



RESIDENTIAL IMPACT FEE NEXUS AND FEASIBILITY STUDY

DRAFT REPORT

Prepared for:
City of Santa Rosa
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I. EXECUTIVE SUMMARY

Introduction

In October 2016 the Santa Rosa City Council accepted the Housing Action Plan, which includes the following program areas:

- **Increase inclusionary affordable housing;**
- **Achieve "Affordability by design" in market-rate projects;**
- **Assemble and offer public land for housing development;**
- **Improve development readiness; and**
- **Increase affordable housing investment and partnerships.**

In 2017 the City Council directed staff to amend the Housing Allocation Plan (HAP) to make adjustments to the City's inclusionary housing programs.

As part of these efforts to address the City's ongoing unmet housing needs, Santa Rosa is considering modifying its affordable housing fee on new development projects and inclusionary housing regulation. The purpose of the affordable housing fee is to mitigate the impact of new market rate development on the demand for affordable housing. When a city or county adopts a development impact fee, it must establish a reasonable relationship or connection between the development project and the fee that is charged. Studies undertaken to demonstrate this connection are called nexus studies. This nexus study quantifies the connection between the development of market rate housing and the demand for affordable housing units. In a concurrent process Santa Rosa is also considering changes to its inclusionary housing regulation. An inclusionary housing program typically requires that builders of new residential projects provide a specified percentage of units, either on-site or off-site, at affordable prices. Some inclusionary programs also allow developers the option of paying fees "in lieu" of providing inclusionary units.

This residential nexus and feasibility study measures the income and spending generated by the new market rate households renting or buying new units in Santa Rosa. This new consumption is then translated into new induced job growth. These induced jobs will be at various wage rates; many will be at lower wages, for example in the retail and personal services sectors. Since low-wage households cannot reasonably afford to pay for market rate rental and for-sale housing in Santa Rosa, a housing impact fee can be justified to bridge the difference between what these new households can afford to pay and the cost of developing modest housing units to accommodate them. (The median home price in Santa Rosa is around \$600,000.¹) The study also considers feasibility and other policy implications of increasing the impact fee level and changing the percentage of inclusionary housing units policy. The City is considering how to establish the percentage requirements for inclusionary units at different income levels, as an alternative to paying the housing impact fee.

¹ <https://www.zillow.com/santa-rosa-ca/home-values/>.

Report Organization

This executive summary highlights the study’s approach and the results of analysis. Subsequent chapters provide more detailed information on the data sources, methodology used in this analysis, and study findings.

The report is organized into five sections, an appendix, and a glossary of terms. Following this Executive Summary, Section II provides an introduction to the purpose of the study, and an overview of the nexus concept. Section III describes the methodology and results of the maximum fee calculation. Section IV discusses financial feasibility testing of the maximum justified fee, reduced fee scenarios and inclusionary housing percentages. Section V discusses other policy considerations that jurisdictions typically weigh before implementing a nexus fee and provides recommended implementation options for the City of Santa Rosa.

Nexus Analysis Methodology and Results

This residential nexus study uses a 5 - step methodology to calculate the maximum legal fee charged on new development for affordable housing. This section describes the steps taken to calculate the nexus-based maximum fee amount per housing unit. More detail on each step can be found in later sections of this report.

Step 1: Establish prototypes representing typical development in Santa Rosa.

Based on the characteristics of Santa Rosa’s recent and planned development, Strategic Economics defined prototypes that represent likely residential development projects in Santa Rosa. The prototypes are not modeled after specific buildings; rather, they are intended to represent the general characteristics of likely new market rate development.

FIGURE 1: RESIDENTIAL PROTOTYPES

Prototype	Unit Type	Square Feet per Unit	Number of Units	Net Area (SF)	Unit Sales Price/ Monthly Rent	Price or Rent per SF
Single-Family Detached (For-Sale)						
2-story wood frame (Type V); attached garage; 8 units per acre	3 bedroom, 2.5 bathroom	2,000	50		\$660,000	\$330
	Net Residential Area (SF)			100,000		
Single-Family Attached Townhomes (For-Sale)						
2-story wood frame (Type V); surface parking; 15 units per acre	3 bedroom, 2.5 bathroom	1,600	50		\$488,000	\$305
	Net Residential Area (SF)			80,000		
Apartments (Rental)						
	1 bedroom, 1 bathroom	750	45		\$2,000	\$2.67
3 story wood frame (Type V); surface parking; 25 units per acre	2 bedroom, 2 bathroom	1,000	45		\$2,500	\$2.50
	3 bedroom, 2 bathroom	1,200	10		\$2,900	\$2.42
	Average Unit Size (SF)	908				
	Net Residential Area (SF)			90,750		

Source: City of Santa Rosa, 2018; CoreLogic, 2018; Zillow.com, 2018; Strategic Economics, 2019.

Step 2: Determine the income distribution of households in each prototype.

The second step in this analysis determines the income distribution of new market rate households. Using market rate prices for recent development, Strategic Economics estimated the annual housing cost of each prototype, and the income required to afford the annual housing costs. This analysis assumes that in order for a unit to be considered affordable, a renter household would spend no more than 30 percent of their annual income on housing costs, and owners would spend no more than 35 percent of their annual income. These standards are based on California’s Health & Safety Code Sections 50052.5 and 50053.

FIGURE 2: ESTIMATED HOUSEHOLD INCOMES FOR SINGLE-FAMILY DETACHED AND ATTACHED UNITS

	Single- Family Detached (For-Sale)	Single-Family Attached Townhomes (For-Sale)
Number of Households	50	50
Sales Price	\$660,000	\$488,000
Estimated Household Income	\$123,197	\$102,406

Source: CoreLogic, 2018; Zillow.com, 2018; Strategic Economics, 2019.

FIGURE 3: ESTIMATED HOUSEHOLD INCOMES FOR APARTMENT UNITS

Unit Type	Apartments (Rental)		
	1 Bedroom	2 bedroom	3 bedroom
Number of Households	45	45	10
Monthly Rent	\$2,000	\$2,500	\$2,900
Estimated Household Income	\$80,000	\$100,000	\$116,000

Source: CoreLogic, 2018; Zillow.com, 2018; Strategic Economics, 2019.

Step 3: Estimate the new demand for affordable housing created by the prototypical projects.

Using the new household income associated with new market rate units, Strategic Economics conducted economic impact analysis to estimate the number of new workers created by the expenditures of the new households. These workers were then converted into worker households by income category.

FIGURE 4: NEW WORKER HOUSEHOLDS, BY INCOME LEVEL AND PROTOTYPE

Prototype	New Worker Households					Total
	Very Low Income (≤50% AMI)	Low Income (51-80% AMI)	Moderate Income (81-120% of AMI)	Total New Very Low, Low, and Moderate Income Households	Above Moderate Income (>120% AMI)	
Single- Family Detached (For-Sale)	1.3	11.7	8.9	21.9	6.3	28.2
Single-Family Attached Townhomes (For-Sale)	1.0	8.1	4.8	14.0	5.4	19.3
Apartments (Rental)	1.9	15.0	8.9	25.8	10.0	35.8

Source: Strategic Economics, 2019.

Step 4: Calculate the affordability gap for new lower income households.

The affordability gap represents the difference between what households in the target income groups can afford to pay for housing, and the cost of building a new, “modest” housing unit. Modest housing units are defined as non-luxury units with costs and characteristics similar to recent projects developed in Santa Rosa by the affordable rental housing sector. The modest units included in the affordability gap may have differing characteristics from the market-rate prototypes described above.

FIGURE 5: AFFORDABILITY GAP FOR SINGLE – FAMILY DETACHED UNITS

Income Level	Households Requiring Affordable Housing	Average Affordability Gap per Household	Affordability Gap for all Households
Very Low Income (<=50% AMI)	1.3	\$210,392	\$279,034
Low Income (51-80% AMI)	11.7	\$133,981	\$1,570,764
Moderate Income (81-120% of AMI)	8.9	\$78,963	\$699,288
Total	21.9		\$2,549,086

Source: Strategic Economics, 2019.

FIGURE 6: AFFORDABILITY GAP FOR SINGLE – FAMILY ATTACHED UNITS

Income Level	Households Requiring Affordable Housing	Average Affordability Gap per Household	Affordability Gap for all Households
Very Low Income (<=50% AMI)	1.0	\$210,392	\$218,682
Low Income (51-80% AMI)	8.1	\$133,981	\$1,087,411
Moderate Income (81-120% of AMI)	4.8	\$78,963	\$380,263
Total	14.0		\$1,686,356

Source: Strategic Economics, 2019.

FIGURE 7: AFFORDABILITY GAP FOR APARTMENT UNITS

Income Level	Households Requiring Affordable Housing	Average Affordability Gap per Household	Affordability Gap for All Households
Very Low Income (<=50% AMI)	1.9	\$210,392	\$406,409
Low Income (51-80% AMI)	15.0	\$133,981	\$2,003,924
Moderate Income (81-120% of AMI)	8.9	\$78,963	\$703,527
Total	25.8		\$3,113,860

Source: Strategic Economics, 2019.

Step 5: Calculate the maximum fee for new market rate units.

To derive the maximum justified fee, the per-unit Housing Affordability Gap is applied to the number of units in the prototype that are affordable to the target income groups. This is the basis for developing an estimate of the total affordability gap, which is then divided by the net square feet in the prototype to calculate a maximum fee per square foot (Figure 8).

FIGURE 8: MAXIMUM JUSTIFIED FEE, BY PROTOTYPE

Prototype	Units	Average Unit Size	Total Affordability Gap	Maximum Fee per Unit	Maximum Fee per SF
Single-Family Detached (For-Sale)	50	2,000	\$2,549,086	\$50,982	\$25.49
Single-Family Attached Townhomes (For-Sale)	50	1,600	\$1,686,356	\$33,727	\$21.08
Apartments (Rental)	100	908	\$3,113,860	\$31,139	\$34.31

Source: Strategic Economics, 2019.

Policy and Feasibility Considerations

There are a number of policy considerations jurisdictions take into account when they consider updating their affordable housing impact fee on new market-rate development. These may include factors such as:

- The fee's role in the City's overall strategy for affordable housing implementation.
- Development feasibility.
- Total development cost.
- Comparison to neighboring jurisdictions.

Role of the Affordable Housing Fee in Santa Rosa's Overall Housing Strategy

Affordable housing in Santa Rosa is currently funded through the use of a variety of financing sources, including funding provided by the City's existing impact fee. Under the City's existing inclusionary housing program, developers may elect to build units on-site or pay the existing affordable housing impact fee. The existing inclusionary housing policy has not resulted in a significant number of affordable housing units built as most developers elect to pay the impact fee rather than build units on-site.

