6	2.8	2.5	10.3	1.9	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.0	44.9	28.9	71.0	18.8	18.8	64.0	32.4	27.3	57.6	0.0	35.3
LnGrp LOS	E	D	C	E	B	B	E	C	C	E		D
Approach Vol, veh/h		782			860			688			234	
Approach Delay, s/veh		42.2			37.1			32.9			41.5	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), 2s	5.0	42.2	11.6	31.2	10.3	57.0	9.8	33.0				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gma2x0), 4s		33.4	9.4	28.4	9.4	44.4	9.4	28.4				
Max Q Clear Time (g_c+I210), 5s		30.5	7.5	11.1	6.4	12.8	6.0	29.7				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.5	0.0	3.7	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			37.9									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

South Santa Rosa Specific Plan

8: Santa Rosa Ave & Yolanda Ave / US-101 NB Off-Ramp/Yolanda Ave

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	31	15	96	305	142	402	644	126	209	530	273
Future Volume (veh/h)	151	31	15	96	305	142	402	644	126	209	530	273
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	154	32	1	98	311	37	410	657	45	213	541	248
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	231	57	48	343	286	242	454	1798	789	293	1644	827
Arrive On Green	0.07	0.03	0.03	0.20	0.16	0.16	0.13	0.52	0.52	0.17	0.95	0.95
Sat Flow, veh/h	3374	1826	1547	1739	1826	1547	3374	3469	1522	3374	3469	1521
Grp Volume(v), veh/h	154	32	1	98	311	37	410	657	45	213	541	248
Grp Sat Flow(s),veh/h/ln	1687	1826	1547	1739	1826	1547	1687	1735	1522	1687	1735	1521
Q Serve(g_s), s	4.0	1.6	0.0	4.3	14.1	1.5	10.8	10.1	1.3	5.4	1.1	1.0
Cycle Q Clear(g_c), s	4.0	1.6	0.0	4.3	14.1	1.5	10.8	10.1	1.3	5.4	1.1	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	57	48	343	286	242	454	1798	789	293	1644	827
V/C Ratio(X)	0.67	0.56	0.02	0.29	1.09	0.15	0.90	0.37	0.06	0.73	0.33	0.30
Avail Cap(c_a), veh/h	540	327	277	343	286	242	454	1798	789	603	1644	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	40.9	43.0	25.6	30.7	38.0	20.9	38.4	12.9	10.8	36.2	1.3	1.0
Incr Delay (d2), s/veh	3.3	8.4	0.2	0.2	78.5	0.3	21.3	0.6	0.1	2.2	0.3	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.8	0.0	1.8	12.3	0.7	5.7	3.8	0.4	2.1	0.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.2	51.4	25.8	30.9	116.4	21.2	59.6	13.5	10.9	38.4	1.6	1.6
LnGrp LOS	D	D	C	C	F	C	E	B	B	D	A	A
Approach Vol, veh/h	187			446			1112			1002		
Approach Delay, s/veh	45.4			89.7			30.4			9.4		
Approach LOS	D			F			C			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), 2s	1.6	6.4	15.7	46.2	10.1	18.0	11.4	50.5				
Change Period (Y+Rc), s	3.9	3.6	3.6	3.6	3.9	* 3.9	3.6	3.9				
Max Green Setting (Gma1x2), 4s	16.1	12.1	34.7	14.4	* 14	16.1	30.4					
Max Q Clear Time (g_c+I16), 3s	3.6	12.8	3.1	6.0	16.1	7.4	12.1					
Green Ext Time (p_c), s	0.0	0.1	0.0	4.8	0.3	0.0	0.4	4.3				

Intersection Summary

HCM 6th Ctrl Delay, s/veh

33.4

HCM 6th LOS

C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	179	60	56	329	0	191	10	180	4	0	3
Future Vol, veh/h	7	179	60	56	329	0	191	10	180	4	0	3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	8	203	68	64	374	0	217	11	205	5	0	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	14.1	22.1	21.3	10.2
HCM LOS	B	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	3%	15%	57%
Vol Thru, %	3%	73%	85%	0%
Vol Right, %	47%	24%	0%	43%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	381	246	385	7
LT Vol	191	7	56	4
Through Vol	10	179	329	0
RT Vol	180	60	0	3
Lane Flow Rate	433	280	438	8
Geometry Grp	1	1	1	1
Degree of Util (X)	0.698	0.462	0.71	0.016
Departure Headway (Hd)	5.802	5.944	5.841	7.051
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	619	601	613	511
Service Time	3.88	4.038	3.924	5.051
HCM Lane V/C Ratio	0.7	0.466	0.715	0.016
HCM Control Delay, s/veh	21.3	14.1	22.1	10.2
HCM Lane LOS	C	B	C	B
HCM 95th-tile Q	5.6	2.4	5.8	0

Intersection												
Int Delay, s/veh	28.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	60	0	223	3	650	129	167	401	3
Future Vol, veh/h	0	0	2	60	0	223	3	650	129	167	401	3
Conflicting Peds, #/hr	0	0	0	0	0	0	5	0	6	6	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	60	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	3	81	0	301	4	878	174	226	542	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1448	2067	278	1702	1982	532	551	0	0	1058	0	0
Stage 1	1001	1001	-	979	979	-	-	-	-	-	-	-
Stage 2	447	1066	-	723	1003	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.58	6.58	6.98	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.54	4.04	3.34	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	90	52	713	~ 58	59	487	1001	-	-	642	-	-
Stage 1	256	314	-	265	322	-	-	-	-	-	-	-
Stage 2	555	293	-	379	314	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	24	33	710	~ 42	38	484	996	-	-	638	-	-
Mov Cap-2 Maneuver	24	33	-	~ 42	38	-	-	-	-	-	-	-
Stage 1	254	202	-	262	319	-	-	-	-	-	-	-
Stage 2	209	290	-	244	202	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s/v	10.1		155.4		0		4					
HCM LOS	B		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	996	-	-	710	42	484	638	-	-			
HCM Lane V/C Ratio	0.004	-	-	0.004	1.931	0.623	0.354	-	-			
HCM Control Delay (s/veh)	8.6	-	-	10.1	\$ 644	23.9	13.7	-	-			
HCM Lane LOS	A	-	-	B	F	C	B	-	-			
HCM 95th %tile Q (veh)	0	-	-	0	8.5	4.2	1.6	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

HCM 6th Signalized Intersection Summary

11: Santa Rosa Ave & E Robles Ave

South Santa Rosa Specific Plan
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	0	5	51	0	90	1	512	10	26	433	6
Future Volume (veh/h)	16	0	5	51	0	90	1	512	10	26	433	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		1.00	0.98		0.99	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	20	0	0	63	0	20	1	632	10	32	535	6
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	333	0	0	360	0	104	6	1215	19	55	1328	15
Arrive On Green	0.07	0.00	0.00	0.07	0.00	0.07	0.00	0.35	0.35	0.03	0.38	0.38
Sat Flow, veh/h	1091	0	0	1359	0	1531	1739	3494	55	1739	3512	39
Grp Volume(v), veh/h	20	0	0	63	0	20	1	314	328	32	264	277
Grp Sat Flow(s),veh/h/ln	1091	0	0	1359	0	1531	1739	1735	1814	1739	1735	1817
Q Serve(g_s), s	0.4	0.0	0.0	0.3	0.0	0.3	0.0	4.0	4.0	0.5	3.1	3.1
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.1	0.0	0.3	0.0	4.0	4.0	0.5	3.1	3.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.03	1.00		0.02
Lane Grp Cap(c), veh/h	333	0	0	360	0	104	6	603	631	55	656	687
V/C Ratio(X)	0.06	0.00	0.00	0.17	0.00	0.19	0.16	0.52	0.52	0.58	0.40	0.40
Avail Cap(c_a), veh/h	720	0	0	999	0	824	624	1743	1823	749	1494	1564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	0.0	0.0	12.6	0.0	12.3	13.9	7.2	7.2	13.3	6.4	6.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.3	4.4	0.3	0.2	3.6	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.3	0.0	0.1	0.0	0.7	0.7	0.2	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.6	0.0	0.0	12.7	0.0	12.6	18.2	7.5	7.5	16.9	6.5	6.5
LnGrp LOS	B			B		B	B	A	A	B	A	A
Approach Vol, veh/h	20				83		643		573			
Approach Delay, s/veh	12.6				12.6		7.5		7.1			
Approach LOS	B				B		A		A			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	15.1		6.5	5.4	15.9		6.5				
Change Period (Y+Rc), s	5.4	5.4		4.6	5.4	5.4		4.6				
Max Green Setting (Gmax), s	12.0	28.0		10.0	10.0	24.0		15.0				
Max Q Clear Time (g_c+l1), s	2.5	6.0		2.7	2.0	5.1		3.1				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	1.3		0.1				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	7.7											
HCM 6th LOS	A											

HCM 6th Signalized Intersection Summary 12: S Moorland Ave & Todd Rd/Todd Rd / US-101 SB Off-Ramp

South Santa Rosa Specific Plan

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↗	↖	↗	↖	↗	↖	↗		↕	
Traffic Volume (veh/h)	0	286	348	264	227	0	483	0	61	0	0	0
Future Volume (veh/h)	0	286	348	264	227	0	483	0	61	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	0	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	0	295	74	272	234	0	498	0	42	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	10	10	0	10	10	10	10	10	10
Cap, veh/h	0	374	317	349	366	0	562	0	1001	0	5	0
Arrive On Green	0.00	0.21	0.21	0.21	0.21	0.00	0.34	0.00	0.34	0.00	0.00	0.00
Sat Flow, veh/h	0	1752	1485	1668	1752	0	1668	0	2969	0	1752	0
Grp Volume(v), veh/h	0	295	74	272	234	0	498	0	42	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1485	1668	1752	0	1668	0	1485	0	1752	0
Q Serve(g_s), s	0.0	6.1	1.6	5.9	4.7	0.0	10.8	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.1	1.6	5.9	4.7	0.0	10.8	0.0	0.4	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	374	317	349	366	0	562	0	1001	0	5	0
V/C Ratio(X)	0.00	0.79	0.23	0.78	0.64	0.00	0.89	0.00	0.04	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	916	776	1308	1373	0	1090	0	1940	0	366	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	14.2	12.5	14.3	13.8	0.0	12.0	0.0	8.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.1	1.4	0.7	0.0	1.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	0.4	1.9	1.5	0.0	3.2	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	15.7	12.6	15.7	14.5	0.0	13.9	0.0	8.5	0.0	0.0	0.0
LnGrp LOS		B	B	B	B		B		A			
Approach Vol, veh/h		369			506			540			0	
Approach Delay, s/veh		15.1			15.2			13.5			0.0	
Approach LOS		B			B			B				
Timer - Assigned Phs		2		4		6			8			
Phs Duration (G+Y+Rc), s		0.0		11.4		15.9			11.0			
Change Period (Y+Rc), s		3.0		3.2		3.0			3.0			
Max Green Setting (Gmax), s		8.0		20.0		25.0			30.0			
Max Q Clear Time (g_c+I1), s		0.0		8.1		12.8			7.9			
Green Ext Time (p_c), s		0.0		0.2		0.1			0.1			

Intersection Summary

HCM 6th Ctrl Delay, s/veh	14.5
HCM 6th LOS	B

Notes

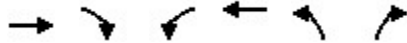
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary

South Santa Rosa Specific Plan

13: Todd Rd Overpass & Todd Rd / US-101 NB Off-Ramp/Todd Rd

Existing AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗↗
Traffic Volume (veh/h)	80	268	279	281	176	461
Future Volume (veh/h)	80	268	279	281	176	461
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	86	34	337	250	189	285
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	412	184	982	1057	280	1207
Arrive On Green	0.12	0.12	0.29	0.60	0.17	0.17
Sat Flow, veh/h	3416	1485	3337	1752	1668	2613
Grp Volume(v), veh/h	86	34	337	250	189	285
Grp Sat Flow(s),veh/h/ln	1664	1485	1668	1752	1668	1306
Q Serve(g_s), s	0.8	0.7	2.6	2.1	3.4	2.1
Cycle Q Clear(g_c), s	0.8	0.7	2.6	2.1	3.4	2.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	412	184	982	1057	280	1207
V/C Ratio(X)	0.21	0.19	0.34	0.24	0.67	0.24
Avail Cap(c_a), veh/h	2058	918	5158	1057	516	1576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	12.7	9.0	3.0	12.6	5.3
Incr Delay (d2), s/veh	0.1	0.2	0.4	0.0	1.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.7	0.2	1.1	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	12.8	12.9	9.4	3.0	13.7	5.3
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	120			587	474	
Approach Delay, s/veh	12.9			6.7	8.6	
Approach LOS	B			A	A	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), 1s	5.5	7.7			23.2	9.1
Change Period (Y+Rc), s	6.0	3.7			3.7	3.7
Max Green Setting (Gma5x0), 0s	20.0				15.0	10.0
Max Q Clear Time (g_c+14), .6s	2.8				4.1	5.4
Green Ext Time (p_c), s	3.1	0.1			0.2	0.1

Intersection Summary

HCM 6th Ctrl Delay, s/veh	8.1
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary 14: Santa Rosa Ave & Todd Rd/E Todd Rd

South Santa Rosa Specific Plan
Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	32	241	12	19	7	305	425	13	11	289	236
Future Volume (veh/h)	268	32	241	12	19	7	305	425	13	11	289	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	312	0	40	13	20	0	328	457	6	12	311	65
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	473	0	210	51	54	0	389	1233	548	21	521	228
Arrive On Green	0.14	0.00	0.14	0.03	0.03	0.00	0.23	0.36	0.36	0.01	0.15	0.15
Sat Flow, veh/h	3421	0	1519	1711	1796	0	1711	3413	1516	1711	3413	1493
Grp Volume(v), veh/h	312	0	40	13	20	0	328	457	6	12	311	65
Grp Sat Flow(s),veh/h/ln	1711	0	1519	1711	1796	0	1711	1706	1516	1711	1706	1493
Q Serve(g_s), s	4.0	0.0	1.1	0.3	0.5	0.0	8.4	4.5	0.1	0.3	3.9	1.8
Cycle Q Clear(g_c), s	4.0	0.0	1.1	0.3	0.5	0.0	8.4	4.5	0.1	0.3	3.9	1.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	473	0	210	51	54	0	389	1233	548	21	521	228
V/C Ratio(X)	0.66	0.00	0.19	0.25	0.37	0.00	0.84	0.37	0.01	0.57	0.60	0.29
Avail Cap(c_a), veh/h	1343	0	596	373	392	0	634	1787	794	373	1191	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	17.5	21.7	21.8	0.0	16.9	10.8	9.4	22.5	18.1	17.2
Incr Delay (d2), s/veh	0.6	0.0	0.2	1.0	1.6	0.0	2.7	0.1	0.0	8.6	0.4	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.3	0.1	0.2	0.0	3.0	1.3	0.0	0.2	1.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.3	0.0	17.6	22.7	23.4	0.0	19.6	10.9	9.4	31.1	18.5	17.5
LnGrp LOS	B		B	C	C		B	B	A	C	B	B
Approach Vol, veh/h	352				33		791				388	
Approach Delay, s/veh	19.1				23.1		14.5				18.7	
Approach LOS	B				C		B				B	
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	11.4		15.5		12.4		6.5		6.0		22.0	
Change Period (Y+Rc), s	5.1		5.1		5.4		5.1		5.4		* 5.4	
Max Green Setting (Gmax), s	18.0		17.0		16.0		10.0		10.0		* 24	
Max Q Clear Time (g_c+l1), s	6.0		10.4		5.9		2.5		2.3		6.5	
Green Ext Time (p_c), s	0.4		0.2		0.8		0.0		0.0		1.4	

Intersection Summary

HCM 6th Ctrl Delay, s/veh	16.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

1: Santa Rosa Ave & Petaluma Hill Rd

South Santa Rosa Specific Plan

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑↑	↑	↑↑		↑	↑↑	
Traffic Volume (veh/h)	0	0	0	0	0	332	1	782	30	328	876	0
Future Volume (veh/h)	0	0	0	0	0	332	1	782	30	328	876	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				0	1885	1885	1885	1885	1885	1885	1885	0
Adj Flow Rate, veh/h				0	0	346	1	815	29	342	912	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	1	1	1	1	1	1	1	0
Cap, veh/h				0	0	0	495	2342	83	393	3373	0
Arrive On Green				0.00	0.00	0.00	0.66	0.66	0.66	0.22	0.94	0.00
Sat Flow, veh/h				0			616	3524	125	1795	3676	0
Grp Volume(v), veh/h				0.0			1	414	430	342	912	0
Grp Sat Flow(s),veh/h/ln							616	1791	1859	1795	1791	0
Q Serve(g_s), s							0.0	8.5	8.5	15.4	1.7	0.0
Cycle Q Clear(g_c), s							0.0	8.5	8.5	15.4	1.7	0.0
Prop In Lane							1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h							495	1190	1235	393	3373	0
V/C Ratio(X)							0.00	0.35	0.35	0.87	0.27	0.00
Avail Cap(c_a), veh/h							495	1190	1235	748	3373	0
HCM Platoon Ratio							1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)							0.97	0.97	0.97	1.00	1.00	0.00
Uniform Delay (d), s/veh							4.7	6.1	6.1	31.7	0.2	0.0
Incr Delay (d2), s/veh							0.0	0.8	0.8	6.0	0.2	0.0
Initial Q Delay(d3), s/veh							0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln							0.0	2.8	2.9	7.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh							4.7	6.9	6.9	37.7	0.4	0.0
LnGrp LOS							A	A	A	D	A	
Approach Vol, veh/h								845			1254	
Approach Delay, s/veh								6.9			10.6	
Approach LOS								A			B	
Timer - Assigned Phs				4			7	8				
Phs Duration (G+Y+Rc), s				84.0			23.3	60.7				
Change Period (Y+Rc), s				4.9			4.9	4.9				
Max Green Setting (Gmax), s				75.1			35.0	35.2				
Max Q Clear Time (g_c+l1), s				3.7			17.4	10.5				
Green Ext Time (p_c), s				7.9			0.9	5.5				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh				9.1								
HCM 6th LOS				A								