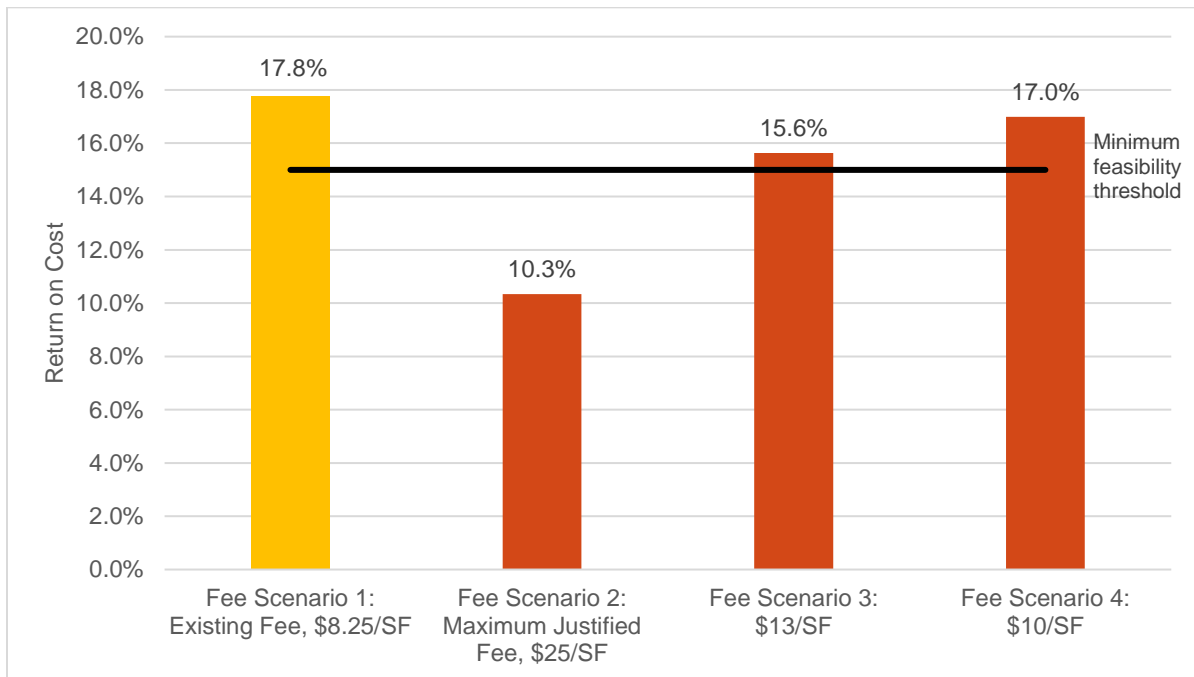
Financial Feasibility

Financial feasibility is just one of several factors to consider in making a decision regarding a potential nexus fee. In order to provide Santa Rosa with guidance on how proposed fees could impact development decisions, the Consultant Team conducted a pro forma analysis that tested the financial impact of the maximum and reduced fee scenarios for each prototype. Figures 9 through 11 illustrate the results of the feasibility analysis for the residential prototypes. See Chapter IV, Feasibility Analysis,

for a description of the metrics shown in the figures and used to evaluate financial feasibility (“return on cost” and “yield on cost”).

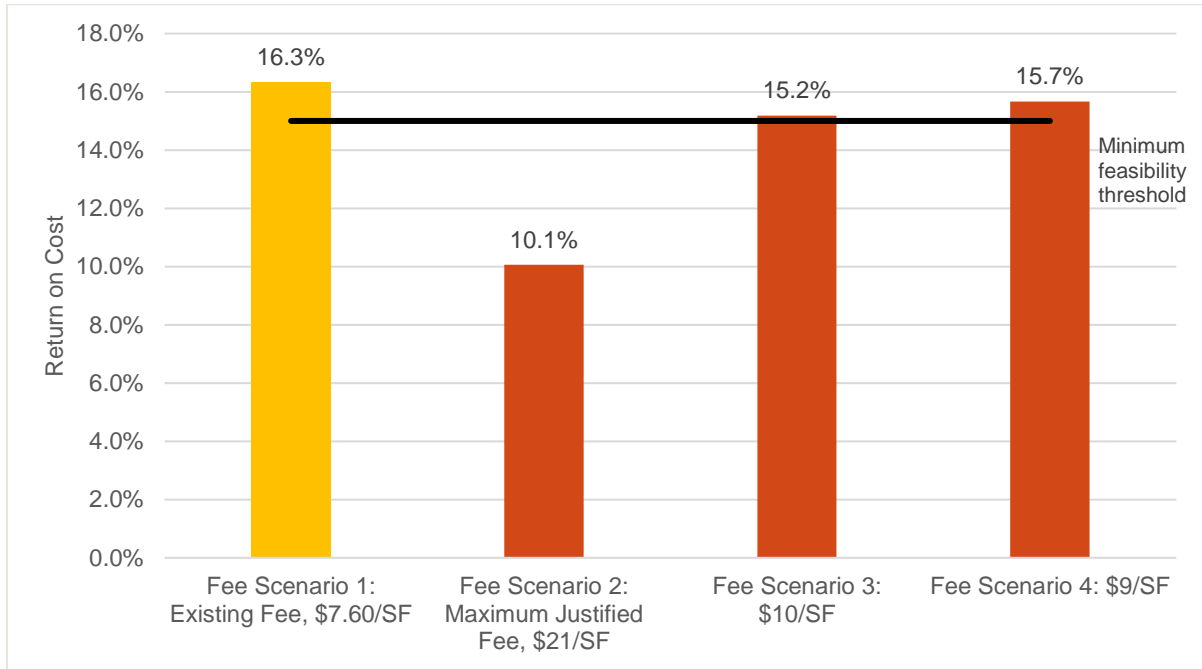
- Single-Family Detached: According to the results of the pro forma analysis, the maximum justified fee level does not meet the threshold of feasibility, but reduced fee levels for the single-family detached prototype of \$13 and \$10 per square foot do meet the threshold of feasibility (Figure 9).
- Single-Family Attached: According to the results of the pro forma analysis, the maximum justified fee level does not meet the threshold of feasibility, but reduced fee levels for the single-family attached prototype of \$10 and \$9 per square foot do meet the threshold of feasibility (Figure 10).
- Apartment: According to the results of the pro forma analysis, the maximum justified fee level does not meet the threshold of feasibility, but reduced fee levels for the apartment prototype of \$10 and \$5 per square foot do marginally meet the threshold of feasibility (Figure 11).

FIGURE 9: FEASIBILITY RESULTS, SINGLE-FAMILY DETACHED PROTOTYPE



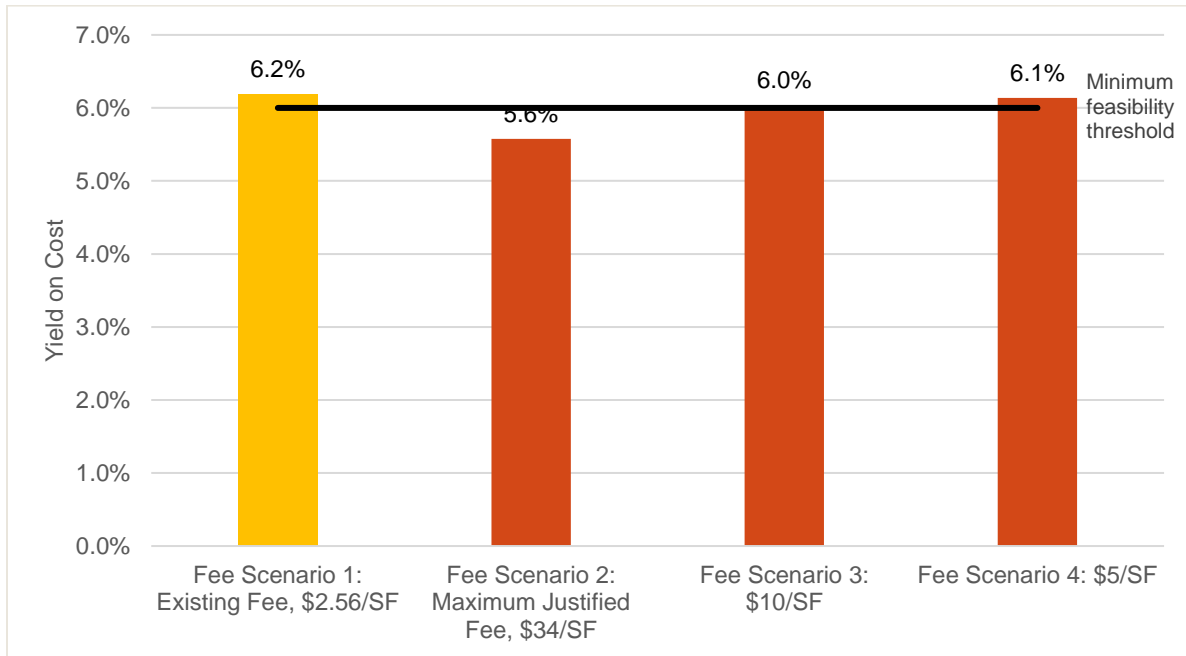
Source: Strategic Economics, 2019.

FIGURE 10: FEASIBILITY RESULTS, SINGLE-FAMILY ATTACHED PROTOTYPE



Source: Strategic Economics, 2019.

FIGURE 11: FEASIBILITY RESULTS, APARTMENT PROTOTYPE



Source: Strategic Economics, 2019.

Inclusionary Housing Policy Considerations

The City of Santa Rosa is considering updating its inclusionary housing program in coordination with updating the affordable housing fee. Policy options include requiring that affordable units be built on-site without the option of paying a fee and adjusting the percentage of affordable units and housing impact fee option. The City may also consider policies to encourage developers to provide the units on-site instead of paying the impact fee. To better understand the likely financial impact of changes to the inclusionary policies, Strategic Economics tested the impact of a range of inclusionary requirement scenarios on development feasibility. The scenarios were tested with and without incentives including a waiver of impact fees on the affordable units. Please note that in all inclusionary variations, the inclusionary units replace any affordable housing fee.

- **Single-Family Detached:** According to the results of the pro forma analysis, an inclusionary level of 15 percent does not meet the threshold of feasibility but reduced inclusionary levels for the single-family detached prototype do meet the threshold of feasibility.
- **Single-Family Attached:** According to the results of the pro forma analysis, an inclusionary level of 15 percent does not meet the threshold of feasibility but reduced inclusionary levels for the single-family attached prototype do meet the threshold of feasibility.
- **Apartment:** According to the results of the pro forma analysis, an inclusionary level of 15 percent does not meet the threshold of feasibility but reduced inclusionary levels for the apartment prototype do meet the threshold of feasibility.

Total Development Cost

Currently, the total development costs (including building and onsite improvements, land, parking, indirect costs, financing costs, developer profit, and the existing affordable housing fee) for the residential prototypes are \$280 per net square foot for the single-family detached prototype, \$262 per net square foot for the townhouse prototype, and \$322 per net square foot for the apartment prototype. As shown in Figure 12 below, the existing affordable housing impact fee represents 3 percent, 3 percent, and 1 percent of total development cost of the single-family detached, single-family attached/townhouse, and apartment prototypes, respectively. The maximum housing impact fees represent 9 percent, 8 percent, and 10 percent of total development cost of the single-family detached, single-family attached/townhouse, and apartment prototypes, respectively. A fee of \$26,000 per unit or \$13 per square foot represents 5 percent of total development costs for single-family detached units, while a fee of \$16,000 per unit or \$10 per square foot represents 4 percent for single-family attached/townhouse, and a fee of \$9,075 per unit or \$10 per square foot represents 3 percent for apartments.

FIGURE 12: FEE SCENARIOS AS PERCENT OF TOTAL DEVELOPMENT COST

	Single-Family Detached		Single-Family Attached		Multifamily Apartments	
	Fee per Unit	Fee as % of TDC	Fee per Unit	Fee as % of TDC	Fee per Unit	Fee as % of TDC
Fee Scenario 1: Existing Fee*	\$16,500	3%	\$12,200	3%	\$2,327	1%
Fee Scenario 2: Max Justified Fee	\$50,982	9%	\$33,727	8%	\$31,139	10%
Fee Scenario 3	\$26,000	5%	\$16,000	4%	\$9,075	3%
Fee Scenario 4	\$20,000	4%	\$14,400	3%	\$4,538	2%

* Santa Rosa's existing fee is 2.5 percent of sales price for single family detached and attached for-sale homes. The existing fee varies based on square footage for multifamily units.

Source: Strategic Economics, 2019.

Comparison to Neighboring Jurisdictions.

A comparison to current housing impact fees charged in nearby or comparison cities can be a helpful consideration. In the North Bay, the single-family detached fees are set between \$7,000 and \$35,000 in most cities. If the maximum impact fees calculated for Santa Rosa were adopted, they would significantly exceed the fees charged in neighboring jurisdictions. The recommended fee level of \$13 per square foot, or \$26,000 for a prototypical single-family detached house, is higher than the fee levels in many of the cities shown (Figure 13), but comparable to the fee in place in Cotati and lower than the fee in place in Novato. The recommended inclusionary level of 10 percent is equivalent to or lower than the levels required in Berkeley, Petaluma, and San Rafael.

FIGURE 13: EXISTING HOUSING IMPACT FEES IN SELECTED CITIES

City	Single-Family Fee/Requirement
Windsor	\$7,220
Napa	\$9,500
Healdsburg	\$10,940
Pleasanton	\$11,939
Sonoma County	\$14,898
Santa Rosa ^a	\$16,500
Cotati ^b	\$23,800
Novato	\$35,242
San Rafael ^c	Base requirement of 10-20 % affordable units on-site
Petaluma ^d	Base requirement of 15% affordable units, or option to pay \$20,240
Berkeley	Base requirement of 20% affordable units on-site

^a Fee amount for a \$660,000 home. Santa Rosa's current fee is 2.5 percent of sales price.

^b Fee amount for a \$660,000 home. Cotati's fee is based on sales price of unit.

^c San Rafael's priority is for provision of on-site inclusionary units. Where this is infeasible, or for fractional units, the fee amount is approximately \$343,970 per affordable unit.

^d Petaluma requires 15% inclusionary for projects with more than 5 units, or option to pay fee with City Council approval. Petaluma's fee is based on square footage. Fee amount shown is for a 2,000 square foot home.

Source: Strategic Economics, 2019.

Implementation Options and Recommendations

This study finds the maximum justified single-family detached impact fee per unit is \$50,982 (\$25 per square foot), \$33,727 (\$21 per square foot) for a single-family attached unit, and \$31,139 (\$34 per square foot) for an apartment unit.

If Santa Rosa elects to update its impact fee on single-family detached housing, the recommended fee level is \$13 per square foot. For single-family attached townhouses, if the City decides to update the impact fee, the recommended level is \$10 per square foot. For apartments, if the City decides to update the impact fee, the recommended level is \$10 per square foot. If the City elects to increase its affordable housing impact fees it should consider an alternative fee schedule and/or additional incentives for high density development in the downtown core. A separate recent study found those building types to be challenged under current conditions and considered additional incentives for development in the downtown core.²

If the City elects to revise its inclusionary housing requirements, the recommended percentages are 10 percent inclusionary for moderate income households for single-family detached and single-family attached and 8 percent inclusionary for low-income households for apartments. It is recommended that the city include regulatory and financial incentives in its inclusionary housing policy. These recommendations are based on the findings of the financial feasibility analysis, a comparison of fees and requirements in neighboring jurisdictions, and other factors as explained in the Policy and Feasibility Considerations section, above. See Chapter V, Policy Considerations and Implementation Options, for additional information on incentives. The recommended fee and inclusionary levels are shown in Figure 14.

FIGURE 14. RECOMMENDED HOUSING IMPACT FEES AND INCLUSIONARY PERCENTAGES BY RESIDENTIAL PROTOTYPE

Prototype	Recommended Fee per Unit	Recommended Fee per SF	Recommended Inclusionary Percentage
Single-Family Detached	\$26,000	\$13	10%
Single-Family Attached	\$16,000	\$10	10%
Apartments	\$9,075	\$10	8%

Sources: Strategic Economics, 2019.

² Keyser Marston Associates, Inc., September 6, 2018, *Memorandum: High-Density Multi-Family Residential Incentives*.

II. INTRODUCTION

The City of Santa Rosa is considering updating its affordable housing fee on new development projects and expanding its inclusionary housing policy. The purpose of affordable housing impact fee is to mitigate the impact of new market rate development on the demand for affordable housing. When a city or county adopts a development impact fee, it must establish a reasonable relationship or connection between the development project and the fee that is charged. Studies undertaken to demonstrate this connection are called nexus studies. This nexus study quantifies the connection between the development of market rate housing and the demand for affordable housing units.

This residential nexus study measures the income and spending generated by the new market rate households renting or buying new units in Santa Rosa. This new consumption is then translated into new induced job growth. These induced jobs will be at various wage rates; many will be at lower wages, for example in the retail and personal services sectors. Since low-wage households cannot reasonably afford to pay for market rate rental and for-sale housing in Santa Rosa, a housing impact fee can be justified to bridge the difference between what these new households can afford to pay and the cost of developing modest housing units to accommodate them.

Background

Cities and counties in California have operated inclusionary zoning programs to increase the supply of affordable housing since the 1970s. A recent national survey of inclusionary housing programs found that there were 149 jurisdictions with inclusionary programs in the State of California.³ An inclusionary program requires that builders of new residential projects provide a specified percentage of units, either on-site or off-site, at affordable prices. Some programs have also allowed developers the option of paying fees “in lieu” of providing inclusionary units. The success of inclusionary housing policies depends on the strength of the housing market, with more flexible inclusionary policies and those designed to offset additional costs associated with providing affordable units often leading to greater production of affordable units.⁴

Inclusionary zoning policies have usually been established based on the police power of cities and counties to enact legislation benefitting public health, safety, and welfare. In its recent decision on *California Building Industry Assn v. City of San Jose*, the California Supreme Court upheld this power of cities, finding that the objective of increasing affordable housing supply in economically diverse developments was “unquestionably” permitted by the U.S. Constitution.

However, in 2009, in *Palmer/Sixth Street Properties, L.P. v. City of Los Angeles*, the Court of Appeal held that inclusionary rental requirements violated the Costa Hawkins Rental Housing Act, which allows landlords to determine the rents of all new units. Affordable rental housing could still be

³ Emily Thaden and Ruoni Wang, September 2017, “Inclusionary Housing in the United States: Prevalence, Impact, and Practices,” https://www.lincolnst.edu/sites/default/files/pubfiles/thaden_wp17et1_0.pdf

⁴ Grounded Solutions Network, “Where Does Inclusionary Housing Work?” <https://inclusionaryhousing.org/inclusionary-housing-explained/what-is-inclusionary-housing/where-does-it-work-3/>

required if a developer agreed by contract to do so, in exchange for financial assistance or regulatory incentives. But in the absence of these incentives, restricted rents could not be required of a developer. Consequently, many communities in California completed nexus studies and imposed rental housing impact fees to mitigate the impact of market-rate rental housing on the need for affordable housing. Although a nexus analysis is not required to adopt inclusionary ordinances and in-lieu fees on for-sale housing, conducting a nexus study provides additional support for these requirements.

In September 2017, Governor Brown signed into law a package of 15 housing bills that includes AB1505, also known as the Palmer Fix, which restores the authority of local governments to enact ordinances that require inclusionary housing in rental housing developments. The reversal of the 2009 Palmer decision allows Santa Rosa and other cities in California to establish inclusionary housing requirements on all new development, including for-sale and rental projects.

The City of Santa Rosa's existing inclusionary housing regulation applies to all residential development (including subdivisions) with more than four units (or residential parcels) and allows developers to build units on-site or make payments in-lieu of units (City Code 21-02.040).

The Nexus Concept

In a balanced housing market, the development of new market rate housing results in population growth. Residents purchasing and renting these new units now spend money in the city. For example, they go out to eat in local restaurants, shop for food and clothing in local stores, and patronize other local businesses, such as hair salons, dry cleaners, and dental offices. This local spending results in the need to hire new workers to respond to the increased demand for goods and services. A nexus study establishes the connection between the households that purchase or rent new housing units and the number of new workers that will be hired by local businesses to serve the needs of new residents.

Growth in employment will provide jobs at various wage rates. While some jobs will pay salaries that will allow new workers to rent or purchase market rate housing, many new jobs will also be at lower wages. Since low-wage households cannot reasonably afford to pay for market rate rental and for-sale housing in Santa Rosa, a housing impact fee addresses the demand for affordable housing.

The nexus analysis presented in this study is designed to define an upper limit for a housing impact fee to be charged on new rental and for-sale housing to mitigate impacts on affordable housing needs. The maximum fee is not necessarily the recommended fee. Subsequent sections of this report address additional policy considerations to consider when adopting an updated housing impact fee.

III. CALCULATION OF THE NEXUS FEE

This residential nexus study uses a 5 - step methodology to calculate the maximum justified fee on new residential development for affordable housing. This section describes the steps taken to calculate the nexus-based maximum fee amount per square foot.

Step 1: Establish the Building Prototypes

The first step in this study is to identify residential housing prototypes. The housing prototypes are not intended to represent specific development projects; rather, the prototypes used in this study represent market-rate residential development recently constructed or proposed in Santa Rosa. This study examined the induced affordable housing need for three residential prototypes, described below and shown in Figure 15.

- **For-Sale Single-Family Detached Units with attached garages:** The for-sale single-family detached prototype is a wood siding wood-frame building with an attached garage and a net residential area of 100,000 square feet. The estimated density is 8 units per acre. This building type is representative of recently built single-family detached units in Santa Rosa. These are three-bedroom and two and a half-bathroom units of 2,000 square feet. The estimated unit sale price is \$660,000.
- **For-Sale Single Family Attached Units (Townhomes) with tuck-under parking:** The for-sale single-family attached prototype is a Type V wood-frame building with tuck-under parking and a net residential area of 80,000 square feet. The estimated density is 15 units per acre. This type of building is typical for new townhouses in Santa Rosa. These are three-bedroom units with an average size of 1,600 square feet and a price of \$488,000.
- **Rental Apartments with surface parking:** The rental apartment prototype is a Type V wood-frame building with surface parking and net residential area of 90,750 square feet. The estimated density is 25 units per acre. This is a typical building type for new market-rate apartment development in Santa Rosa. The apartment unit mix consists of mostly one- and two-bedroom units, with a smaller number of three-bedroom units. Estimated monthly rents range from \$2,000 to \$2,900 per unit, depending on unit size and number of bedrooms.