HCM 6th Signalized Intersection Summary 2: Santa Rosa Ave & Baker Overcrossing

South Santa Rosa Specific Plan
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	0	715	2	1	7	211	702	2	3	702	368
Future Volume (veh/h)	236	0	715	2	1	7	211	702	2	3	702	368
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	241	0	174	2	1	0	215	716	2	3	716	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	318	0	705	22	11	0	240	2697	8	7	3121	
Arrive On Green	0.09	0.00	0.09	0.02	0.02	0.00	0.27	1.00	1.00	0.00	0.61	0.00
Sat Flow, veh/h	3591	0	3141	1216	608	0	1795	3664	10	1795	5316	0
Grp Volume(v), veh/h	241	0	174	3	0	0	215	350	368	3	716	0
Grp Sat Flow(s),veh/h/ln	1795	0	1571	1824	0	0	1795	1791	1883	1795	1716	0
Q Serve(g_s), s	7.9	0.0	0.0	0.2	0.0	0.0	13.8	0.0	0.0	0.2	7.6	0.0
Cycle Q Clear(g_c), s	7.9	0.0	0.0	0.2	0.0	0.0	13.8	0.0	0.0	0.2	7.6	0.0
Prop In Lane	1.00		1.00	0.67		0.00	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	318	0	705	33	0	0	240	1318	1386	7	3121	
V/C Ratio(X)	0.76	0.00	0.25	0.09	0.00	0.00	0.90	0.27	0.27	0.42	0.23	
Avail Cap(c_a), veh/h	778	0	1108	321	0	0	376	1318	1386	111	3121	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.86	0.86	0.86	0.97	0.97	0.00
Uniform Delay (d), s/veh	53.4	0.0	38.4	58.0	0.0	0.0	43.1	0.0	0.0	59.6	10.8	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.1	0.4	0.0	0.0	9.8	0.4	0.4	13.6	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	2.1	0.1	0.0	0.0	5.9	0.2	0.2	0.1	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	0.0	38.4	58.4	0.0	0.0	52.9	0.4	0.4	73.2	11.0	0.0
LnGrp LOS	D		D	E			D	A	A	E	B	
Approach Vol, veh/h	415			3			933			719		
Approach Delay, s/veh	48.0			58.4			12.5			11.2		
Approach LOS	D			E			B			B		
Timer - Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	15.2		20.9	77.7	6.2		5.4	93.2				
Change Period (Y+Rc), s	4.6		4.9	4.9	4.0		4.9	4.9				
Max Green Setting (Gmax), s	26.0		25.1	29.4	21.1		7.4	47.1				
Max Q Clear Time (g_c+I1), s	9.9		15.8	9.6	2.2		2.2	2.0				
Green Ext Time (p_c), s	0.8		0.2	4.7	0.0		0.0	4.9				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	19.2											
HCM 6th LOS	B											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Santa Rosa Ave & Colgan Ave

South Santa Rosa Specific Plan
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	32	36	94	178	62	633	755	92	96	1086	224
Future Volume (veh/h)	96	32	36	94	178	62	633	755	92	96	1086	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	98	33	0	96	182	63	646	770	68	98	1108	229
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	156	52	0	315	212	73	697	1867	165	121	1831	378
Arrive On Green	0.04	0.03	0.00	0.06	0.05	0.05	0.40	1.00	1.00	0.14	0.86	0.86
Sat Flow, veh/h	3483	1885	0	1795	1338	463	3483	3320	293	1795	4259	880
Grp Volume(v), veh/h	98	33	0	96	0	245	646	415	423	98	893	444
Grp Sat Flow(s),veh/h/ln	1742	1885	0	1795	0	1801	1742	1791	1822	1795	1716	1707
Q Serve(g_s), s	3.3	2.1	0.0	6.2	0.0	16.2	21.2	0.0	0.0	6.4	9.1	9.1
Cycle Q Clear(g_c), s	3.3	2.1	0.0	6.2	0.0	16.2	21.2	0.0	0.0	6.4	9.1	9.1
Prop In Lane	1.00		0.00	1.00		0.26	1.00		0.16	1.00		0.52
Lane Grp Cap(c), veh/h	156	52	0	315	0	286	697	1007	1025	121	1475	734
V/C Ratio(X)	0.63	0.63	0.00	0.30	0.00	0.86	0.93	0.41	0.41	0.81	0.61	0.61
Avail Cap(c_a), veh/h	438	237	0	380	0	381	758	1007	1025	200	1475	734
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	0.98	0.00	0.98	0.95	0.95	0.95	0.90	0.90	0.90
Uniform Delay (d), s/veh	56.3	57.7	0.0	49.5	0.0	55.5	35.2	0.0	0.0	51.1	5.4	5.4
Incr Delay (d2), s/veh	5.9	11.8	0.0	0.5	0.0	13.5	16.1	1.2	1.2	10.7	0.6	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.2	0.0	2.9	0.0	8.9	8.6	0.3	0.3	3.0	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.2	69.5	0.0	50.0	0.0	69.0	51.2	1.2	1.2	61.8	6.1	6.7
LnGrp LOS	E	E		D		E	D	A	A	E	A	A
Approach Vol, veh/h		131			341			1484			1435	
Approach Delay, s/veh		64.0			63.7			23.0			10.1	
Approach LOS		E			E			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), 2s	5.7	7.9	28.9	57.5	10.0	23.6	14.0	72.4				
Change Period (Y+Rc), s	4.6	4.6	4.9	5.9	4.6	4.6	5.9	4.9				
Max Green Setting (Gma2x5), 4s	15.1	26.1	33.4	15.1	25.4	13.4	46.1					
Max Q Clear Time (g_c+I18), 2s	4.1	23.2	11.1	5.3	18.2	8.4	2.0					
Green Ext Time (p_c), s	0.2	0.1	0.8	9.7	0.3	0.7	0.1	6.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			23.2									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary 4: Petaluma Hill Rd & Colgan Ave

South Santa Rosa Specific Plan
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	9	91	7	16	6	154	526	4	13	637	128
Future Volume (veh/h)	98	9	91	7	16	6	154	526	4	13	637	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	102	9	17	7	17	0	160	548	4	14	664	96
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	145	13	206	15	36	0	495	1317	10	589	1275	1191
Arrive On Green	0.09	0.09	0.09	0.03	0.03	0.00	0.04	0.70	0.70	0.02	0.68	0.68
Sat Flow, veh/h	1656	146	1561	542	1316	0	1795	1869	14	1795	1885	1554
Grp Volume(v), veh/h	111	0	17	24	0	0	160	0	552	14	664	96
Grp Sat Flow(s),veh/h/ln	1802	0	1561	1858	0	0	1795	0	1882	1795	1885	1554
Q Serve(g_s), s	7.2	0.0	1.1	1.5	0.0	0.0	3.3	0.0	14.7	0.3	21.1	1.9
Cycle Q Clear(g_c), s	7.2	0.0	1.1	1.5	0.0	0.0	3.3	0.0	14.7	0.3	21.1	1.9
Prop In Lane	0.92		1.00	0.29		0.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	157	0	206	51	0	0	495	0	1326	589	1275	1191
V/C Ratio(X)	0.71	0.00	0.08	0.47	0.00	0.00	0.32	0.00	0.42	0.02	0.52	0.08
Avail Cap(c_a), veh/h	366	0	388	99	0	0	501	0	1326	646	1275	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.00	0.83	1.00	0.00	0.00	0.88	0.00	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	0.0	45.8	57.5	0.0	0.0	7.5	0.0	7.4	6.3	9.7	3.6
Incr Delay (d2), s/veh	4.8	0.0	0.1	6.5	0.0	0.0	0.3	0.0	0.8	0.0	1.5	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.4	0.8	0.0	0.0	1.1	0.0	5.4	0.1	8.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.0	0.0	45.9	64.0	0.0	0.0	7.9	0.0	8.3	6.3	11.2	3.7
LnGrp LOS	E		D	E			A		A	A	B	A
Approach Vol, veh/h	128			24			712			774		
Approach Delay, s/veh	56.4			64.0			8.2			10.2		
Approach LOS	E			E			A			B		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	15.1		10.6	86.5		7.9	7.2	89.9				
Change Period (Y+Rc), s	4.6		5.3	5.3		4.6	5.3	5.3				
Max Green Setting (Gmax), s	24.4		5.7	63.7		6.4	5.7	63.7				
Max Q Clear Time (g_c+I1), s	9.2		5.3	23.1		3.5	2.3	16.7				
Green Ext Time (p_c), s	0.5		0.0	5.5		0.0	0.0	3.8				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	13.7											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary 5: Petaluma Hill Rd & Kawana Springs Rd

South Santa Rosa Specific Plan
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	174	108	122	142	36	116	466	185	33	433	201
Future Volume (veh/h)	165	174	108	122	142	36	116	466	185	33	433	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.98	1.00		0.99	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	176	185	24	130	151	31	123	496	164	35	461	112
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	394	342	287	384	241	50	346	948	311	347	584	476
Arrive On Green	0.11	0.18	0.18	0.09	0.16	0.16	0.09	0.36	0.36	0.04	0.31	0.31
Sat Flow, veh/h	1795	1885	1579	1795	1511	310	1795	2639	867	1795	1885	1538
Grp Volume(v), veh/h	176	185	24	130	0	182	123	336	324	35	461	112
Grp Sat Flow(s),veh/h/ln	1795	1885	1579	1795	0	1821	1795	1791	1715	1795	1885	1538
Q Serve(g_s), s	4.8	5.4	0.8	3.6	0.0	5.7	2.7	9.0	9.1	0.8	13.6	3.3
Cycle Q Clear(g_c), s	4.8	5.4	0.8	3.6	0.0	5.7	2.7	9.0	9.1	0.8	13.6	3.3
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.51	1.00		1.00
Lane Grp Cap(c), veh/h	394	342	287	384	0	291	346	643	616	347	584	476
V/C Ratio(X)	0.45	0.54	0.08	0.34	0.00	0.63	0.36	0.52	0.53	0.10	0.79	0.24
Avail Cap(c_a), veh/h	787	774	648	669	0	598	633	1470	1408	723	1548	1263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	22.6	20.7	18.8	0.0	23.9	13.7	15.4	15.4	13.6	19.2	15.7
Incr Delay (d2), s/veh	0.3	1.3	0.1	0.2	0.0	2.2	0.2	0.2	0.3	0.0	0.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.3	0.3	1.4	0.0	2.5	0.9	3.1	3.0	0.3	5.2	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.6	23.9	20.8	18.9	0.0	26.1	13.9	15.6	15.7	13.6	20.1	15.7
LnGrp LOS	B	C	C	B		C	B	B	B	B	C	B
Approach Vol, veh/h	385			312			783			608		
Approach Delay, s/veh	21.3			23.1			15.4			18.9		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), 1s	0.2	16.0	10.6	24.2	11.6	14.6	7.5	27.2				
Change Period (Y+Rc), s	4.9	4.9	5.3	5.3	4.9	4.9	5.3	5.3				
Max Green Setting (Gma1x5),.0s	25.0	15.0	50.0	20.0	20.0	15.0	50.0					
Max Q Clear Time (g_c+I15),.6s	7.4	4.7	15.6	6.8	7.7	2.8	11.1					
Green Ext Time (p_c), s	0.1	0.9	0.1	1.9	0.2	0.7	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	18.7											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary 6: Corby Ave & Hearn Ave

South Santa Rosa Specific Plan
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	471	211	236	623	103	100	185	651	99	89	125
Future Volume (veh/h)	56	471	211	236	623	103	100	185	651	99	89	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	57	481	80	241	636	96	102	189	584	101	91	75
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	81	664	549	273	1425	215	127	487	650	126	245	202
Arrive On Green	0.04	0.35	0.35	0.15	0.46	0.46	0.07	0.26	0.26	0.07	0.26	0.26
Sat Flow, veh/h	1795	1885	1559	1795	3102	467	1795	1885	1576	1795	952	785
Grp Volume(v), veh/h	57	481	80	241	367	365	102	189	584	101	0	166
Grp Sat Flow(s),veh/h/ln	1795	1885	1559	1795	1791	1779	1795	1885	1576	1795	0	1736
Q Serve(g_s), s	3.4	24.4	3.9	14.5	15.3	15.4	6.2	9.1	28.4	6.1	0.0	8.6
Cycle Q Clear(g_c), s	3.4	24.4	3.9	14.5	15.3	15.4	6.2	9.1	28.4	6.1	0.0	8.6
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	81	664	549	273	823	817	127	487	650	126	0	447
V/C Ratio(X)	0.71	0.72	0.15	0.88	0.45	0.45	0.80	0.39	0.90	0.80	0.00	0.37
Avail Cap(c_a), veh/h	153	664	549	349	823	817	137	487	650	137	0	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	31.0	24.3	45.7	20.2	20.2	50.3	33.6	30.4	50.4	0.0	33.5
Incr Delay (d2), s/veh	4.2	6.8	0.6	15.6	1.4	1.4	23.8	0.2	15.0	23.4	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	12.2	1.5	7.6	6.6	6.6	3.6	4.2	16.7	3.6	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.0	37.8	24.9	61.2	21.6	21.7	74.2	33.8	45.3	73.8	0.0	33.7
LnGrp LOS	E	D	C	E	C	C	E	C	D	E		C
Approach Vol, veh/h		618			973			875			267	
Approach Delay, s/veh		37.8			31.4			46.2			48.9	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), 2s	1.4	43.3	12.4	32.9	9.5	55.1	12.3	33.0				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gma2x1), 4s	33.4	8.4	28.4	9.4	45.4	8.4	28.4					
Max Q Clear Time (g_c+I116), 5s	26.4	8.2	10.6	5.4	17.4	8.1	30.4					
Green Ext Time (p_c), s	0.3	2.5	0.0	0.5	0.0	5.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			39.3									
HCM 6th LOS			D									

Min green cannot be greater than Max Green.