FIGURE 15: RESIDENTIAL PROTOTYPES

Prototype	Unit Type	Square Feet per Unit	Number of Units	Net Area (SF)	Unit Sales Price/ Monthly Rent	Price or Rent per SF
Single- Family Detached (For-Sale)						
2-story wood frame (Type V); attached garage; 8 units per acre	3 bedroom, 2.5 bathroom	2,000	50		\$660,000	\$330
	Net Residential Area (SF)			100,000		
Single-Family Attached Townhomes (For-Sale)						
2-story wood frame (Type V); surface parking; 15 units per acre	3 bedroom, 2.5 bathroom	1,600	50		\$488,000	\$305
	Net Residential Area (SF)			80,000		
Apartments (Rental)						
	1 bedroom, 1 bathroom	750	45		\$2,000	\$2.67
3 story wood frame (Type V); surface parking; 25 units per acre	2 bedroom, 2 bathroom	1,000	45		\$2,500	\$2.50
	3 bedroom, 2 bathroom	1,200	10		\$2,900	\$2.42
	Average Unit Size (SF)	908				
	Net Residential Area (SF)			90,750		

Source: City of Santa Rosa, 2018; CoreLogic, 2018; Zillow.com, 2018; Strategic Economics, 2018.

Step 2: Estimate the Income Distribution of New Market Rate Units

Using the sales prices and rents shown in Figure 15, the next step is to calculate the annual household incomes of the buyers of new for-sale single-family detached units, for-sale single-family attached units, and the renters occupying new apartment units. These household incomes provide a basis for estimating household expenditures, and ultimately the demand for new affordable housing.

- Incomes of buyers of for-sale Single-Family Detached units with attached garages:** To calculate the household income of buyers of new single-family detached units, the analysis used typical mortgage terms for Santa Rosa: 20 percent down payment, 30-year fixed rate mortgage, and 4.0 percent interest rate. Santa Rosa’s property tax rate was estimated from recent budget documents. Total housing costs, including monthly payments for mortgage payments, property taxes and insurance, are assumed to be 35 percent of available monthly income. The result of the income estimates for households buying new single-family detached units is shown in Figure 16. As shown in the calculations, for single-family detached units, household incomes are estimated to be over \$123,000.
- Incomes of buyers of for-sale Single Family Attached Units (Townhomes) with Tuck-Under Parking:** For buyers of townhouses, the analysis applied the same typical mortgage terms as those used for single-family detached units, and Santa Rosa’s property tax rates. Homeowner association (HOA) fees were based on a review of HOA fees at similar new single-family attached developments in Sonoma County. As in the previous case, households are expected to spend 35 percent of available monthly income on total housing costs, including monthly payments for mortgage payments, property taxes, insurance and HOA fees. Figure 17 shows the result of the income

estimates for households buying new townhouse units. As shown in the calculations, for townhouses, household incomes are estimated to be just over \$100,000.

- Incomes of renters in the rental Apartments:** For renter households, maximum annual housing costs are assumed to be 30 percent of gross household income, a standard established in California’s Health and Safety Code Sections 50052.5 and 50053. The estimated household income of renters varies by unit type, as indicated in Figure 18. One-bedroom, two-bedroom and three-bedroom unit renter households have estimated household incomes of \$80,000, \$100,000 and \$116,000, respectively.

FIGURE 16: HOUSEHOLD INCOME DISTRIBUTION OF NEW HOUSEHOLDS, SINGLE – FAMILY DETACHED

Number of Households	50
Sales Price	\$660,000
Down Payment (a)	\$132,000
Loan Amount	\$528,000
Monthly Debt Service (b)	\$2,521
Annual Debt Service	\$30,249
Annual Property Taxes (c)	\$10,560
Fire and Hazard Insurance (d)	\$2,310
Annual Housing Costs (e)	\$43,119
Household Income	\$123,197

Notes:

- (a) Down payment is estimated at 20% of sales price.
 - (b) Interest rate was estimated at 4.00% for a 30-year term.
 - (c) Property tax rate is 1.6000% based on Santa Rosa’s CAFR, citywide tax rate.
 - (d) Industry standard estimated at 0.35%.
 - (e) Homeownership housing burden is estimated at 35%, based on California Health & Safety Code Sections 50052.5 and 50053.
- Source: Strategic Economics, 2019.

FIGURE 17: HOUSEHOLD INCOME DISTRIBUTION OF NEW HOUSEHOLDS, SINGLE – FAMILY ATTACHED TOWNHOMES

Number of Households	50
Sales Price	\$488,000
Down Payment (a)	\$97,600
Loan Amount	\$390,400
Monthly Debt Service (b)	\$1,864
Annual Debt Service	\$22,366
Annual Property Taxes (c)	\$7,808
Annual HOA Fees (d)	\$3,960
Fire and Hazard Insurance (e)	\$1,708
Annual Housing Costs (f)	\$35,842
Household Income	\$102,406

Notes:

- (a) Down payment is estimated at 20% of sales price.
 - (b) Interest rate was estimated at 4.00% for a 30-year term.
 - (c) Property tax rate is 1.6000% based on Santa Rosa’s CAFR, citywide tax rate.
 - (d) Based on comparable properties in Santa Rosa.
 - (e) Industry standard estimated at 0.35%.
 - (f) Homeownership housing burden is estimated at 35%, based on California Health & Safety Code Sections 50052.5 and 50053.
- Source: Strategic Economics, 2019.

FIGURE 18: HOUSEHOLD INCOME DISTRIBUTION OF HOUSEHOLDS, APARTMENTS

Apartments (Rental)			
Unit Type	1 Bedroom	2 bedroom	3 bedroom
Number of Households	45	45	10
Monthly Rent	\$2,000	\$2,500	\$2,900
Annual Housing Costs ^(a)	\$24,000	\$30,000	\$34,800
Estimated Household Income	\$80,000	\$100,000	\$116,000

(a) Renter housing burden is estimated at 30%, based on California Health & Safety Code Sections 50052.5 and 50053.
Source: Strategic Economics, 2019.

Step 3: Estimate the Demand for New Affordable Housing

Next, Strategic Economics estimated the demand for new affordable housing induced by the prototypical new market rate residential development modeled in this study. The new households in the market rate development spend money in the local economy, which can be linked to new jobs. These jobs will be of varying wages, with some paying low wages. Workers in these new jobs may be unable to afford market rate housing and may require affordable housing.

Estimating the demand for new affordable housing involves the following 4 steps:

- A. Estimating new jobs linked to the households in the new residential development (IMPLAN3).
- B. Estimating wage impacts of the new jobs.
- C. Estimating worker households.
- D. Estimating demand for affordable housing.

Step 3A: Estimating new jobs linked to the households in the new residential development (IMPLAN3).

The first step in estimating the demand for affordable housing is to estimate the number of new jobs that new households will support with their household expenditures. This step uses IMPLAN3. IMPLAN3 is an input-output based economic impact model to calculate the impact of new household income on consumer expenditures in different sectors. The input-output dataset represents a static snapshot of the economy for the region, in this case Sonoma County, from which multiplier effects are modelled. For this analysis, IMPLAN3 used regional data specific to Sonoma County in order to create the multiplier effects resulting from new households. In this case, all of the multiplier effects derive from new demand for goods and local services (including government) that new households would generate within Sonoma County. It is assumed that buyers and renters of new housing units in Santa Rosa increase demand for goods and services within Sonoma County. The multiplier effects do not account for economic impacts generated during the construction period, or any economic impacts that would occur outside of the county.

The economic impacts estimated by the model generally fall into one of three categories - direct, indirect, or induced. For this analysis:

- Direct impacts represent the household income brought into the community by new residents, calculated in Step 2 of this analysis.

- **Indirect** impacts would normally result from demand for commodities and services provided by suppliers for business operations. (Because the direct impacts come only from household spending, and not from business activity, the indirect effects were not calculated.)
- **Induced** impacts represent the potential effects resulting from household spending at local establishments. These impacts affect all sectors of the economy, but primarily affect retail businesses, health services, personal services providers, and government services. The employment estimates provided by the IMPLAN3 model cover all types of jobs, including full and part time jobs. The induced jobs for each prototype are shown in Figure 19. Additional detailed data tables are included in the Appendix to this report.

It should be noted that the figures used in the IMPLAN3 analysis reflect the demand for goods and services by net, new Sonoma County households. The multiplier impacts assume that all of this spending will remain in Sonoma County.

FIGURE 19: NEW WORKERS AND WORKER HOUSEHOLDS, BY PROTOTYPE

Prototype	Induced Employment	Workers per Household	New Worker Households
Single - Family Detached (For-Sale)	45.1	1.60	28.2
Single - Family Attached Townhomes (For-Sale)	31.0	1.60	19.3
Apartments (Rental)	57.3	1.60	35.8

Source: IMPLAN3, 2018; U.S. Census Bureau's American Community Survey, 5-Year Estimates, 2011-2015; Strategic Economics, 2019.

Step 3B: Estimating wage impacts of the new jobs.

Based on the number of induced jobs in each IMPLAN3 sector, Strategic Economics estimated the wages associated with the new jobs for each prototype. This analysis estimated the number of new jobs in each occupation by applying national occupation distributions for each IMPLAN3 sector. Next, it applied regional wage data for each occupation to arrive at an estimate of the incomes for new workers for each prototype.

Step 3C: Creating worker households.

Many households include multiple wage earners. In order to determine the number of worker households required to fill the jobs associated with each prototype, the number of new workers (calculated in Step 3A) was divided by 1.60 (the average number of wage-earners per working household in Santa Rosa, according to the U.S. Census Bureau's American Community Survey, 5-Year Estimates, 2011-2015). The calculation of total new worker households is shown in Figure 19, above.

The analysis also assumed that the income of the second wage-earner in a household would be similar to the wage of the first wage-earner. Accordingly, individual worker wages (estimated in Step 3B) were multiplied by 1.60 to represent total household incomes.

Step 3D: Estimating demand for affordable housing.

Next, worker households are categorized as very low, low, moderate, and above moderate-income based on the income definitions established by Santa Rosa Housing and Community Services for a three-person household, the average household size in the City of Santa Rosa according to the U.S.

Census Bureau American Community Survey 5-Year Estimates, 2011-2015. Figure 20 shows the number of households in each income category by prototype. Above moderate-income households were removed from the subsequent steps of the nexus analysis, as it is assumed that these income groups would be able to afford market-rate housing.

FIGURE 20: NEW WORKER HOUSEHOLDS BY INCOME GROUP AND PROTOTYPE

Prototype	Income Thresholds (3-person HH)	New Worker Households		
		Single- Family Detached (For-Sale)	Single-Family Attached Townhomes (For-Sale)	Apartments (Rental)
Very Low Income (<=50% AMI)	<=\$39,650	1.3	1.0	1.9
Low Income (51-80% AMI)	\$39,650-\$63,450	11.7	8.1	15.0
Moderate Income (81-120% of AMI)	\$63,450-\$90,600	8.9	4.8	8.9
	Subtotal	21.9	13.9	25.8
Above Moderate Income (>120% AMI)	>\$90,600	6.3	5.4	10.0
	Total	28.2	19.3	35.8

Source: Strategic Economics, 2019.

Step 4: Calculate the Affordability Gap

Next, the Housing Affordability Gap is estimated. The Housing Affordability Gap is defined as the difference between what very low, low, and moderate-income households can afford to pay for housing, and the cost to develop new, “modest” housing units. Modest housing units are defined as non-luxury units with costs and characteristics similar to recent projects developed in Santa Rosa by the affordable rental housing sector. The calculation does not assume the availability of any other source of housing subsidy because not all modest housing is built with public subsidies, and tax credits and tax-exempt bond financing are highly competitive programs that will not always be available to developers of modest housing units.

Calculating the Housing Affordability Gap involves the following three steps:

- A. Estimate affordable rents and housing prices for very low, low, and moderate-income households.
- B. Estimate development costs of building new, modest housing units, based on current construction and land cost data.
- C. Calculate the different between what renters and owners can afford to pay for housing and the cost of development of rental and ownership units.

Each step is described below.

Step 4A. Estimate Affordable Rents and Sales Prices

The first step in calculating the Housing Affordability Gap is to determine the maximum amount that households at the targeted income levels can afford to pay for housing. The maximum affordable monthly rent is calculated as 30 percent of gross monthly household income, minus a deduction for

utilities. Homeowners are assumed to pay a maximum of 35 percent of gross monthly income on total housing costs. Figure 21 show the calculations for rental housing. Figure 22 show the calculations for ownership housing. Key assumptions used to calculate the maximum affordable rents and housing prices are discussed below.

- **Unit types.** For rental housing, the analysis included studios, and one-, two-, and three-bedroom apartment units. For for-sale housing, two- and three-bedroom townhouse units were included. These unit types represent the range of affordable and modestly priced rental and for-sale units available in Santa Rosa.
- **Occupancy and household size assumptions.** Calculating affordable unit prices requires defining household sizes for each unit type. Consistent with California Health and Safety Code Section 50052.5(h), unit occupancy was generally estimated as the number of bedrooms plus one. For example, a studio unit is assumed to be occupied by one person, a one-bedroom unit is assumed to be occupied by two people, and so on. Several adjustments to this general assumption were made in order to capture the full range of household sizes. In particular, it is assumed that two-bedroom townhouses could be occupied by two- or three-person households, and three-bedroom apartments and townhouses could be occupied by four- or five-person households.
- **Targeted income levels for rental housing.** For rental housing, affordable rents were calculated for very low, low, and moderate-income households. For eligibility purposes, most affordable housing programs define very low-income households as those earning 50 percent or less of area median income, or AMI, low-income households as those earning between 51 and 80 percent of AMI, and moderate-income households as those earning between 81 and 120 percent of AMI.
- **Targeted income levels for ownership housing.** For ownership housing, affordable home prices were calculated only for moderate income households. Higher income limits are used for ownership than for rental housing because ownership housing is more expensive to purchase and maintain. It is assumed that moderate-income homebuyers may earn slightly less than the maximum for that income category (120 percent of AMI).
- **Maximum monthly housing costs.** For renters, maximum monthly housing costs are assumed to be 30 percent of gross household income. For homebuyers, 35 percent of gross income is assumed to be available for monthly housing costs, reflecting the higher incomes of this group. These standards are based on California's Health & Safety Code Sections 50052.5 and 50053.
- **Utilities.** The monthly utility cost assumptions are based on utility allowances calculated by calculated by City of Santa Rosa Housing and Community Services.⁵

⁵ City of Santa Rosa Housing and Community Services, Utility Allowances, Effective December 2017, <https://srcity.org/DocumentCenter/View/4114/Utility-Allowances-for-Tenant-Furnished-Utilities--Duplex-and-Detached-House>; <https://srcity.org/DocumentCenter/View/4115/Utility-Allowances-for-Tenant-Furnished-Utilities--Apartment-and-Townhouse>.

Both renters and owners are assumed to pay for heating, cooking, other electric, and water heating. In addition, owners are assumed to pay for water and trash collection.⁶

- **Mortgage terms & costs included for ownership housing.** For ownership housing, the mortgage calculations are based on the terms typically offered to first-time homebuyers (such as the terms offered by the California Housing Finance Authority), which is a 30-year mortgage with a five percent down payment. A five percent down payment standard is also used by many private lenders for first-time homebuyers. Based on recent interest rates to first-time buyers, the analysis assumes a 4.0 percent annual interest rate.⁷ In addition to mortgage payments and utilities, monthly ownership housing costs include homeowner association (HOA) dues,⁸ property taxes,⁹ private mortgage insurance,¹⁰ and hazard and casualty insurance.¹¹

⁶ Units are assumed to have natural gas heating, cooking, and water heating systems, as natural gas is the most common fuel for units located in Sonoma County. Source: U.S. Census Bureau, 2015 American Community Survey.

⁷ Sources: CalHFA Mortgage Calculator, accessed November 2017; Zillow.com, “Current Mortgage Rates and Home Loans,” accessed November 2017.

⁸ HOA fees are estimated at \$330 per unit per month, based on common HOA fees in Santa Rosa as reported on Zillow.com in January 2017.

⁹ The annual property tax rate is estimated at 1.60 percent of the sales price, based on the average total tax rate for Santa Rosa (calculated from Santa Rosa Consolidated Annual Financial Report, FY 2014-2015).

¹⁰ The annual private mortgage insurance premium rate is estimated at 1.08 percent of the total mortgage amount, consistent with standard requirements for conventional loans with a five percent down payment. Sources: GIC, Apr 2016; Radian, June 2016; Genworth, July 2016.

¹¹ The annual hazard and casualty insurance rate is assumed to be 0.35 percent of the sales price, consistent with standard industry practice.

FIGURE 21: CALCULATION OF AFFORDABLE RENTS IN SANTA ROSA BY APARTMENT UNIT TYPE

	Apartment Unit Type			
	Studio (1 person)	1 bedroom (2 persons)	2 bedroom (3 persons)	3 bedroom (4 persons)
Very Low Income (<=50% AMI)				
Maximum Household Income at 50% AMI	\$34,400	\$39,300	\$44,200	\$49,100
Maximum Monthly Housing Cost ^(a)	\$860	\$983	\$1,105	\$1,326
Utility Deduction	\$41	\$46	\$64	\$80
Maximum Available for Rent	\$819	\$937	\$1,148	\$1,246
Low Income (50%-80% AMI)				
Maximum Household Income at 80% AMI	\$55,000	\$62,850	\$70,700	\$78,550
Maximum Monthly Housing Cost ^(a)	\$1,375	\$1,571	\$1,768	\$1,964
Utility Deduction	\$41	\$46	\$64	\$80
Maximum Available for Rent	\$1,334	\$1,525	\$1,884	\$1,884
Moderate Income (80%-120% AMI)				
Maximum Household Income at 120% AMI	\$70,650	\$80,750	\$90,850	\$100,900
Maximum Monthly Housing Cost ^(a)	\$1,766	\$2,019	\$2,271	\$2,523
Utility Deduction	\$41	\$46	\$64	\$80
Maximum Available for Rent	\$1,725	\$1,973	\$2,443	\$2,645

Notes:

^a 30 percent of maximum monthly household income.

Acronyms:

AMI: Area median income

Sources: Santa Rosa Housing and Community Services Income Guidelines, Effective June 1, 2018; Santa Rosa Housing and Community Services Utility Allowances, Effective December 1, 2017; Strategic Economics, 2017.

FIGURE 22: CALCULATION OF AFFORDABLE SINGLE FAMILY SALES PRICE IN SANTA ROSA BY UNIT TYPE

Unit Type	2 bedroom		3 bedroom	
	2 persons	3 persons	4 persons	5 persons
Moderate Income (120% AMI)				
Maximum Household Income at 120% AMI ^(a)	\$80,750	\$90,850	\$100,900	\$109,000
Maximum Monthly Housing Cost ^(b)	\$2,355	\$2,649	\$2,942	\$3,179
Monthly Deductions	\$0	\$0	\$0	\$0
Utilities	\$123	\$123	\$148	\$148
HOA Dues	\$345	\$345	\$345	\$345
Property Taxes and Insurance ^(c)	\$666	\$770	\$865	\$947
Monthly Income Available for Mortgage Payment ^(d)	\$1,222	\$1,413	\$1,587	\$1,740
Maximum Mortgage Amount ^(e)	\$237,708	\$274,812	\$308,585	\$338,343
Maximum Affordable Sales Price ^(f)				
By HH Size	\$250,219	\$289,276	\$324,826	\$356,150
By Unit Type	\$269,747		\$340,488	

Notes:

^(a) Calculated as 120 percent of the median household income reported by Santa Rosa Housing and Community Services for each household size.

^(b) Maximum housing cost is estimated at 35 percent of household income for homebuyers.

^(c) Assumes annual property tax rate of 1.62 percent of sales price; annual private mortgage insurance premium rate of 1.28 percent of mortgage amount; annual hazard and casualty insurance rate of 0.35 percent of sales price.

^(d) Maximum monthly housing cost minus deductions

^(e) Assumes 4.6 percent interest rate and 30-year loan term.

^(f) Assumes 5 percent down payment

Acronyms:

AMI: Area median income

HOA: Home owners association

Sources: Santa Rosa Housing and Community Services Income Guidelines, Effective June 1, 2017; Sonoma County Community Development Commission, Utility Allowances, Effective October 2017; Strategic Economics, 2017.

Step 4B. Estimate Housing Development Costs

The second step in calculating the Housing Affordability Gap is to estimate the cost of developing new, modest housing units. First, an average, per-square foot development cost was estimated, using a pro forma model (Figure 23). Next, the per-square foot cost was translated to per-unit costs, using assumptions about average unit sizes (Figures 24 and 25). Key assumptions are discussed below.

- **Building characteristics:** The rental housing building characteristics shown in Figure 23 are based on a review of recent affordable apartment projects developed in Santa Rosa. The modest for-sale housing characteristics are based on non-luxury, market-rate townhouse development projects in Santa Rosa. Each prototype was assumed to include 100 units for ease of calculation.
- **Development cost assumptions:** Figure 23 also shows development cost assumptions. Land acquisition costs are based on asking sales prices for residential land listed on Loopnet.com in September and December 2018. Hard cost, soft cost, and developer fee assumptions are based on a review of recent affordable housing pro formas and developer interviews. Soft costs are assumed to include design, engineering, city permits and fees, construction interest, contingencies, legal, etc.

- **Unit sizes:** Unit sizes were estimated based on recent affordable and modest development projects.