HCM 6th Signalized Intersection Summary

South Santa Rosa Specific Plan

8: Santa Rosa Ave & Yolanda Ave / US-101 NB Off-Ramp/Yolanda Ave

Existing PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	45	32	91	271	153	337	726	144	249	950	265
Future Volume (veh/h)	313	45	32	91	271	153	337	726	144	249	950	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	333	48	2	97	288	28	359	772	70	265	1011	252
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	395	66	56	446	315	267	418	1787	777	324	1699	929
Arrive On Green	0.11	0.03	0.03	0.25	0.17	0.17	0.12	0.50	0.50	0.19	0.95	0.95
Sat Flow, veh/h	3483	1885	1598	1795	1885	1598	3483	3582	1557	3483	3582	1576
Grp Volume(v), veh/h	333	48	2	97	288	28	359	772	70	265	1011	252
Grp Sat Flow(s),veh/h/ln	1742	1885	1598	1795	1885	1598	1742	1791	1557	1742	1791	1576
Q Serve(g_s), s	11.2	3.0	0.1	5.2	18.0	1.5	12.1	16.5	2.8	8.8	4.0	1.1
Cycle Q Clear(g_c), s	11.2	3.0	0.1	5.2	18.0	1.5	12.1	16.5	2.8	8.8	4.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	66	56	446	315	267	418	1787	777	324	1699	929
V/C Ratio(X)	0.84	0.73	0.04	0.22	0.91	0.10	0.86	0.43	0.09	0.82	0.59	0.27
Avail Cap(c_a), veh/h	476	316	268	446	316	268	467	1787	777	467	1699	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.52	0.52	0.52
Uniform Delay (d), s/veh	52.1	57.4	37.0	35.9	49.1	28.0	51.8	19.2	15.8	47.8	1.7	1.0
Incr Delay (d2), s/veh	11.1	14.4	0.3	0.1	29.8	0.2	13.7	0.8	0.2	3.9	0.8	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	1.7	0.1	2.3	11.0	0.7	6.0	6.9	1.0	3.6	0.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.3	71.8	37.3	35.9	78.9	28.2	65.5	20.0	16.0	51.8	2.5	1.4
LnGrp LOS	E	E	D	D	E	C	E	B	B	D	A	A
Approach Vol, veh/h	383			413			1201			1528		
Approach Delay, s/veh	64.2			65.4			33.3			10.9		
Approach LOS	E			E			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), 3s	3.7	7.8	18.0	60.5	17.5	23.9	14.8	63.8				
Change Period (Y+Rc), s	3.9	3.6	3.6	3.6	3.9	* 3.9	3.6	3.9				
Max Green Setting (Gma1x6), 4s	20.1	16.1	52.7	16.4	* 20	16.1	52.4					
Max Q Clear Time (g_c+I17), 2s	5.0	14.1	6.0	13.2	20.0	10.8	18.5					
Green Ext Time (p_c), s	0.1	0.1	0.3	10.4	0.4	0.0	0.4	6.2				

Intersection Summary

HCM 6th Ctrl Delay, s/veh

30.7

HCM 6th LOS

C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Intersection Delay, s/veh16.4

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	255	132	196	195	3	105	1	116	18	6	10
Future Vol, veh/h	2	255	132	196	195	3	105	1	116	18	6	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	277	143	213	212	3	114	1	126	20	7	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB		WB		NB		SB					
Opposing Approach	WB		EB		SB		NB					
Opposing Lanes	1		1		1		1					
Conflicting Approach Left SB			NB		EB		WB					
Conflicting Lanes Left	1		1		1		1					
Conflicting Approach RightNB			SB		WB		EB					
Conflicting Lanes Right	1		1		1		1					
HCM Control Delay, s/veh6.6			18.7		13.1		10.3					
HCM LOS	C		C		B		B					

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	1%	50%	53%
Vol Thru, %	0%	66%	49%	18%
Vol Right, %	52%	34%	1%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	222	389	394	34
LT Vol	105	2	196	18
Through Vol	1	255	195	6
RT Vol	116	132	3	10
Lane Flow Rate	241	423	428	37
Geometry Grp	1	1	1	1
Degree of Util (X)	0.401	0.619	0.658	0.07
Departure Headway (Hd)	5.985	5.271	5.533	6.798
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	598	681	651	530
Service Time	4.057	3.333	3.594	4.798
HCM Lane V/C Ratio	0.403	0.621	0.657	0.07
HCM Control Delay, s/veh	13.1	16.6	18.7	10.3
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	1.9	4.3	4.9	0.2

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕		↕	↕↕	
Traffic Vol, veh/h	2	0	2	32	0	76	5	1030	56	85	627	0
Future Vol, veh/h	2	0	2	32	0	76	5	1030	56	85	627	0
Conflicting Peds, #/hr	2	0	0	0	0	2	7	0	12	12	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	60	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	0	2	33	0	78	5	1051	57	87	640	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1359	1951	327	1596	1923	568	647	0	0	1120	0	0
Stage 1	821	821	-	1102	1102	-	-	-	-	-	-	-
Stage 2	538	1130	-	494	821	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	108	64	672	72	67	469	941	-	-	625	-	-
Stage 1	337	389	-	227	288	-	-	-	-	-	-	-
Stage 2	497	279	-	528	389	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	79	54	668	63	56	463	935	-	-	618	-	-
Mov Cap-2 Maneuver	79	54	-	63	56	-	-	-	-	-	-	-
Stage 1	333	332	-	223	283	-	-	-	-	-	-	-
Stage 2	411	275	-	452	332	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s/v	31.3		43.3		0		1.4					
HCM LOS	D		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	935	-	-	141 63 463	618	-	-					
HCM Lane V/C Ratio	0.005	-	-	0.029 0.518 0.167	0.14	-	-					
HCM Control Delay (s/veh)	8.9	-	-	31.3 112.1 14.3	11.8	-	-					
HCM Lane LOS	A	-	-	D F B	B	-	-					
HCM 95th %tile Q (veh)	0	-	-	0.1 2.1 0.6 0.5	-	-	-					

HCM 6th Signalized Intersection Summary

11: Santa Rosa Ave & E Robles Ave

South Santa Rosa Specific Plan
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	2	20	29	2	56	16	915	40	45	512	9
Future Volume (veh/h)	12	2	20	29	2	56	16	915	40	45	512	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.97	0.97		0.99	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	2	3	31	2	7	17	984	40	48	551	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	5	8	287	14	47	31	1491	61	78	1628	27
Arrive On Green	0.04	0.04	0.04	0.04	0.04	0.04	0.02	0.43	0.43	0.04	0.46	0.46
Sat Flow, veh/h	884	136	204	1368	361	1264	1781	3473	141	1781	3575	58
Grp Volume(v), veh/h	18	0	0	31	0	9	17	503	521	48	274	286
Grp Sat Flow(s),veh/h/ln	1224	0	0	1368	0	1625	1781	1777	1837	1781	1777	1857
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.2	0.3	7.1	7.1	0.8	3.1	3.1
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.6	0.0	0.2	0.3	7.1	7.1	0.8	3.1	3.1
Prop In Lane	0.72		0.17	1.00		0.78	1.00		0.08	1.00		0.03
Lane Grp Cap(c), veh/h	243	0	0	287	0	61	31	763	789	78	809	846
V/C Ratio(X)	0.07	0.00	0.00	0.11	0.00	0.15	0.54	0.66	0.66	0.62	0.34	0.34
Avail Cap(c_a), veh/h	643	0	0	888	0	775	566	1582	1635	680	1356	1417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	14.8	0.0	14.7	15.3	7.1	7.1	14.8	5.5	5.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.4	5.3	0.4	0.4	3.0	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.2	0.0	0.1	0.1	1.2	1.3	0.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.0	0.0	0.0	14.9	0.0	15.1	20.7	7.5	7.5	17.7	5.6	5.6
LnGrp LOS	B			B		B	C	A	A	B	A	A
Approach Vol, veh/h		18			40			1041			608	
Approach Delay, s/veh		15.0			14.9			7.7			6.6	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	18.9		5.8	6.0	19.7		5.8				
Change Period (Y+Rc), s	5.4	5.4		4.6	5.4	5.4		4.6				
Max Green Setting (Gmax), s	12.0	28.0		10.0	10.0	24.0		15.0				
Max Q Clear Time (g_c+l1), s	2.8	9.1		2.6	2.3	5.1		2.6				
Green Ext Time (p_c), s	0.0	2.9		0.0	0.0	1.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			7.6									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary

South Santa Rosa Specific Plan

12: S Moorland Ave & Todd Rd/Todd Rd / US-101 SB Off-Ramp

Existing PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↗	↗	↗		↖	↖	↖		↔	
Traffic Volume (veh/h)	0	272	468	314	153	0	472	0	76	0	0	0
Future Volume (veh/h)	0	272	468	314	153	0	472	0	76	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No		No				No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	0	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	0	280	93	324	158	0	487	0	52	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	0	8	8	8	8	8	8
Cap, veh/h	0	361	306	397	417	0	553	0	984	0	5	0
Arrive On Green	0.00	0.20	0.20	0.23	0.23	0.00	0.33	0.00	0.33	0.00	0.00	0.00
Sat Flow, veh/h	0	1781	1510	1697	1781	0	1697	0	3019	0	1781	0
Grp Volume(v), veh/h	0	280	93	324	158	0	487	0	52	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1781	1510	1697	1781	0	1697	0	1510	0	1781	0
Q Serve(g_s), s	0.0	5.8	2.0	7.0	2.9	0.0	10.5	0.0	0.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.8	2.0	7.0	2.9	0.0	10.5	0.0	0.5	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	361	306	397	417	0	553	0	984	0	5	0
V/C Ratio(X)	0.00	0.77	0.30	0.82	0.38	0.00	0.88	0.00	0.05	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	919	779	1314	1379	0	1095	0	1948	0	368	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	14.6	13.1	14.1	12.5	0.0	12.4	0.0	9.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.2	1.6	0.2	0.0	1.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	0.6	2.3	1.0	0.0	3.3	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	16.0	13.3	15.6	12.7	0.0	14.2	0.0	9.0	0.0	0.0	0.0
LnGrp LOS		B	B	B	B		B		A			
Approach Vol, veh/h	373				482		539		0			
Approach Delay, s/veh	15.3				14.7		13.7		0.0			
Approach LOS	B				B		B					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	0.0		11.1		15.6		12.1					
Change Period (Y+Rc), s	3.0		3.2		3.0		3.0					
Max Green Setting (Gmax), s	8.0		20.0		25.0		30.0					
Max Q Clear Time (g_c+I1), s	0.0		7.8		12.5		9.0					
Green Ext Time (p_c), s	0.0		0.2		0.1		0.1					

Intersection Summary

HCM 6th Ctrl Delay, s/veh 14.5

HCM 6th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

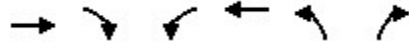
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary

South Santa Rosa Specific Plan

13: Todd Rd Overpass & Todd Rd / US-101 NB Off-Ramp/Todd Rd

Existing PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗↗
Traffic Volume (veh/h)	91	177	314	322	208	630
Future Volume (veh/h)	91	177	314	322	208	630
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	95	19	371	274	217	389
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	425	189	1028	1099	313	1296
Arrive On Green	0.12	0.12	0.29	0.60	0.18	0.18
Sat Flow, veh/h	3589	1560	3506	1841	1753	2745
Grp Volume(v), veh/h	95	19	371	274	217	389
Grp Sat Flow(s),veh/h/ln	1749	1560	1753	1841	1753	1373
Q Serve(g_s), s	0.8	0.4	2.8	2.3	3.8	2.9
Cycle Q Clear(g_c), s	0.8	0.4	2.8	2.3	3.8	2.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	425	189	1028	1099	313	1296
V/C Ratio(X)	0.22	0.10	0.36	0.25	0.69	0.30
Avail Cap(c_a), veh/h	2123	947	5321	1099	532	1639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	12.9	9.2	3.1	12.7	5.4
Incr Delay (d2), s/veh	0.1	0.1	0.5	0.0	1.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.8	0.3	1.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.2	13.0	9.7	3.2	13.7	5.4
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	114			645	606	
Approach Delay, s/veh	13.1			6.9	8.4	
Approach LOS	B			A	A	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), 1s	5.7	7.7			23.4	9.6
Change Period (Y+Rc), s	6.0	3.7			3.7	3.7
Max Green Setting (Gma5x0),0s	20.0				15.0	10.0
Max Q Clear Time (g_c+I14),.8s	2.8				4.3	5.8
Green Ext Time (p_c), s	3.4	0.1			0.2	0.1

Intersection Summary

HCM 6th Ctrl Delay, s/veh	8.1
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary 14: Santa Rosa Ave & Todd Rd/E Todd Rd

South Santa Rosa Specific Plan
Existing PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	405	32	284	40	54	31	330	760	24	13	349	252
Future Volume (veh/h)	405	32	284	40	54	31	330	760	24	13	349	252
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	446	0	54	42	56	11	344	792	13	14	364	62
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	603	0	266	106	90	18	398	1358	601	25	632	274
Arrive On Green	0.17	0.00	0.17	0.06	0.06	0.06	0.23	0.39	0.39	0.01	0.18	0.18
Sat Flow, veh/h	3534	0	1561	1767	1501	295	1767	3526	1560	1767	3526	1529
Grp Volume(v), veh/h	446	0	54	42	0	67	344	792	13	14	364	62
Grp Sat Flow(s),veh/h/ln	1767	0	1561	1767	0	1796	1767	1763	1560	1767	1763	1529
Q Serve(g_s), s	6.8	0.0	1.7	1.3	0.0	2.1	10.6	10.1	0.3	0.4	5.4	2.0
Cycle Q Clear(g_c), s	6.8	0.0	1.7	1.3	0.0	2.1	10.6	10.1	0.3	0.4	5.4	2.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	603	0	266	106	0	108	398	1358	601	25	632	274
V/C Ratio(X)	0.74	0.00	0.20	0.40	0.00	0.62	0.86	0.58	0.02	0.57	0.58	0.23
Avail Cap(c_a), veh/h	1246	0	551	312	0	317	654	2486	1100	312	1678	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	0.0	20.2	25.7	0.0	26.0	21.1	13.8	10.8	27.8	21.3	19.9
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.9	0.0	2.2	3.5	0.1	0.0	7.4	0.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.6	0.5	0.0	0.9	4.2	3.3	0.1	0.2	2.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.0	0.0	20.3	26.6	0.0	28.2	24.6	14.0	10.8	35.2	21.6	20.1
LnGrp LOS	C		C	C		C	C	B	B	D	C	C
Approach Vol, veh/h		500			109			1149			440	
Approach Delay, s/veh		22.7			27.6			17.1			21.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.8	17.9	15.6		8.5	6.2	27.3				
Change Period (Y+Rc), s		5.1	5.1	5.4		5.1	5.4	* 5.4				
Max Green Setting (Gmax), s		20.0	21.0	27.0		10.0	10.0	* 40				
Max Q Clear Time (g_c+I1), s		8.8	12.6	7.4		4.1	2.4	12.1				
Green Ext Time (p_c), s		0.5	0.2	1.1		0.1	0.0	2.7				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	19.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Appendix C:

Peak Hour Signal Warrant Worksheets



Major Street Santa Rosa Avenue
Minor Street Bellevue Avenue

Project South Santa Rosa Specific Plan
Scenario Existing Conditions
Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	3	167	0	60
Through	650	401	0	0
Right	129	3	2	223
Total	782	571	2	283

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	155.4
Approach with Worst Case Delay	WB
Total Vehicles on Approach	283

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Existing Conditions	12.2	283	1,638
Limiting Value	4	100	800
Condition Satisfied?	Met	Met	Met
Warrant Met	YES		

Major Street Santa Rosa Avenue
Minor Street Bellevue Avenue

Project South Santa Rosa Specific Plan
Scenario Existing Conditions
Peak Hour AM

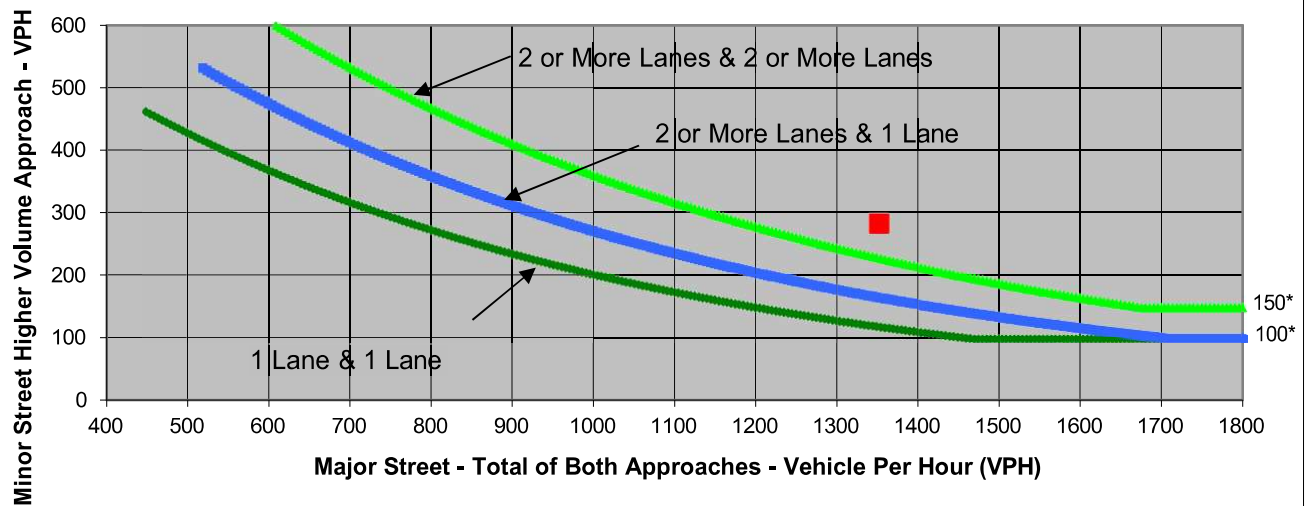
Turn Movement Volumes

	NB	SB	EB	WB
Left	3	167	0	60
Through	650	401	0	0
Right	129	3	2	223
Total	782	571	2	283

Major Street Direction

x North/South
East/West

Warrant 3B, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Santa Rosa Avenue	Bellevue Avenue	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,353	283	
* Note: Traffic Volume for Major Street is Total Volume of Both Approches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			



Major Street	Santa Rosa Avenue
Minor Street	Bellevue Avenue

Project	South Santa Rosa Specific Plan
Scenario	Existing Conditions
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	85	2	32
Through	1,036	627	0	0
Right	56	0	2	76
Total	1,097	712	4	108

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	43.3
Approach with Worst Case Delay	WB
Total Vehicles on Approach	108

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Existing Conditions	1.3	108	1,921
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Met	Met
Warrant Met	<u>NO</u>		



Major Street Santa Rosa Avenue
 Minor Street Bellevue

Project South Santa Rosa Specific Plan
 Scenario Existing Conditions
 Peak Hour PM