FIGURE 23: PRO FORMA ANALYSIS

	Modest Rental Housing	Modest For-Sale Housing
Building Characteristics ^(a)		
Building Type	3 story wood frame apartment building	Attached townhouses
Number of Units	100	100
Average Unit Size (SF)	1,000	1,400
Net Building Area (SF)	100,000	140,000
Gross Building Area (SF)	117,647	164,706
Land Area (SF)	174,240	290,400
Parking Type	Surface	Surface
Parking Spaces/ Unit	2	2
Density (units per acre)	25	15
Development Cost Assumptions ^(b)		
Land Acquisition Costs (per SF Land)	\$17	\$17
Hard Costs (per Net SF)	\$190	\$160
Soft Costs (as % of Hard Costs)	35%	35%
Developer Fees (as % of Hard and Soft Costs)	12%	12%
Total Development Costs		
Land Cost	\$2,905,983	\$4,843,305
Hard Costs	\$19,000,000	\$22,400,000
Soft Costs	\$6,650,000	\$7,840,000
Developer Fees	\$3,078,000	\$3,628,800
Total Development Costs	\$31,633,983	\$38,712,105
Total Development Cost per Net SF	\$316	\$277

Notes:

^(a) Prototypical building characteristics based on review of recent affordable and modest market-rate development in Santa Rosa.

^(b) Cost estimates based on asking sales prices for residential land listed on Loopnet.com, December 2016; review of affordable housing developer pro formas; and interviews with developers.

Sources: Loopnet.com, December 2016; Selected Santa Rosa Rental Housing Pro Formas, 2016; Developer Interviews; Strategic Economics, 2017.

FIGURE 24: RENTAL HOUSING UNIT SIZES AND DEVELOPMENT COSTS

Unit Type	Estimated Cost per Net SF	Unit Size (net SF)	Development Costs
Studio	\$316	500	\$158,170
One bedroom	\$316	680	\$215,111
Two bedroom	\$316	900	\$284,706
Three bedroom	\$316	1,100	\$347,974

Source: Strategic Economics, 2019.

FIGURE 25: FOR-SALE UNIT SIZE AND DEVELOPMENT COSTS

Unit Type	Estimated Cost per Net SF	Unit Size (net SF)	Development Costs
Two bedroom	\$277	1,200	\$331,818
Three bedroom	\$277	1,600	\$442,424

Source: Strategic Economics, 2019.

Step 4C. Calculating the Housing Affordability Gap

The final step in calculating the Housing Affordability Gap is to calculate the difference between what renters and owners can afford to pay and the total cost of developing new units.

Figure 26 shows the Housing Affordability Gap calculation for rental units. For each rental housing unit type and income level, the gap is defined as the difference between the per-unit cost of development and the supportable debt per unit. The supportable debt is calculated based on the net operating income generated by an affordable monthly rent, incorporating assumptions about operating expenses (including property taxes, insurance, etc.), reserves, vacancy and collection loss, and mortgage terms based on discussions with local affordable housing developers. Because household sizes are not uniform and the types of units each household may occupy is variable, the average Housing Affordability Gap is calculated by averaging the housing affordability gaps for the various unit sizes.

Figure 27 shows the Housing Affordability Gap calculation for ownership units. For each unit type, the gap is calculated as the difference between the per-unit cost of development and the affordable sales price for each income level. As with rental housing, the average Housing Affordability Gap for each income level is calculated by averaging the housing affordability gaps across unit sizes in order to reflect that households in each income group vary in size and may occupy any of these unit types.

Finally, tenure-neutral estimates of the Housing Affordability Gap were estimated for very low, low, and moderate-income households (Figure 28). Because very low and low-income households that are looking for housing in today's market are much more likely to be renters, an ownership gap was not calculated for these income groups. The rental gap represents the overall affordability gap for these two income groups. On the other hand, moderate income households could be either renters or owners. Therefore, the rental and ownership gaps are averaged for this income group to calculate the overall affordability gap for moderate income households. The calculated average affordability gap per unit is \$210,392 for very low-income households; \$133,981 for low income households, and \$75,924 for moderate income households.

FIGURE 26: AFFORDABILITY GAP CALCULATIONS FOR RENTAL UNITS

Income Level and Unit Type	Unit Size (SF)	Maximum Monthly Rent ^(a)	Annual Income	Net Operating Income ^(b)	Available for Debt Service ^(c)	Supportable Debt ^(d)	Development Costs ^(e)	Affordability Gap
Very-Low Income (50% AMI)								
Studio	500	\$819	\$9,828	\$1,837	\$1,469	\$19,448	\$158,170	\$138,722
1 Bedroom	700	\$937	\$11,238	\$3,176	\$2,541	\$33,633	\$215,111	\$181,478
2 Bedroom	970	\$1,041	\$12,492	\$4,367	\$3,494	\$46,248	\$284,706	\$238,458
3 Bedroom	1,170	\$1,197	\$14,363	\$6,144	\$4,916	\$65,065	\$347,974	\$282,909
Average Affordability Gap						\$41,098	\$251,490	\$210,392
Low Income (80% AMI)								
Studio	500	\$1,334	\$16,008	\$7,708	\$6,166	\$81,618	\$158,170	\$76,552
1 Bedroom	700	\$1,525	\$18,303	\$9,888	\$7,910	\$104,705	\$215,111	\$110,406
2 Bedroom	970	\$1,704	\$20,442	\$11,920	\$9,536	\$126,223	\$284,706	\$158,483
3 Bedroom	1,170	\$1,963	\$23,550	\$14,873	\$11,898	\$157,489	\$347,974	\$190,485
Average Affordability Gap						\$117,509	\$251,490	\$133,981
Moderate Income (120% AMI)								
Studio	500	\$1,725	\$20,703	\$12,168	\$9,734	\$128,849	\$158,170	\$329,321
1 Bedroom	700	\$1,973	\$23,673	\$14,989	\$11,991	\$158,726	\$215,111	\$56,385
2 Bedroom	970	\$2,207	\$26,487	\$17,663	\$14,130	\$187,035	\$284,706	\$97,671
3 Bedroom	1,170	\$2,544	\$30,525	\$21,499	\$17,199	\$227,656	\$347,974	\$120,318
Average Affordability Gap						\$175,567	\$251,490	\$75,924

Notes:

^(a) Affordable Rents are based on Santa Rosa Housing and Community Services Income Guidelines, Effective June 1, 2018.

^(b) Amount available for debt. Assumes 5% vacancy and collection loss and \$7,500 per unit for operating expenses and reserves.

^(c) Assumes 1.25 Debt Coverage Ratio.

^(d) Assumes 6.37%, 30 year loan. Calculations based on annual payments.

^(e) Assumes development cost of \$316 per net square foot on rental units.

Sources: Selected Santa Rosa Rental Housing Pro Formas, 2017; RS Means, 2018; LoopNet, 2018; Citi Community Capital's Multifamily Housing Indicative Rates and Terms, 2018; Strategic Economics, 2019.

FIGURE 27: AFFORDABILITY GAP CALCULATION FOR FOR-SALE UNITS

Income Level and Unit Type	Unit Size (SF)	Affordable Sales Price ^(a)	Development Costs ^(b)	Affordability Gap ^(c)
Moderate Income (120% of AMI)				
2 Bedroom	1,200	\$269,747	\$331,818	\$62,071
3 Bedroom	1,600	\$340,488	\$442,424	\$101,936
Average Affordability Gap		\$305,118	\$387,121	\$82,003

Notes:

^(a) See Figure 21 above.

^(b) Assumes \$277/SF for development costs, based on recent condominium sales.

^(c) Calculated as the difference between affordable sales price and development cost

Sources: RS Means, 2017; LoopNet, 2016; Strategic Economics, 2017.

FIGURE 28: AVERAGE AFFORDABILITY GAP BY INCOME GROUP

Income Level	Rental Gap	Ownership Gap	Average Affordability Gap
Very Low-Income (<=50% AMI)	\$210,392	N/A	\$210,392
Low-Income (50% - 80% AMI)	\$133,981	N/A	\$133,981
Moderate-Income (80% - 120% AMI)	\$75,924	\$82,003	\$78,963

Source: Strategic Economics, 2019.

Step 5: Calculate the Maximum Fee

Finally, the maximum justified fee for each prototype was derived by multiplying the total number of very low, low, and moderate-income new worker households for each prototype (calculated in Step 3), by the corresponding affordable housing gap figure (calculated in Step 4). This is the basis for developing an estimate of the total affordability gap for each prototype. The total gap for each prototype is then divided by the net residential square feet in the development prototype to calculate a single maximum fee per square foot.

Figures 29, 30, and 31 present the results of the maximum fee calculations for each residential prototype. The calculations shown below assume that 100 percent of the very low, low, and moderate-income households linked to the new market rate households would be accommodated in Santa Rosa. The maximum fee results are \$25 per square foot for single-family detached, \$21 per square foot for single-family attached, and \$34 per square foot for apartments.

The fees presented in Figures 29-31 represent the maximum that Santa Rosa could charge to mitigate affordable housing demand related to new market rate residential development as supported by the nexus study. The City may adopt a fee at a lower level than the maximum justified fees, depending on a variety of policy considerations such as other fees charged on new development, the financial feasibility of development projects, and other factors.

FIGURE 29: CALCULATION OF MAXIMUM JUSTIFIED FEE - SINGLE FAMILY DETACHED

	Average Affordability Gap (per Household)	Number of Worker Households	Maximum Fee Revenues for Prototype	Total Fee Per Unit	Total Fee Per Square Foot
Very Low Income (<=50% AMI)	\$210,392	1.3	\$279,033		
Low Income (51-80% AMI)	\$133,981	11.7	\$1,570,764		
Moderate Income (81-120% AMI)	\$78,963	8.9	\$699,288		
Total		21.9		\$50,982	\$25.49

Source: Strategic Economics, 2019.

FIGURE 30: CALCULATION OF MAXIMUM JUSTIFIED FEE - SINGLE FAMILY ATTACHED

	Average Affordability Gap (per Household)	Number of Worker Households	Maximum Fee Revenues for Prototype	Total Fee Per Unit	Total Fee Per Square Foot
Very Low Income (<=50% AMI)	\$210,392	1.0	\$218,682		
Low Income (51-80% AMI)	\$133,981	8.1	\$1,087,411		
Moderate Income (81-120% AMI)	\$78,963	4.8	\$380,263		
Total		13.9		\$33,727	\$21.08

Source: Strategic Economics, 2019.

FIGURE 31: CALCULATION OF MAXIMUM JUSTIFIED FEE – APARTMENTS

	Average Affordability Gap (per Household)	Number of Worker Households	Maximum Fee Revenues for Prototype	Total Fee Per Unit	Total Fee Per Square Foot
Very Low Income (<=50% AMI)	\$210,392	1.9	\$406,409		
Low Income (51-80% AMI)	\$133,981	15.0	\$2,003,924		
Moderate Income (81-120% AMI)	\$78,963	8.9	\$703,527		
Total		25.8		\$31,139	\$34.31

Source: Strategic Economics, 2019.

IV. DEVELOPMENT FEASIBILITY

There are a number of policy considerations jurisdictions take into account when they consider updating their affordable housing impact fee on new market-rate development. These may include factors such as:

- Development feasibility.
- Comparison to neighboring jurisdictions.
- The fee's role in the City's overall strategy for affordable housing implementation.
- Total development cost.
- Comparison to existing City fees.

This chapter provides a discussion of development feasibility while the following chapter discusses other key policy questions for Santa Rosa.