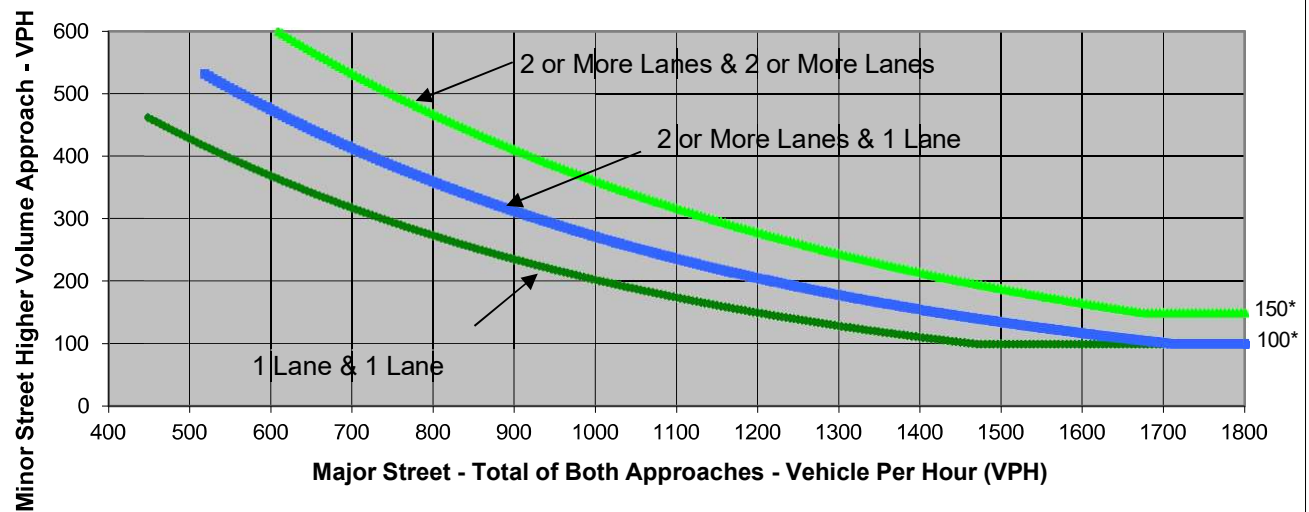
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	85	2	32
Through	1036	627	0	0
Right	56	0	2	76
Total	1,097	712	4	108

Major Street Direction

x North/South
 East/West

Warrant 3B, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

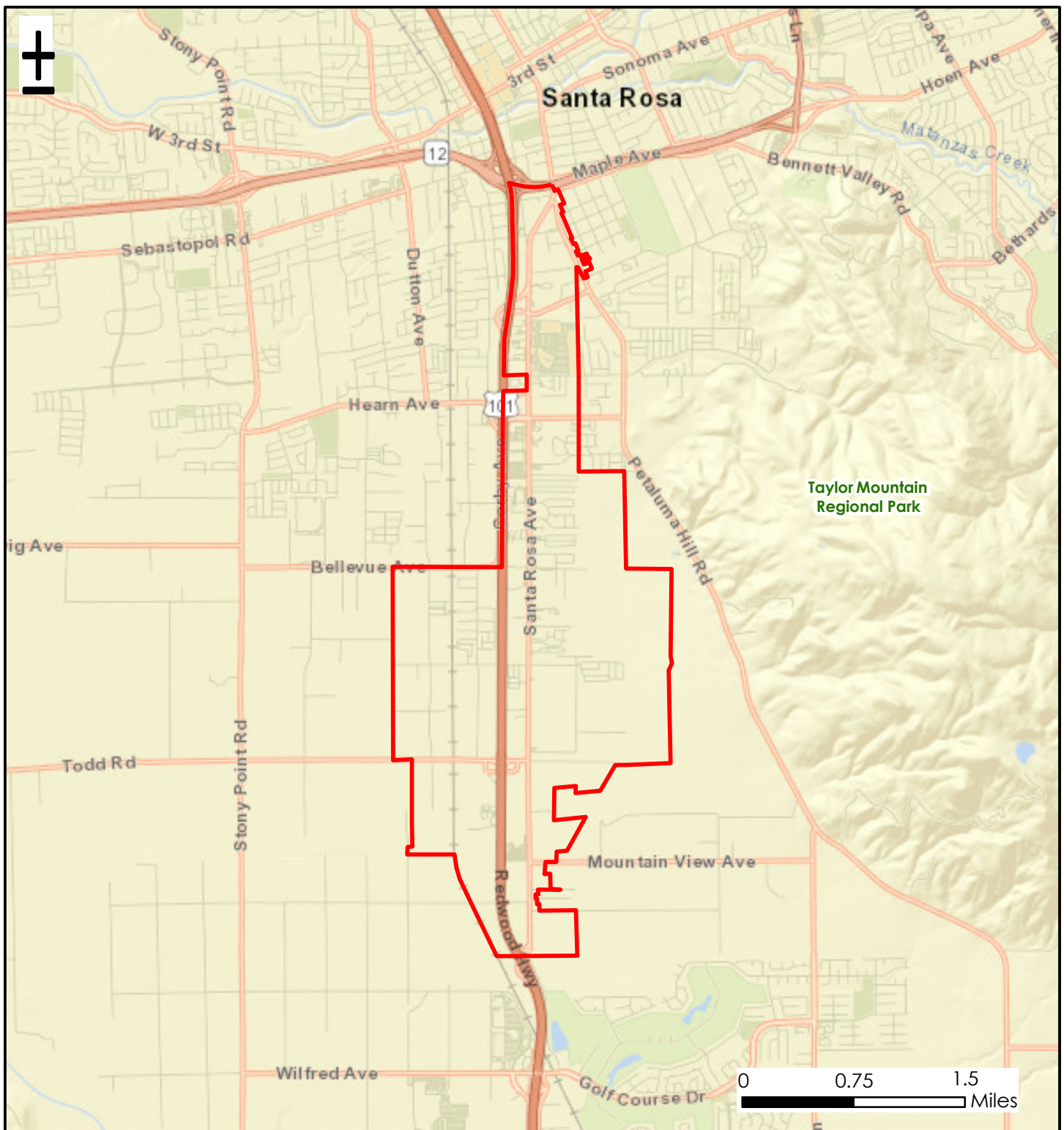
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Santa Rosa Avenue	Bellevue Avenue	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,809	108	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

APPENDIX B

WATEARTH EXHIBITS



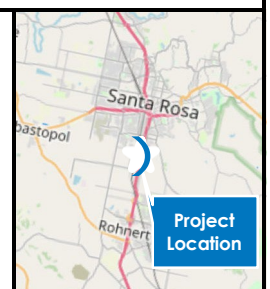
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

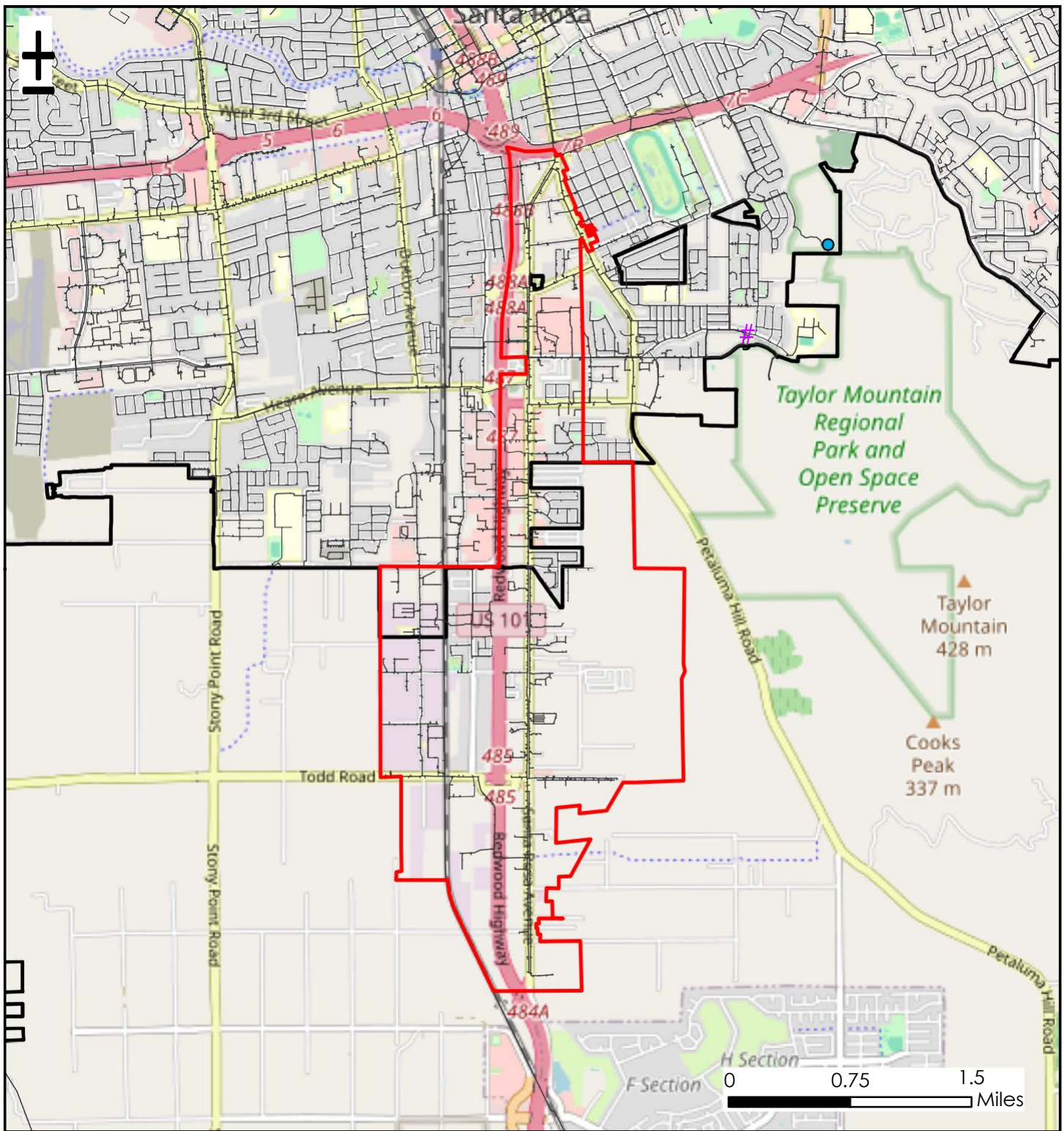
Exhibit 1 - Site Vicinity Map

Watearth

Legend

South Santa Rosa Specific Plan





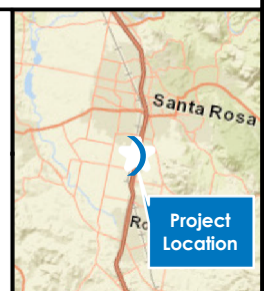
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

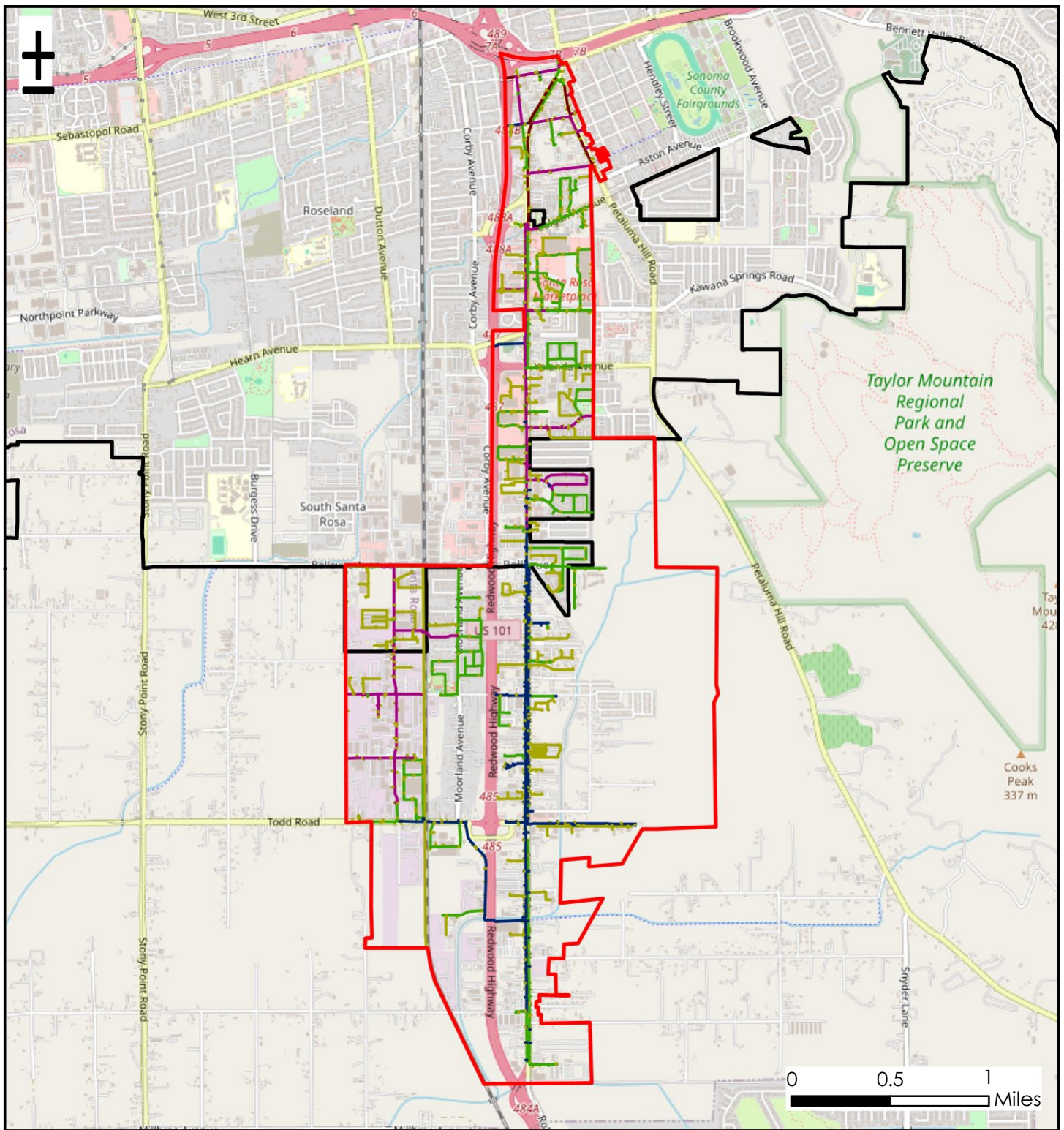
Exhibit 2 - Water Infrastructure Map

Watearth

Legend

- Water Tanks
- # Pump Stations
- Water Mains
- Project Area
- Santa Rosa City Limits





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

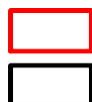
Exhibit 3 - Water Infrastructure - Pipe Type Classification Map

Watearth

Legend

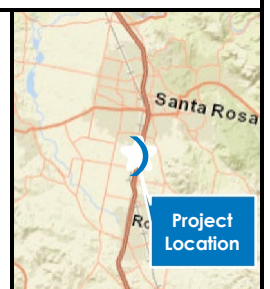
Water Main Pipe Type

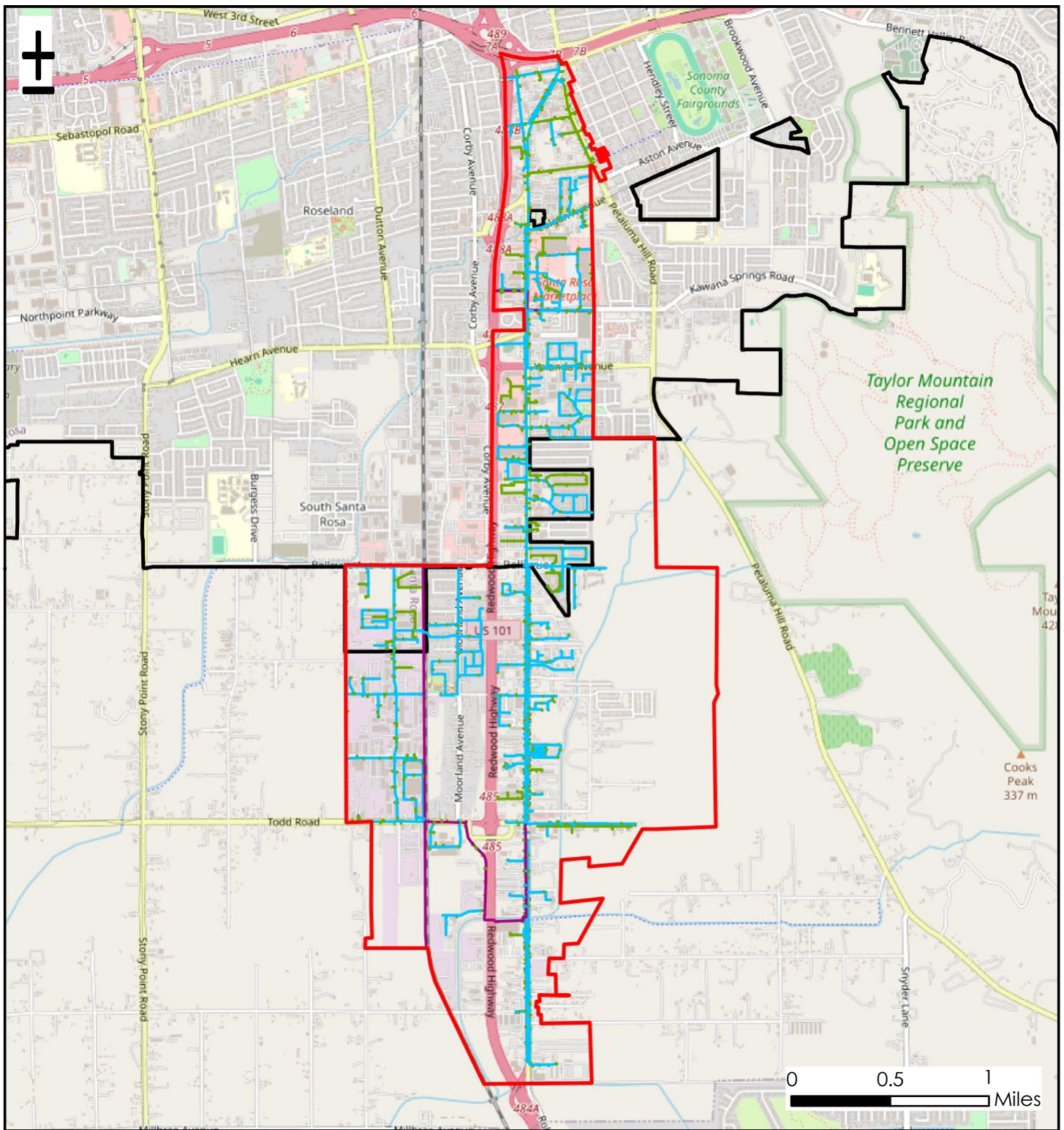
- Unclassified
- AC
- CAS
- DIP
- PVC



Project Area

Santa Rosa City Limits





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

Exhibit 4 - Water Infrastructure - Pipe Diameter Map

Watearth

Legend

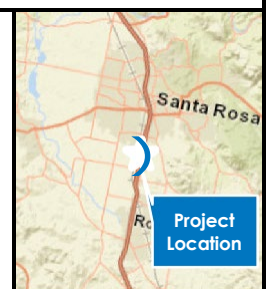
Water Main Pipe Diameter (in)

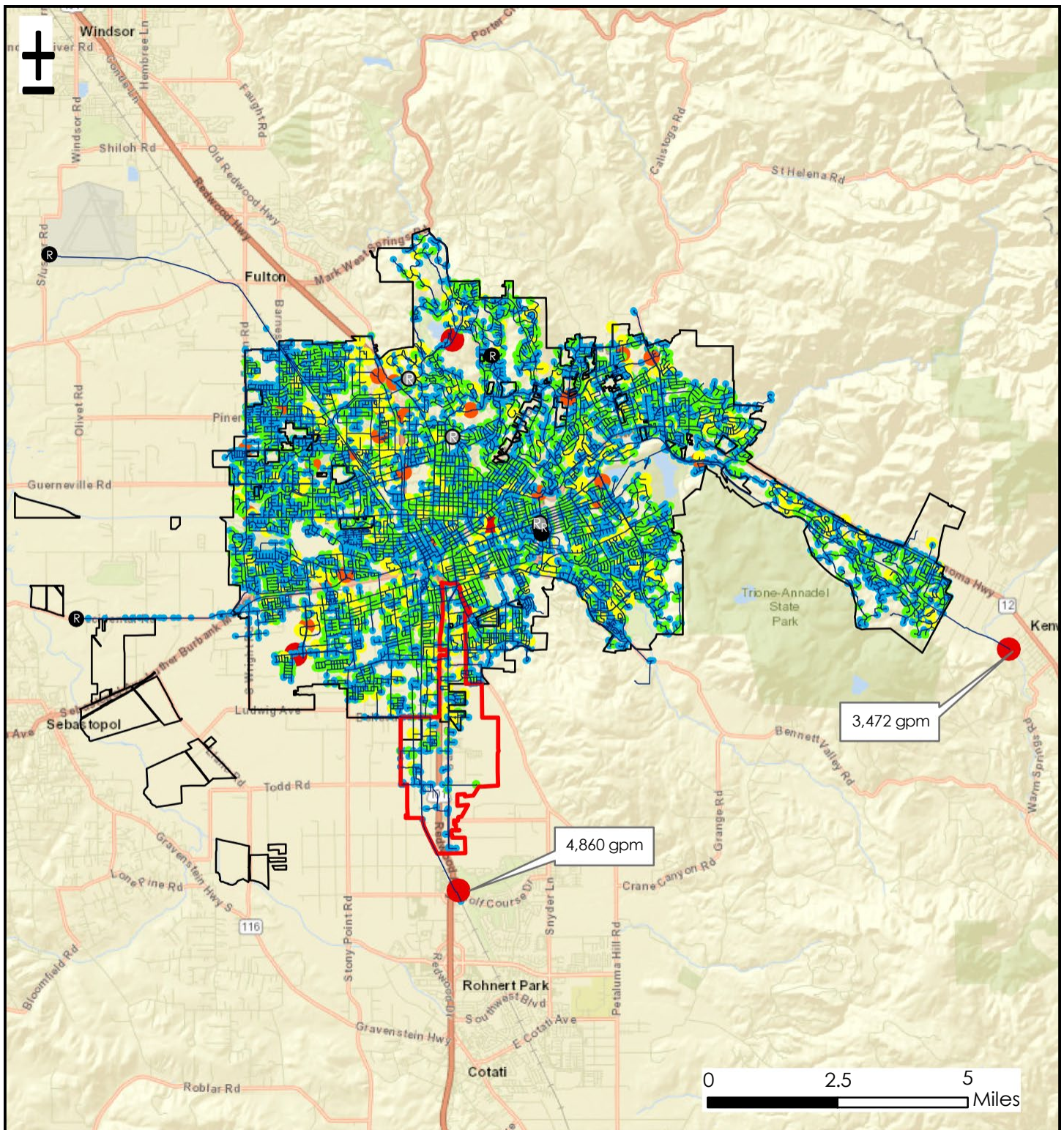
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- 8 - 12
- 16 - 36



Project Area

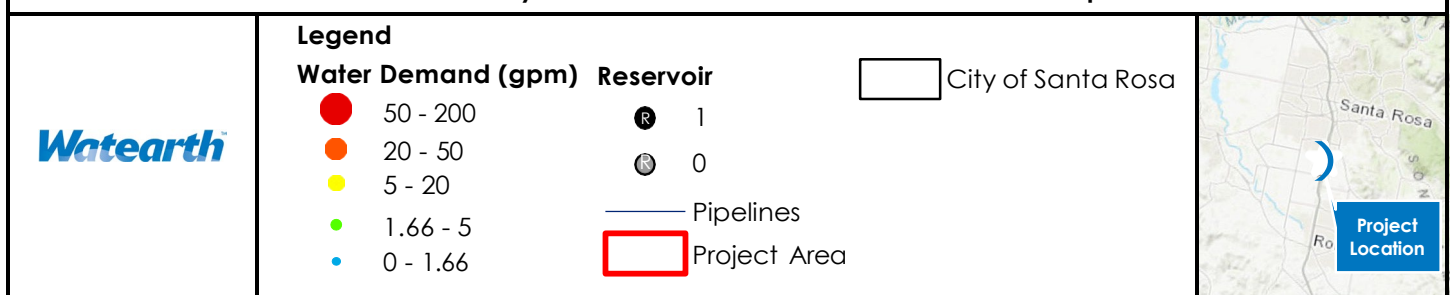
Santa Rosa City Limits

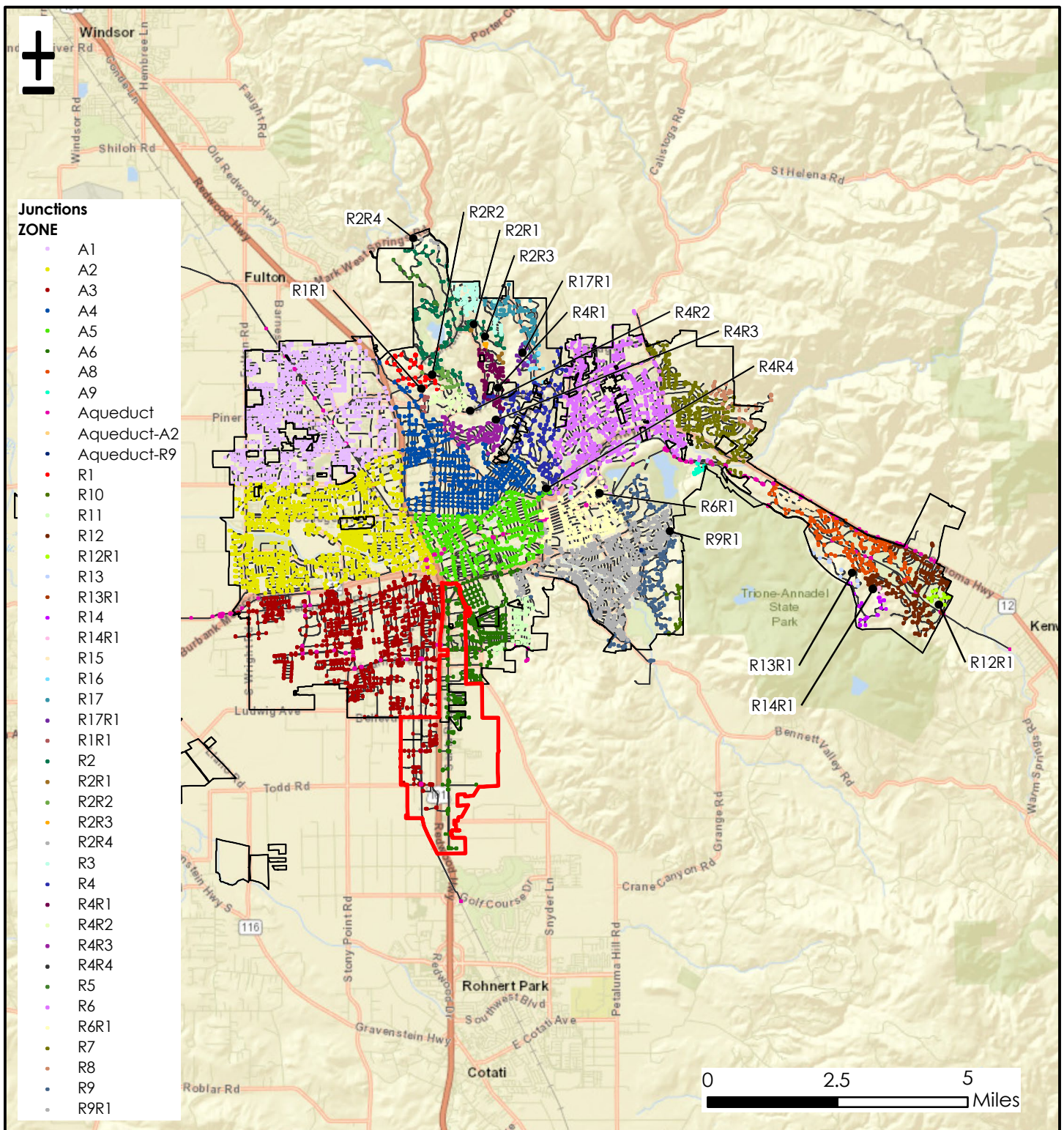




City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

Exhibit 5 - City of Santa Rosa Modeled Water Demand Map





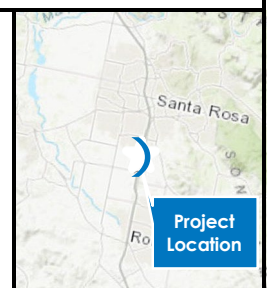
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

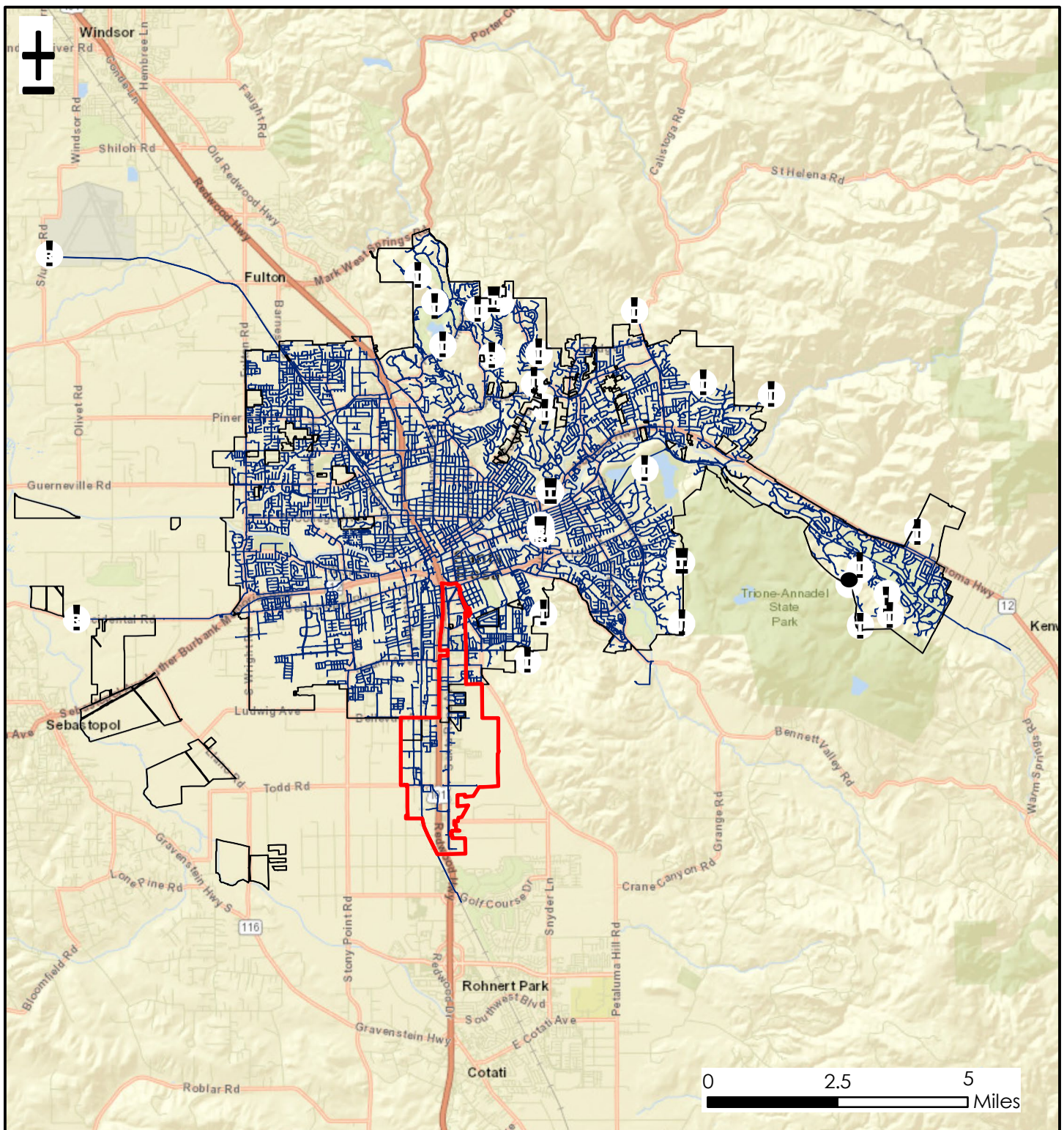
Exhibit 6 - City of Santa Rosa Modeled Pressure Zones Map