Feasibility Testing

In order to provide Santa Rosa with guidance on how proposed housing impact fee levels and inclusionary housing requirements could impact development decisions, Strategic Economics conducted a financial feasibility analysis that tested the impact of several fee and inclusionary requirement scenarios on developer profit. This chapter provides a summary of the feasibility analysis for three residential prototypes.

Methodology

This analysis tested the financial feasibility of a range of fee scenarios on prototypical residential and development projects. Financial feasibility was tested using a static pro forma model that measures **return on cost** (or ROC, used for for-sale residential development) or **yield on cost** (YOC, used for rental properties). Return on cost and yield on cost are commonly used metrics indicating the profitability of development projects. These metrics are calculated using the following methodology:

- **Return on cost** is calculated by tallying all development costs, including land, direct construction costs, indirect or soft costs (including financing) and developer fees. Total revenues from the sale of the for-sale units are then estimated. Developer profit is calculated by subtracting total revenues minus costs. Finally, ROC is calculated by dividing developer profit into total development cost.
- **Yield on cost** is calculated by dividing a project's expected net annual operating income at full lease-up¹² by total development costs (including construction costs, soft costs, fees, and land costs but excluding financing costs). Using YOC as a metric for feasibility allows for a comparison of rates of return among different rental projects, without skewing the results based on the specific financing arrangements (such as the

¹² Net operating income at full lease-up is calculated as total rental revenues minus operating costs, assuming a stable vacancy rate.

particular combination of debt and equity) that can be highly variable from project to project.

Prototypes

Strategic Economics worked with City staff to construct three residential prototypes that represent the range of market-rate housing development that can reasonably be expected in Santa Rosa based on recent development trends and a review of development proposals that are currently in the pipeline. Figure 32 summarizes the characteristics of the three development prototypes that were tested for financial feasibility:

- For-sale single-family detached prototype
- For-sale single-family attached prototype
- Rental apartment prototype

The characteristics, including building type, size, density (floor-area-ratio), and parking assumptions are based on a review of recently built and proposed projects in Santa Rosa and Sonoma County. The financial feasibility of potential fee levels is tested for each of these prototypes.

FIGURE 32: RESIDENTIAL PROTOTYPES

	Single-Family Detached	Single-Family Attached	Apartment
Building Type	2-story wood frame (Type V); attached garage	2-story wood frame (Type V); surface parking	3 story wood frame (Type V); surface parking
Unit Type	3 bedroom, 2.5 bathroom	3 bedrooms, 2.5 bathrooms	45% 1 bedroom, 1 bath 45% 2 bedroom, 2 bath 10% 3 bedroom, 2 bath
Gross Sq. Ft.	100,000	88,889	106,765
Net Sq. Ft.	100,000	80,000	90,750
Efficiency		90%	85%
Total number of units	50	50	100
Average Unit Size (SF)	2,000	1,600	908
Dwellings per Acre	8.0	15.0	25
Lot Size (Acres)	6.3	3.3	4.0
Parking Spaces	2 car garages	125	250
Covered		50	100
Visitor Spaces		75	150

Source: Strategic Economics, 2017.

Revenues

To estimate income from residential development, the analysis used estimates of sales prices and monthly rents. These revenue assumptions were based on a review of local and regional market data,

including information on the type of development that has been recently constructed or is planned or proposed in Santa Rosa; and recent sales prices and current rental rates of recently built (or sold) development in Santa Rosa and neighboring cities.

For single-family detached and for-sale attached projects, the revenues are calculated by multiplying the unit count by the sales price.

For the apartment prototype, the revenues were estimated using an income capitalization approach. This valuation approach first estimates the annual net operating income (NOI) of the development prototype, which is the difference between total project income (annual rents) and project expenses, including operating costs¹³ and vacancies. The NOI is then divided by the capitalization rate (cap rate) to derive total project value.¹⁴

Figures 33 and 34 summarize the calculations and data sources used for estimating the value of the prototypes.

FIGURE 33: PROTOTYPE SALES PRICES AND RENTS

Prototype	Unit Type	Square Feet per Unit	Number of Units	Net Area (SF)	Unit Sales Price/Monthly Rent	Price or Rent per SF
Single-Family Detached (For-Sale)						
2-story wood frame (Type V); attached garage; 8 units per acre	3 bedroom, 2.5 bathroom	2,000	50		\$660,000	\$330
	Net Residential Area (SF)			100,000		
Single-Family Attached Townhomes (For-Sale)						
2-story wood frame (Type V); surface parking; 15 units per acre	3 bedroom, 2.5 bathroom	1,600	50		\$488,000	\$305
	Net Residential Area (SF)			80,000		
Apartments (Rental)						
	1 bedroom, 1 bathroom	750	45		\$2,000	\$2.67
3 story wood frame (Type V); surface parking; 25 units per acre	2 bedroom, 2 bathroom	1,000	45		\$2,500	\$2.50
	3 bedroom, 2 bathroom	1,200	10		\$2,900	\$2.42
	Average Unit Size (SF)	908				
	Net Residential Area (SF)			90,750		

Source: City of Santa Rosa, 2018; CoreLogic, 2018; Zillow.com, 2018; Strategic Economics, 2019.

¹³ Operating costs were calculated based on the Institute of Real Estate Management Survey of Apartment Buildings in the San Francisco Metropolitan Statistical Area (MSA).

¹⁴ A project's capitalization (or "cap") rate is the ratio of net operating income divided by property value. Real estate brokerage firms typically calculate the market capitalization rate as the average capitalization rate for projects sold in a given period.

FIGURE 34: APARTMENT REVENUE CALCULATIONS

Apartment Revenues	Calculation	Total
Gross Annual Rental Income (a)	Gross annual rents	\$2,778,000
Operating Expenses (b)	30 percent of income	(\$833,400)
Vacancy (c)	5 percent of income	(\$138,900)
Annual Net Operating Income	Income less expenses and vacancy	\$1,805,700
Capitalization Rate (d)	4.5 percent	4.50%
Capitalized Value	Project value	\$40,126,667

(a) Average monthly rents multiplied by 12 months multiplied by unit count for each unit type.

(b) Institute of Real Estate Management, San Francisco MSA Apartment Properties.

(c) Assumes a vacancy rate of 5 percent in a stabilized rental market.

(d) CBRE Cap Rate Survey, 1st Half 2018, Oakland Suburban Market.

Sources: Corelogic, 2018; IREM, DTZ, Strategic Economics, 2019.

Development Costs

Cost estimates for the prototypes include land costs, direct construction costs (site work/infrastructure, building costs, and parking), indirect costs, financing costs, and developer overhead and profit. Land costs are based on average asking prices for single-family and multi-family zoned property that was listed on LoopNet (a commercial real estate site) in Santa Rosa in September and December 2018 and interviews with developers. Direct building construction cost estimates include site work, building construction, and parking costs and are based on RS Means, project pro formas for recent projects in Santa Rosa, and information from developer interviews. Soft costs and developer overhead/profit were estimated based on review of similar project pro formas in Santa Rosa and interviews with developers. City and schools fee calculations were provided by City staff and school district staff; the project is assumed to be in the Santa Rosa City Schools (SRCS) district, one of the largest school districts in the City. The cost factors used in the analysis are summarized in Figure 35.

FIGURE 35: DEVELOPMENT COST FACTORS

Development Costs		Metric
Land		
Single Family	\$17	per SF
Multifamily	\$20	per SF
Direct Costs (a)		
Single-Family Detached	\$160	Per Net SF
Single-Family Attached	\$155	Per Net SF
Apartments	\$190	Per Net SF
Indirect Costs (b)		
A&E and Consulting	5.00%	of direct costs
Taxes, Insurance, Legal & Accounting	3.00%	of direct costs
Other (c)	3.00%	of direct costs
Contingency	5.00%	of direct costs
Fees (excluding housing impact fees)		
Single-Family Detached	\$33,511	per unit
Single-Family Attached	\$29,884	per unit
Apartments	\$26,740	per unit
Financing Costs		
Loan to Cost Ratio (LTC)	80%	of total costs
Loan Interest Rate	6%	annual rate
Compounding Period	12	months
Construction/Absorption Period (d)	18 to 24	months
Utilization Rate	55%	of loan
Loan Fees	2%	of loan
Developer Overhead & Fee	4%	of total costs (excl. land)

Notes:

(a) Direct costs include site work, building construction, and parking costs. Costs estimates are based on review of Santa Rosa pro formas for similar projects, data from RS Means, and developer interviews.

(b) Based on review of similar project pro formas in Santa Rosa and interviews with developers. Fee estimates were provided by City and School District staff and exclude the existing housing impact fee.

(c) Other Indirect Costs include marketing, environmental studies, etc.

(d) Absorption periods are estimated at 24 months for apartments and townhouses; and 18 months for single-family subdivisions.

Sources: RS Means, 2017; Similar pro formas; City of Santa Rosa, 2017; Strategic Economics, 2017.

Measures of Feasibility

To establish a reasonable threshold for a developer’s rate of return on new for-sale and rental development projects in Santa Rosa, Strategic Economics interviewed local developers, reviewed other similar financial analyses in the Bay Area, and reviewed publications on the local and regional real estate market.

- **Return on Cost (For-Sale Development):** Return on Cost (ROC) is calculated as developer profit (projects revenues minus costs) divided into the total cost of development. Single-family attached and detached development is considered much

lower risk in the Santa Rosa area compared to multi-family development, although developers noted that the cost and time delays associated with permitting and environmental mitigation (particularly in areas affected by the California Tiger Salamander) can significantly affect a developer’s rate of return. Based on input from developers, for-sale projects with an ROC of at least 15.0 to 18.0 percent were considered financially feasible. Development with a ROC of less than 15.0 percent are not financially feasible, while projects with an ROC at the lower end of the threshold (at or just above 15.0 percent) are considered marginally feasible.

- Yield on Cost (Rental Development):** A common rule of thumb is that the expected Yield on Cost (YOC) for a rental development project should be about 1.5 to 2.0 percentage points higher than the average capitalization rate in the local market. As shown in Figure 36, the average capitalization rate (cap rate) for multifamily in the region was approximately 4.5 – 5.0 percent in first half of 2018. Local developers reported that investors expect yields in the range of 6 to 7 percent. Expectations for returns are higher in the North Bay compared to San Francisco because the market is not as strong, and rents and prices are lower. Developers also reported that construction costs have escalated rapidly, while rental rate increases have begun to slow. This dynamic is likely to cause investors to have higher expectations of yield in the short- to mid-term (three to five years). Based on the research described above, projects with a YOC of at least 6.0 to 7.0 percent were considered financially feasible for the purposes of this analysis. Developments with a YOC of less than 6.0 percent are not financially feasible, while projects with a YOC at the lower end of the threshold (at or just above 6.0 percent) are considered marginally feasible.

FIGURE 36: FEASIBILITY THRESHOLDS

	Capitalization Rates	Selected Threshold for Return on Cost/Yield on Cost
Single-Family Detached and Attached (ROC) (a)	N/A	15.0% -18.0%
Apartments (YOC) (b)	4.5% - 5.0%	6.0% - 7.0%

Notes:

(a) Interviews with developers.