Watearth

Legend

- Pipelines
- Project Area
- City of Santa Rosa





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

Exhibit 7 - City of Santa Rosa Modeled Water Supply Map

Watearth

Legend



Tank



City of Santa Rosa

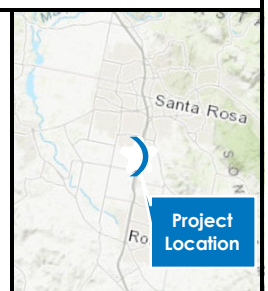


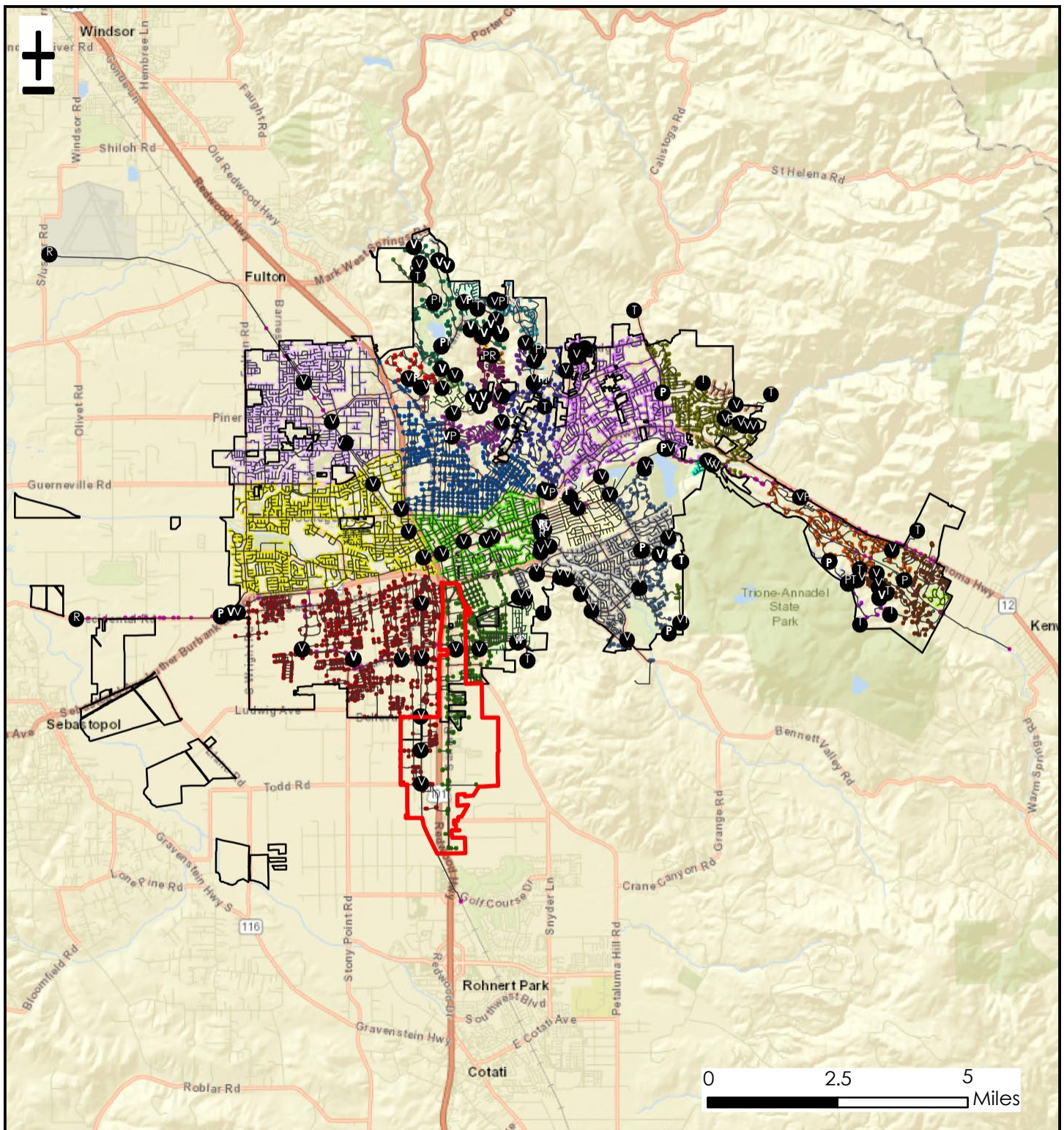
Reservoir

— Pipelines



Project Area





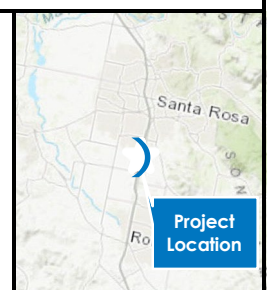
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

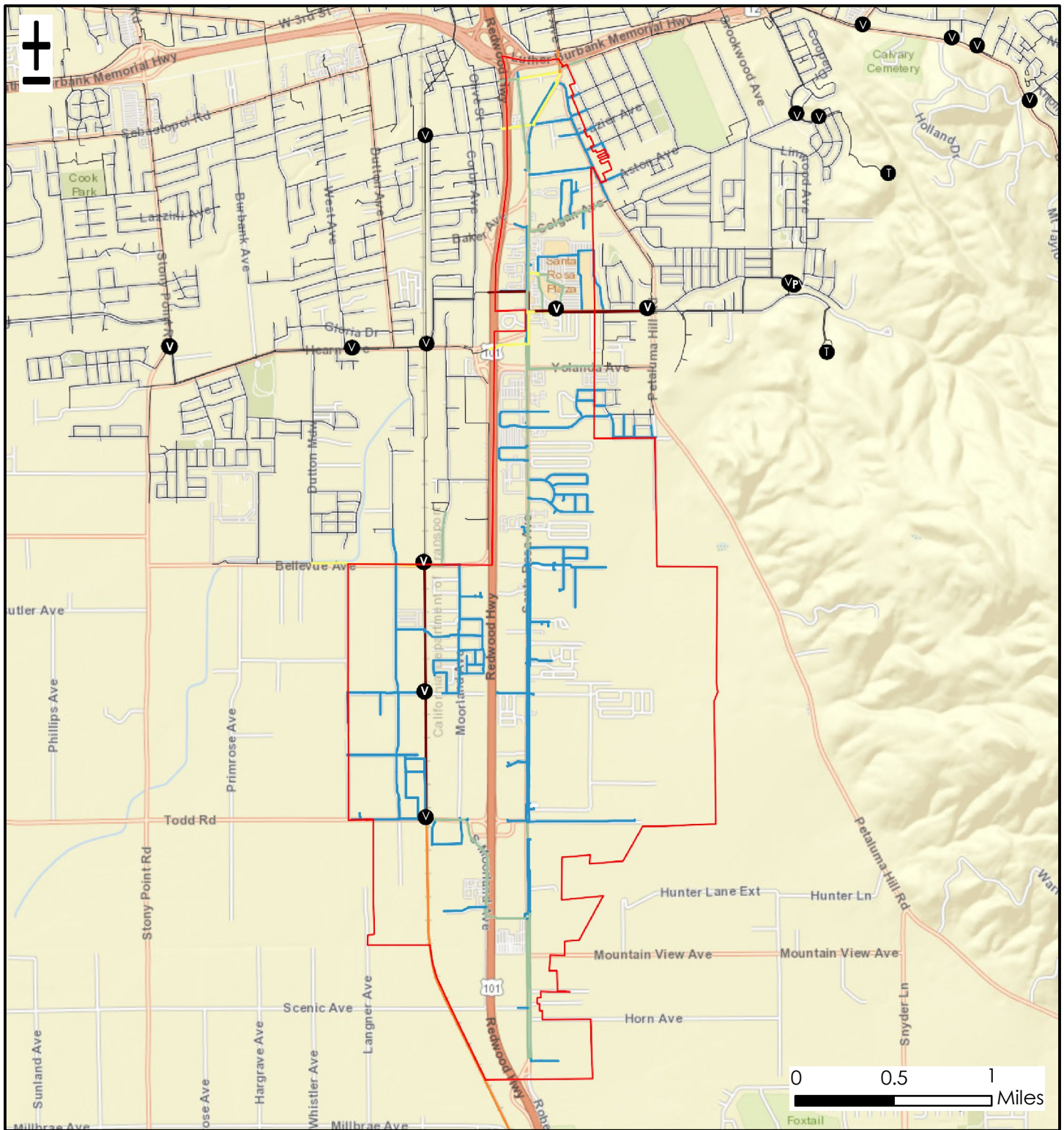
Exhibit 8 - City of Santa Rosa Modeled Assets Map

Watearth

Legend

- Valve
- Tank
- Reservoir
- Pump
- Pipelines
- Project Area
- City of Santa Rosa





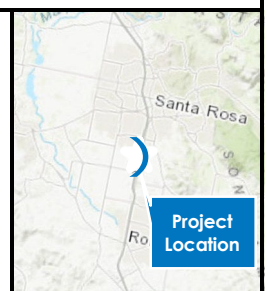
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

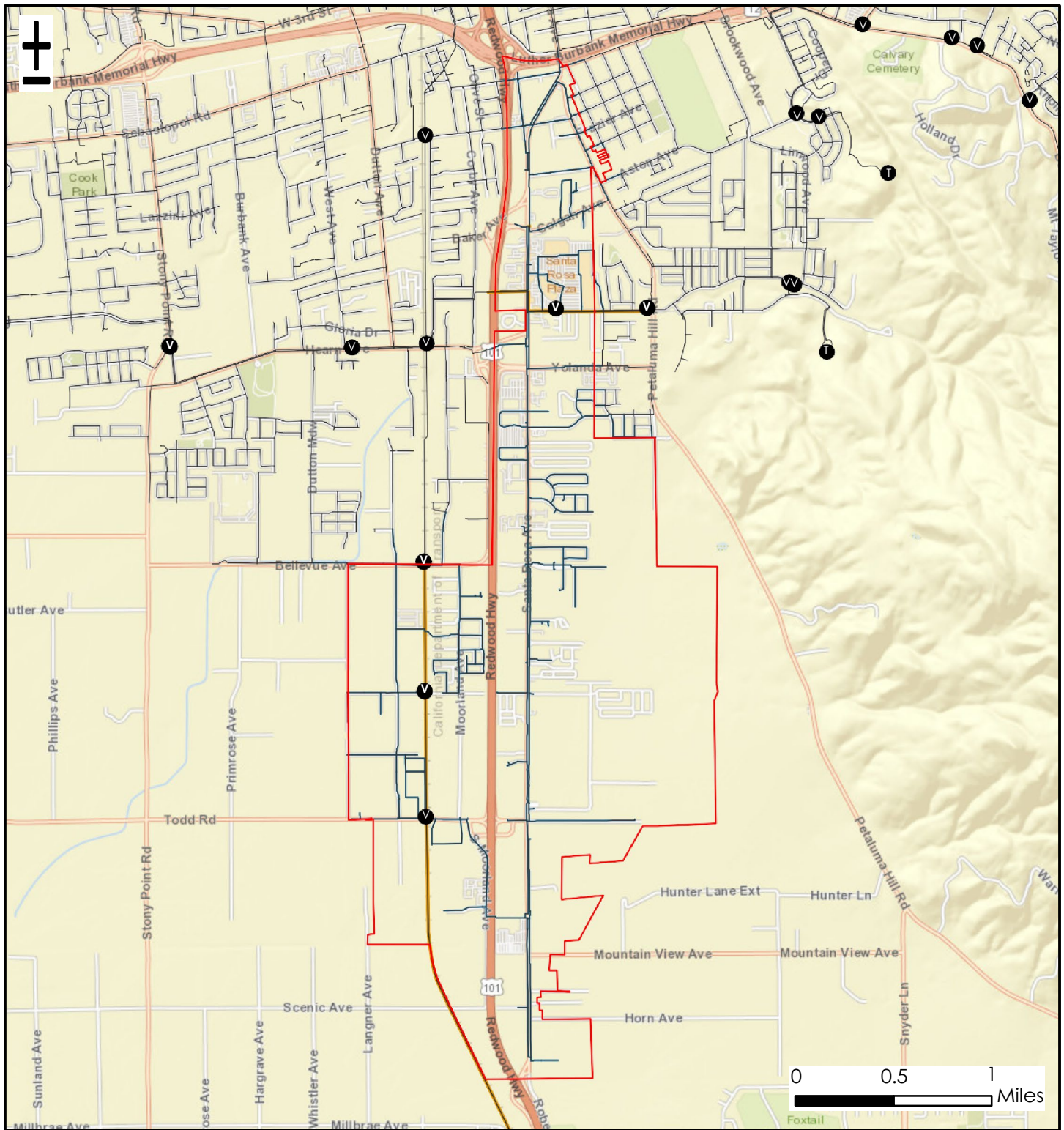
Exhibit 9 - Study Area - Modeled Water Flow Capacities Map

Watearth

Legend

● V	Valve	Maximum Flow (gpm)	200 - 500
● T	Tank	0 - 100	500 - 5,000
● P	Pump	100 - 200	5,000 - 12,666
—	Pipelines		Project Area





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

Exhibit 10 - Study Area - Modeled Maximum Velocity Map

Watearth

Legend



Valve



Tank

Pipelines

Maximum Velocity (fps)

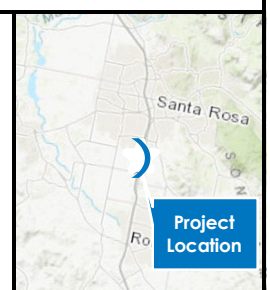
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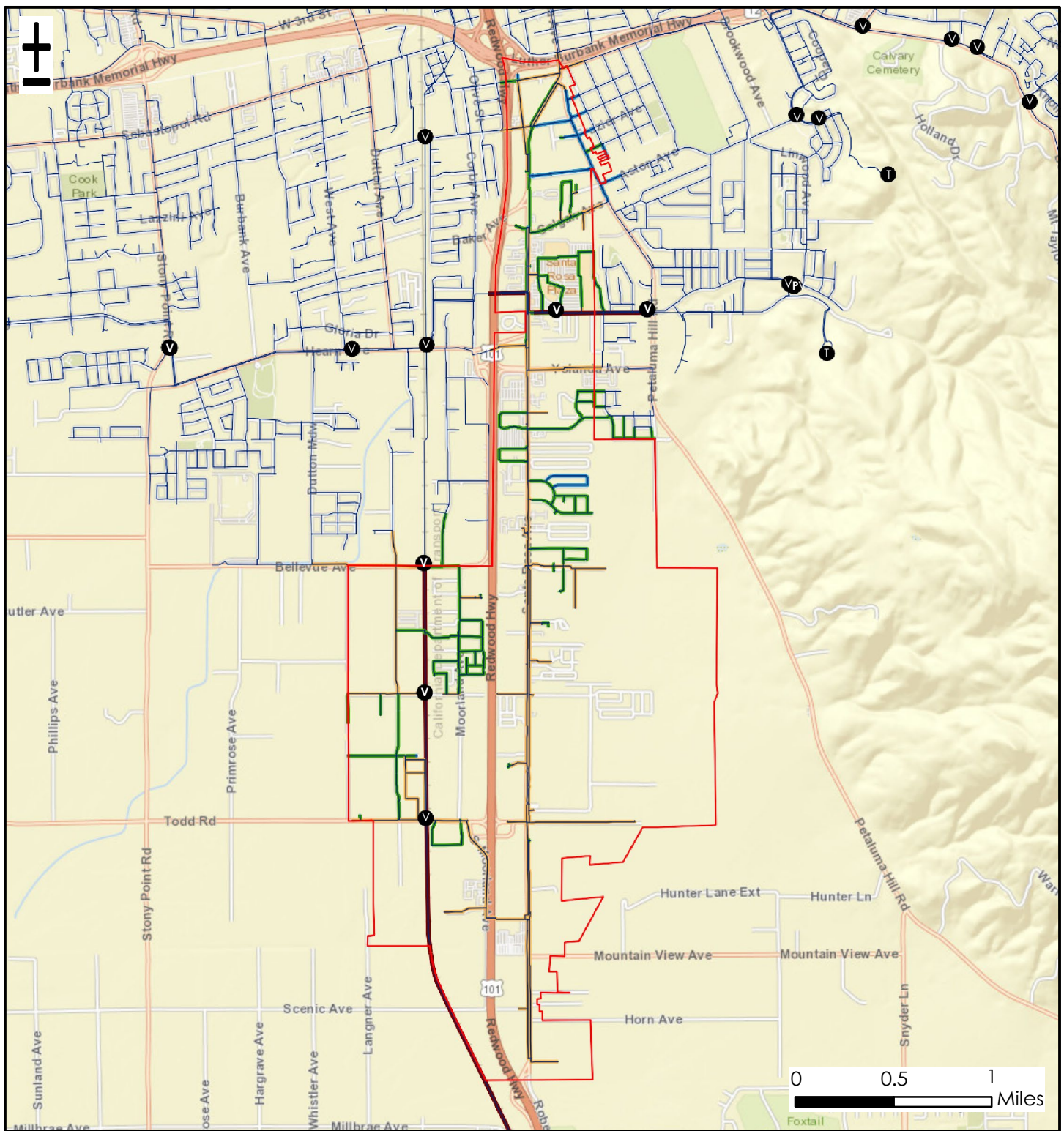
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> 5



Project Area





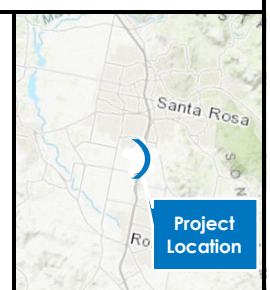
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

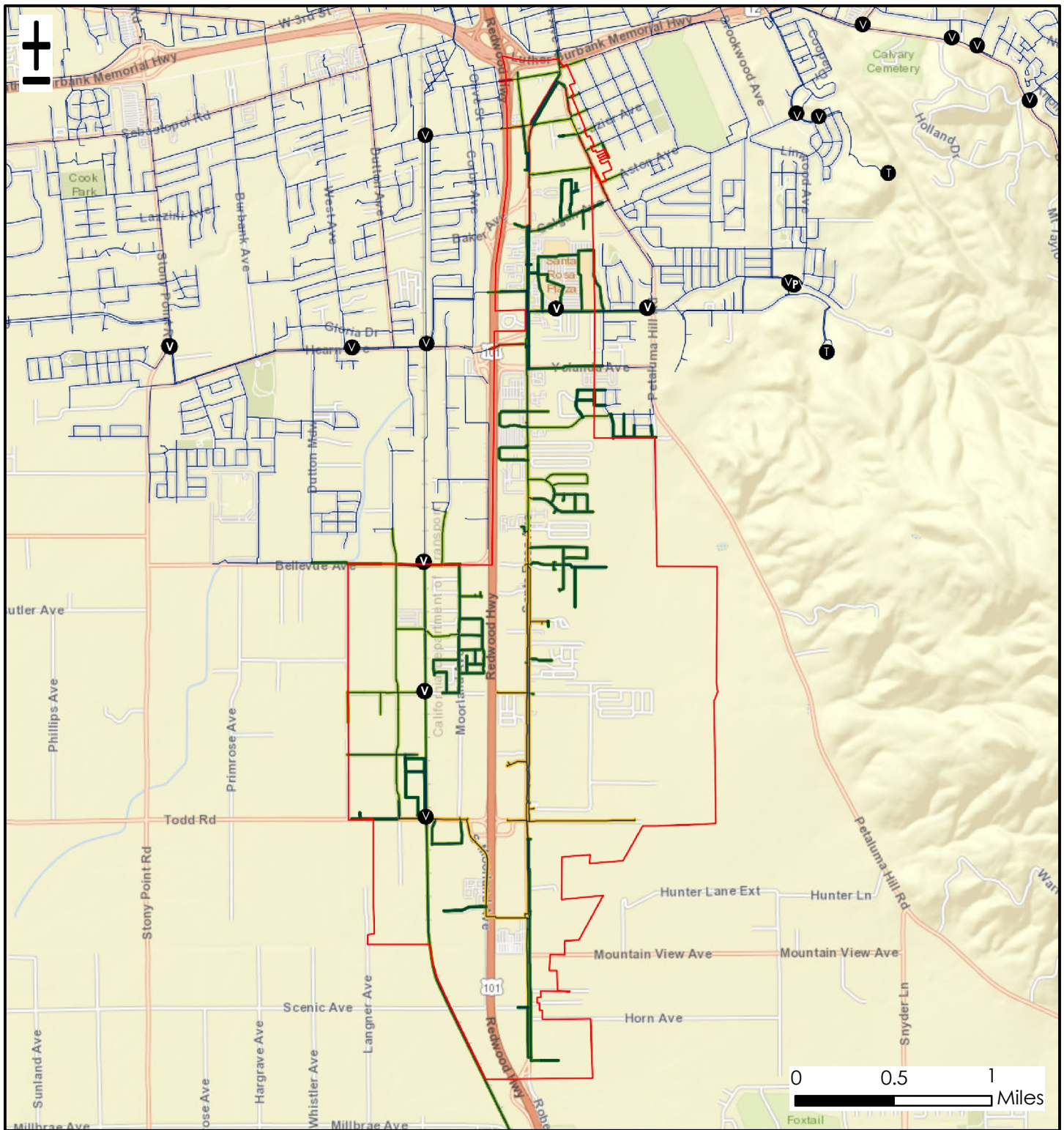
Exhibit 11 - Study Area - Modeled Water Main Diameter Map

Watearth

Legend

● V	Valve	Water Main Diameter (in)	10 - 16
● T	Tank		16 - 36
● P	Pump		Project Area
—	Pipelines		
		4 - 6	
		6 - 10	





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

Exhibit 12 - Study Area - Modeled Water Main Roughness Coefficient Map

Watearth

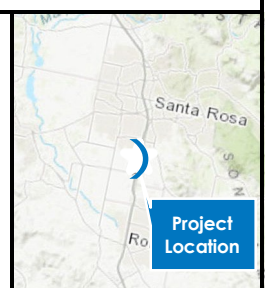
Legend

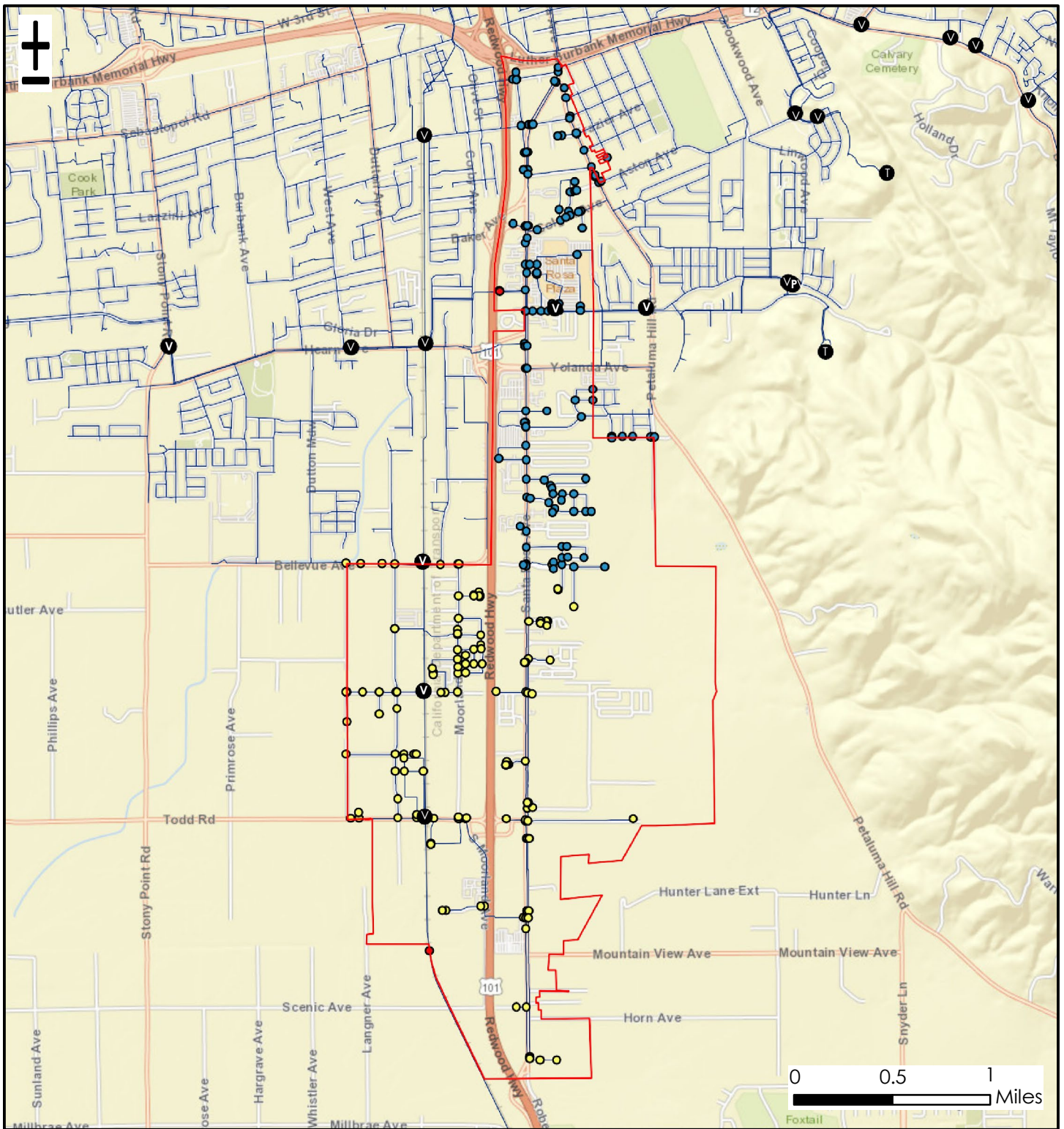
- Valve
- Tank
- Pump
- Pipelines

Modeled Water Main Roughness

- 75
- 80
- 90
- 95
- 110
- 120
- 125
- 130
- 135
- 140

Project Area





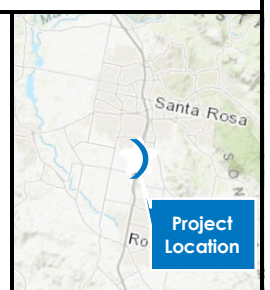
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

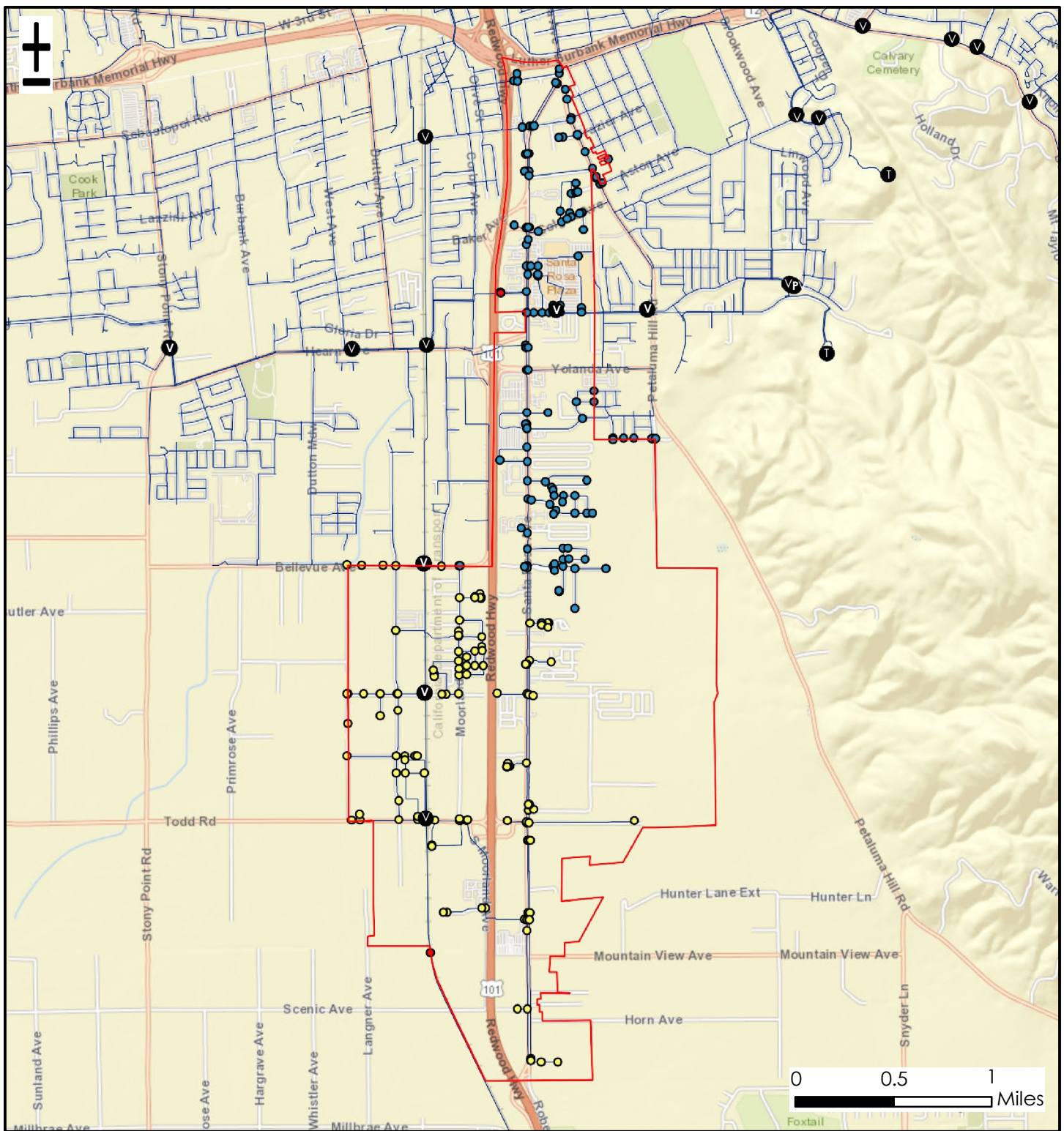
Exhibit 13 - Study Area - Modeled Maximum Pressure Map

Watearth

Legend

- | | | | |
|-----|-------|-------------------------|----------------|
| ● V | Valve | Maximum Pressure | — Pipelines |
| ● T | Tank | ● 50 - 75 psi | ▭ Project Area |
| ● P | Pump | ● 75 - 100 psi | |
| | | ● 100 - 115 psi | |





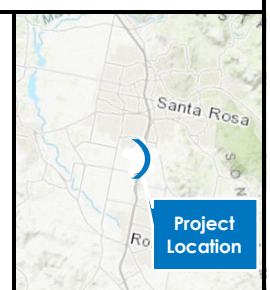
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

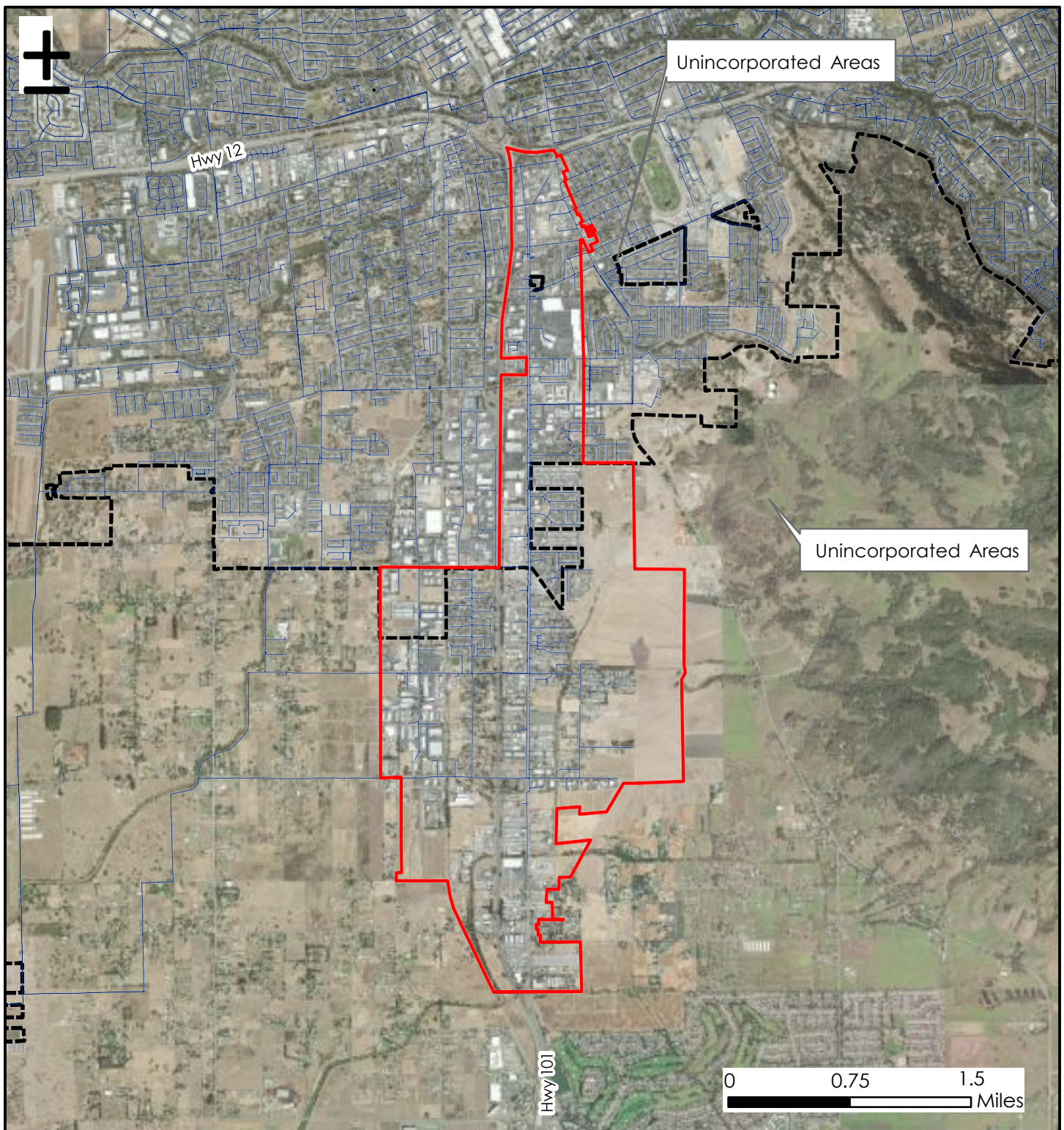
Exhibit 14 - Study Area - Modeled Minimum Pressure Map

Watearth

Legend

- | | | | |
|-----|-------|-------------------------|----------------|
| ● V | Valve | Minimum Pressure | — Pipelines |
| ● T | Tank | ● 50 - 75 psi | □ Project Area |
| ● P | Pump | ● 75 - 90 psi | |
| | | ● 90 - 105 psi | |