(b) CBRE Cap Rate Survey, 1st Half 2018, Oakland Suburban Market.

Source: CBRE, 2018; Strategic Economics, 2017.

Fee Scenarios Tested

Strategic Economics tested the impact of a range of different fee levels and inclusionary requirement scenarios on development feasibility:

- Existing Fee:** This scenario tests the existing affordable housing impact fee on residential uses.
- Maximum Justified Fee:** This scenario tests the maximum that Santa Rosa could charge to mitigate affordable housing demand related to new market rate residential development as supported by the nexus study.
- Fee Increase:** These scenarios test the feasibility of two different fee levels between existing fees and the maximum justified fee level.

Figure 37 shows the fees calculated for each prototype under the scenarios described above on a per-unit and per square foot basis. The existing fee is shown under Scenario 1, it is calculated based on the sales price for for-sale units and on square footage for apartments. These scenarios are referred to as the “nexus fee scenarios” throughout this document. Note that the fees shown in Figure 37 only include the fees that are the subject of this nexus study; other fees (including school district and other City fees) are discussed above under “Costs.”

FIGURE 37: NEXUS FEE SCENARIOS

Prototype	Net Residential SF per Unit	Scenario 1 (Existing Fee)	Scenario 2 (Maximum Fee)	Scenario 3	Scenario 4
Single-Family Detached	2,000	2.5% of sales price	\$50,982 per unit \$25 per SF	\$26,000 per unit \$13 per SF	\$20,000 per unit \$10 per SF
Single-Family Attached	1,600	2.5% of sales price	\$33,727 per unit \$21 per SF	\$16,000 per unit \$10 per SF	\$14,400 per unit \$9 per SF
Apartments	908	varies based on SF	\$31,139 per unit \$34 per SF	\$9,075 per unit \$10 per SF	\$4,537 per unit \$5 per SF

Source: Strategic Economics, 2017.

Financial Feasibility Results

Figures 38, 39, and 40 provide the pro forma model results for the residential prototypes. To understand the financial burden of the fee scenarios on overall development costs, the pro forma analysis also measures the fees as a percent of total development costs. Below is a discussion of the findings.

For-Sale Single-Family Detached

The feasibility analysis indicates that at current market prices, the return on cost for the single-family detached prototype meets the required threshold for financial feasibility (15.0%-18.0%) under the existing fee, but not under the maximum justified fee. The following summarizes the financial feasibility results for potential housing impact fees at different levels:

- The existing fee results in a calculated return on cost of 17.79 percent, which meets the feasibility threshold.
- The maximum justified fee of \$25 per square foot results in a calculated return on cost of 10.33 percent, which does not meet the feasibility threshold.
- An impact fee set at \$13 per square foot results in a calculated return on cost is 15.63 percent, which meets the feasibility threshold.
- An impact fee set at \$10 per square foot results in a calculated return on cost of 16.98 percent, which meets the feasibility threshold.

FIGURE 38: PRO FORMA MODEL RESULTS, SINGLE-FAMILY DETACHED PROTOTYPE

	Single-Family Detached	
Development Costs	per Unit	Total
Land	\$92,565	\$4,628,250
Direct Costs	\$320,000	\$16,000,000
Indirect Costs (Excluding Financing)		
A&E and Consulting	\$16,000	\$800,000
Permits and Fees (exc. Nexus Fee)	\$33,511	\$1,675,551
Taxes, Insurance, Legal & Accounting	\$9,600	\$480,000
Other	\$9,600	\$480,000
Contingency	\$16,000	\$800,000
Total Indirect Costs	\$84,711	\$4,235,551
 Total Development Costs (TDC) Before Financing, Nexus Fee	 \$497,276	 \$24,863,801
 Nexus Fee Scenarios	 Fees per Unit	 Fees
Fee Scenario 1: Existing Fee	\$16,500	\$825,000
Fee Scenario 2: Maximum Justified Fee	\$50,982	\$2,549,086
Fee Scenario 3	\$26,000	\$1,300,000
Fee Scenario 4	\$20,000	\$1,000,000
 Financing		
Fee Scenario 1: Existing Fee		\$1,428,297
Fee Scenario 2: Maximum Justified Fee		\$1,524,157
Fee Scenario 3		\$1,454,707
Fee Scenario 4		\$1,438,027
 Developer Overhead & Fee		
Fee Scenario 1: Existing Fee		\$899,554
Fee Scenario 2: Maximum Justified Fee		\$972,352
Fee Scenario 3		\$919,610
Fee Scenario 4		\$906,943

Source: Strategic Economics, 2019.

FIGURE 38: PRO FORMA MODEL RESULTS, SINGLE-FAMILY DETACHED PROTOTYPE, CONT.

Single-Family Detached		
Total Development Costs (TDC) with Various Nexus Fee Levels		
	TDC per Unit	TDC
Fee Scenario 1: Existing Fee	\$560,333	\$28,016,652
Fee Scenario 2: Maximum Justified Fee	\$598,188	\$29,909,395
Fee Scenario 3	\$570,762	\$28,538,119
Fee Scenario 4	\$564,175	\$28,208,771
Revenues		
Annual NOI		
Net Sales Proceeds/Capitalized Value		\$33,000,000
Return on Cost		ROC
Fee Scenario 1: Existing Fee		17.79%
Fee Scenario 2: Maximum Justified Fee		10.33%
Fee Scenario 3		15.63%
Fee Scenario 4		16.98%
Threshold for feasibility		15.0%-18.0%
Fee Level as % of TDC		% of TDC
	Fee per Unit	
Fee Scenario 1: Existing Fee	\$16,500	3%
Fee Scenario 2: Maximum Justified Fee	\$50,982	9%
Fee Scenario 3	\$26,000	5%
Fee Scenario 4	\$20,000	4%

Source: Strategic Economics, 2019.

For-Sale Single-Family Attached

The feasibility analysis indicates that at current market prices, the return on cost for the single-family attached prototype meets the required threshold for financial feasibility (15.0%-18.0%) under the existing fee, but not under the maximum justified fee. The following summarizes the financial feasibility results for potential housing impact fees at different levels:

- The existing fee results in a calculated return on cost of 16.34 percent, which meets the feasibility threshold.
- The maximum justified fee of \$21 per square foot results in a calculated return on cost of 10.06 percent, which does not meet the feasibility threshold.
- An impact fee set at \$10 per square foot results in a calculated return on cost is 15.18 percent, which meets the feasibility threshold.
- An impact fee set at \$9 per square foot results in a calculated return on cost of 15.67 percent, which meets the feasibility threshold.

FIGURE 39: PRO FORMA MODEL RESULTS, SINGLE-FAMILY ATTACHED PROTOTYPE

	Single-Family Attached	
Development Costs	per Unit	Total
Land	\$49,368	\$2,468,400
Direct Costs	\$248,000	\$12,400,000
Indirect Costs (Excluding Financing)		
A&E and Consulting	\$12,400	\$620,000
Permits and Fees (exc. Nexus Fee)	\$29,884	\$1,494,214
Taxes, Insurance, Legal & Accounting	\$7,440	\$372,000
Other	\$7,440	\$372,000
Contingency	\$12,400	\$620,000
Total Indirect Costs	\$69,564	\$3,478,214
 Total Development Costs (TDC) Before Financing, Nexus Fee	 \$366,932	 \$18,346,614
 Nexus Fee Scenarios	 Fees per Unit	 Fees
Fee Scenario 1: Existing Fee	\$12,200	\$610,000
Fee Scenario 2: Maximum Justified Fee	\$33,727	\$1,686,356
Fee Scenario 3	\$16,000	\$800,000
Fee Scenario 4	\$14,400	\$720,000
 Financing		
Fee Scenario 1: Existing Fee		\$1,304,215
Fee Scenario 2: Maximum Justified Fee		\$1,378,268
Fee Scenario 3		\$1,317,287
Fee Scenario 4		\$1,311,783
 Developer Overhead & Fee		
Fee Scenario 1: Existing Fee		\$711,697
Fee Scenario 2: Maximum Justified Fee		\$757,714
Fee Scenario 3		\$719,820
Fee Scenario 4		\$716,400

Source: Strategic Economics, 2019.

FIGURE 39: PRO FORMA MODEL RESULTS, SINGLE-FAMILY ATTACHED PROTOTYPE, CONT.

Single-Family Attached		
Total Development Costs (TDC) with Various Nexus Fee Levels		
	TDC per Unit	TDC
Fee Scenario 1: Existing Fee	\$419,451	\$20,972,526
Fee Scenario 2: Maximum Justified Fee	\$443,379	\$22,168,952
Fee Scenario 3	\$423,674	\$21,183,721
Fee Scenario 4	\$421,896	\$21,094,797
Revenues		
Annual NOI		
Net Sales Proceeds/Capitalized Value		\$24,400,000
Return on Cost/ Yield on Cost		
		ROC
Fee Scenario 1: Existing Fee		16.34%
Fee Scenario 2: Maximum Justified Fee		10.06%
Fee Scenario 3		15.18%
Fee Scenario 4		15.67%
Threshold for feasibility		15.0%-18.0%
Nexus Fee Level as % of TDC		
	Fee per Unit	% of TDC
Fee Scenario 1: Existing Fee	\$12,200	3%
Fee Scenario 2: Maximum Justified Fee	\$33,727	8%
Fee Scenario 3	\$16,000	4%
Fee Scenario 4	\$14,400	3%

Source: Strategic Economics, 2019.

Apartments

The feasibility analysis indicates that under current market conditions, the yield on cost for the apartment prototype meets the required threshold for financial feasibility (6.0%-7.0%) under the existing fee, but not under the maximum justified fee. The following summarizes the financial feasibility results for potential housing impact fees at different levels:

- The existing fee results in a calculated yield on cost of 6.19 percent, which meets the feasibility threshold.
- The maximum justified fee of \$34 per square foot results in a calculated yield on cost of 5.58 percent, which does not meet the feasibility threshold.
- An impact fee set at \$10 per square foot results in a calculated yield on cost is 6.03 percent, which meets the feasibility threshold, but only marginally.
- An impact fee set at \$5 per square foot results in a calculated yield on cost of 6.14 percent, which meets the feasibility threshold.

FIGURE 40: PRO FORMA MODEL RESULTS, APARTMENT PROTOTYPE

	Multifamily Apartments	
	per Unit	Total
Development Costs		
Land	\$34,848	\$3,484,800
Direct Costs	\$172,425	\$17,242,500
Indirect Costs (Excluding Financing)		
A&E and Consulting	\$8,621	\$862,125
Permits and Fees (exc. Nexus Fee)	\$26,558	\$2,655,791
Taxes, Insurance, Legal & Accounting	\$5,173	\$517,275
Other	\$5,173	\$517,275
Contingency	\$8,621	\$862,125
Total Indirect Costs	\$54,146	\$5,414,591
Total Development Costs (TDC) Before Financing, Nexus Fee	\$261,419	\$26,141,891
Nexus Fee Scenarios		
	Fees per Unit	Fees
Fee Scenario 1: Existing Fee	\$2,327	\$232,730
Fee Scenario 2: Maximum Justified