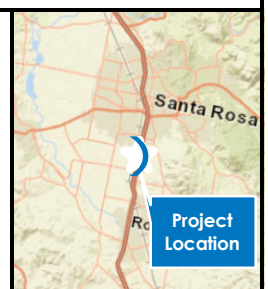


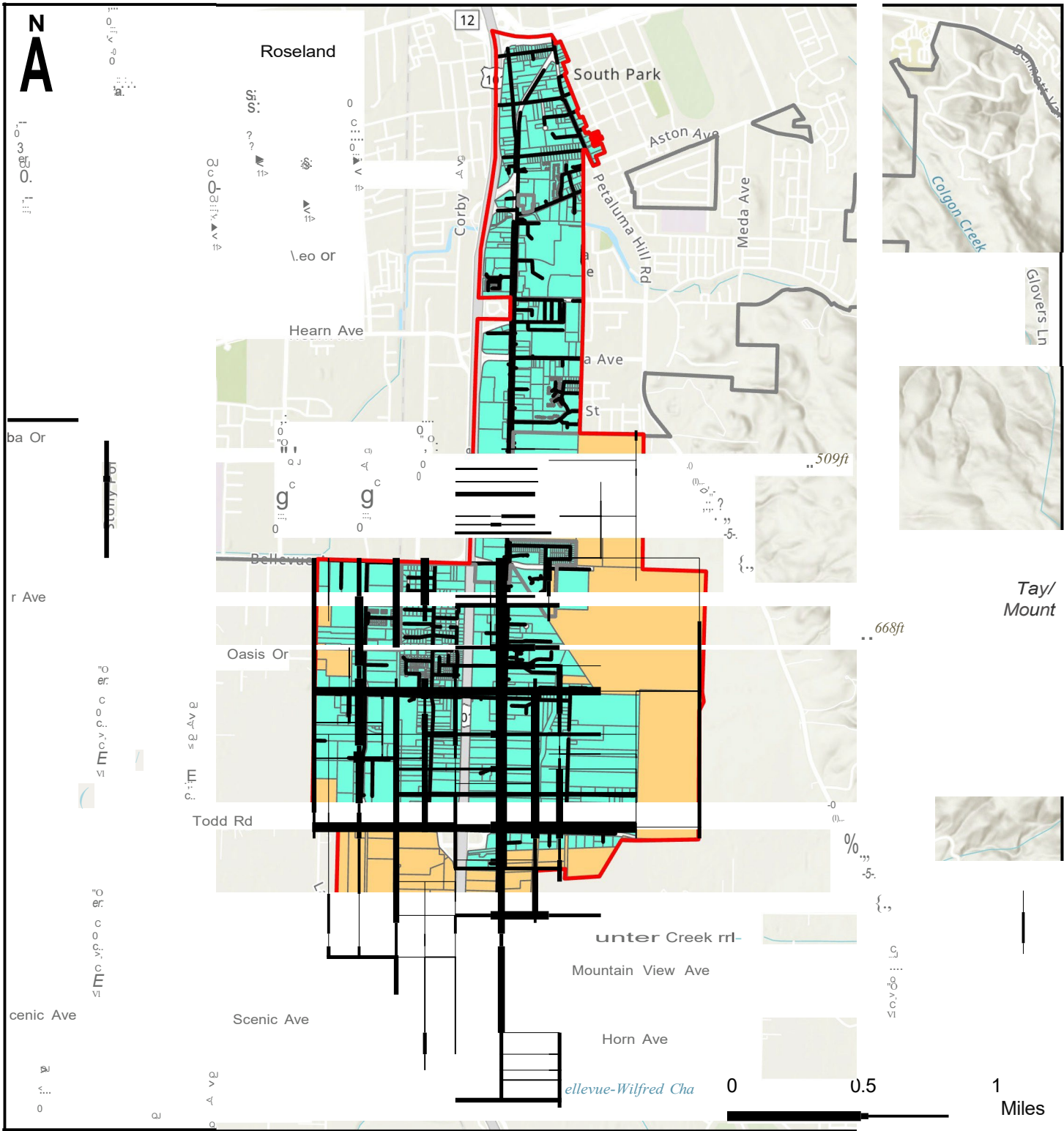
City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan **Exhibit 15 - Wastewater Infrastructure Map**

Watearth

Legend

- Sewer Mains
- Specific Plan Project Area
- Santa Rosa City Limits





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

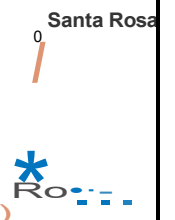
Exhibit 16 - Wastewater Parcel Classification

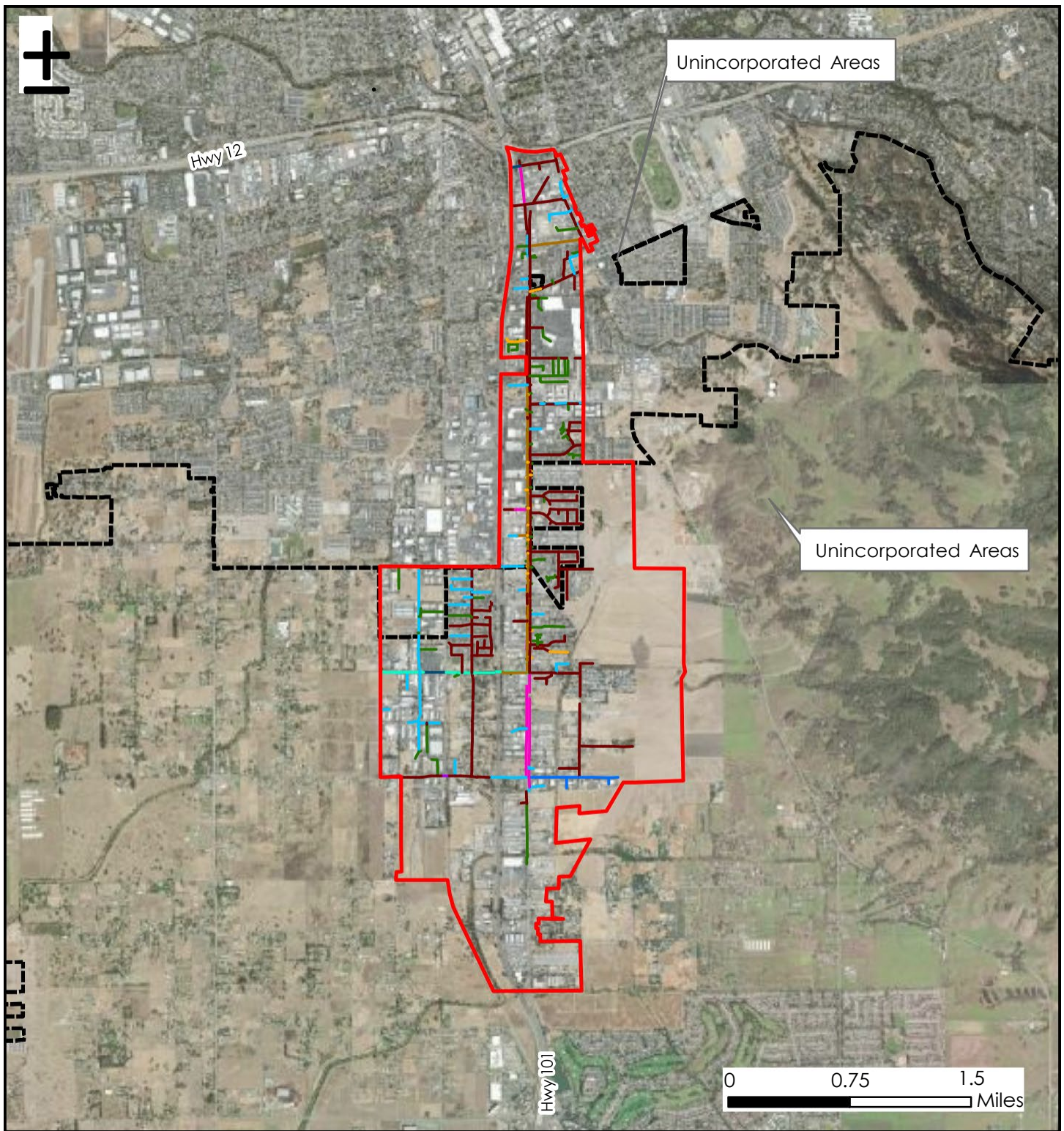
earth

Legend

- Project Area
- Santa Rosa City Limit
- Sewer Main Lines

- Sewer Parcel Classification
- Septic Parcel Classification





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

Exhibit 17 - Wastewater Infrastructure - Pipe Classification Map

Watearth

Legend

Sewer Main Pipe Type

Unclassified

AC

CP

DIP

FRP

PE

PVC

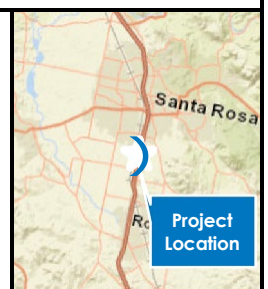
RCP

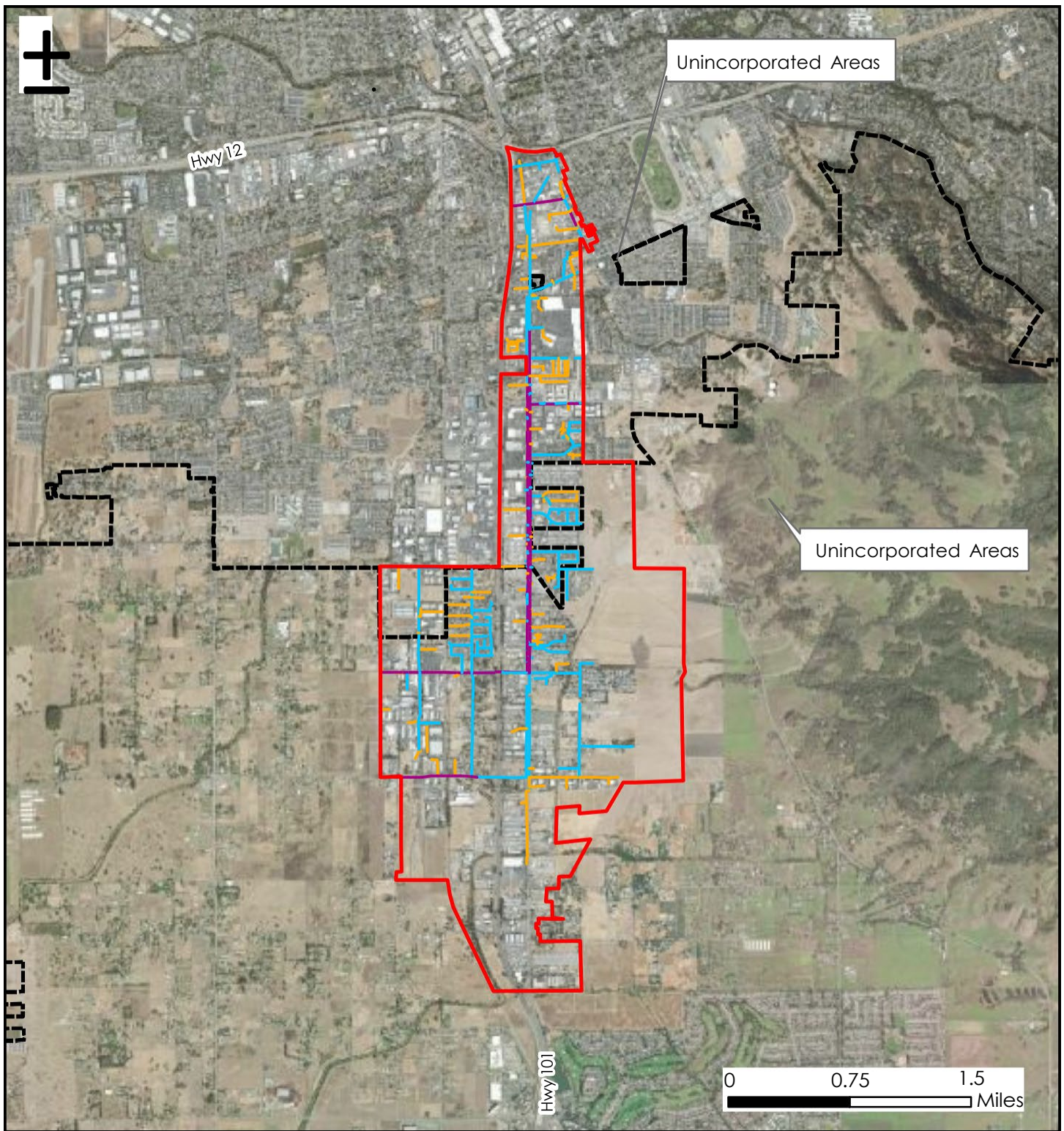
RPM

VCP

Specific Plan Project Area

Santa Rosa City Limits





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan
Exhibit 18 - Wastewater Infrastructure - Pipe Diameter Classification Map

Watearth

Legend

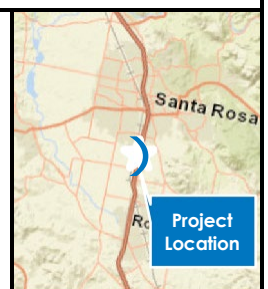
Sewer Main Pipe Diameter (in)

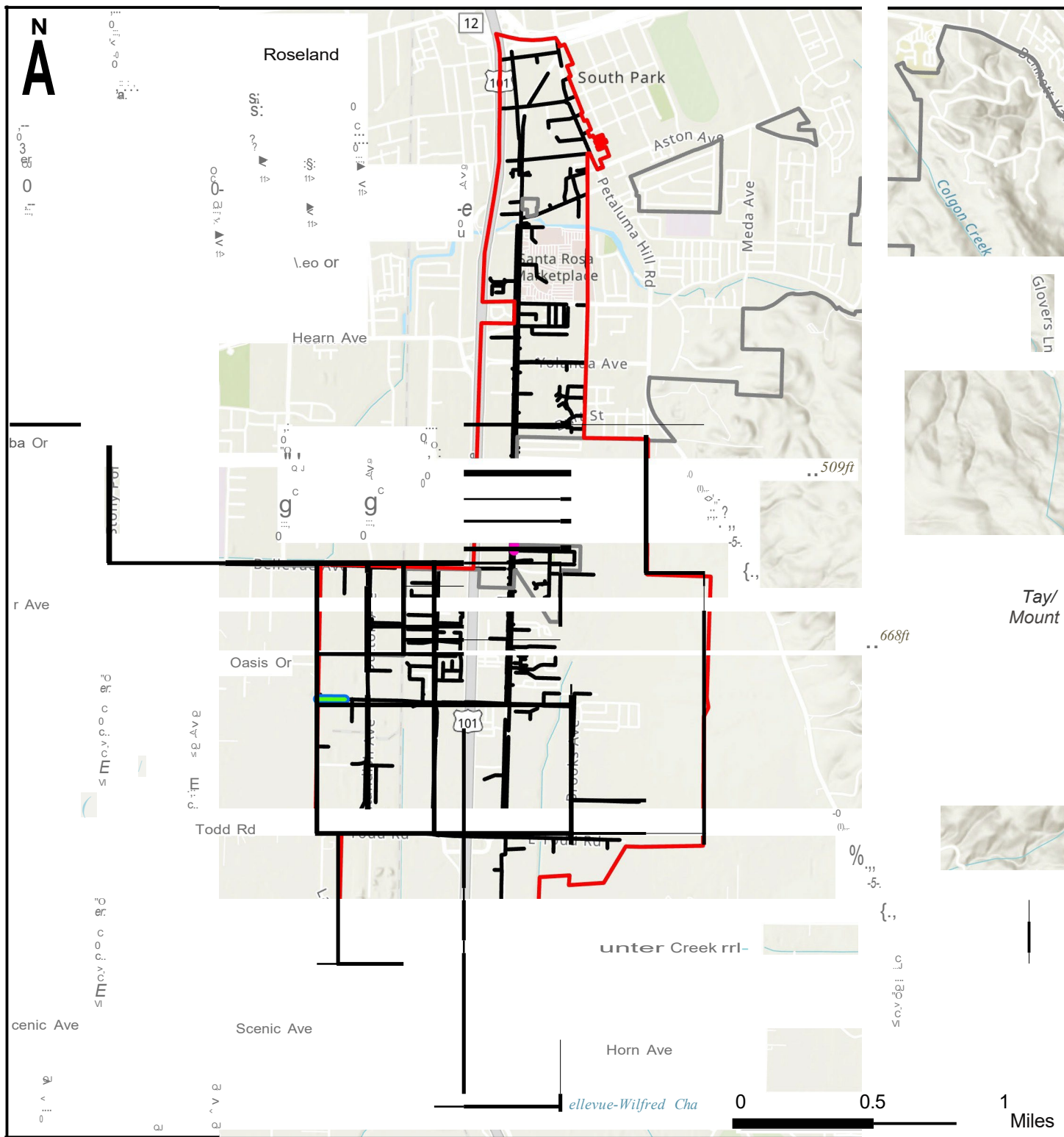
- 1 - 6
- 8 - 12
- 15 - 30



Specific Plan Project Area

Santa Rosa City Limits





City of Santa Rosa South Santa Rosa Specific Plan Infrastructure Plan

Exhibit 19 - Study Area - Modeled Maximum Wastewater Result Locations

earth

Legend

- Project Area
- Santa Rosa City Limit
- Sewer Main Lines
- Flow (MGD) - Existing/Future Location

- Velocity (fps) - Existing/Future Location
- Diameter (in) - Existing/Future Location

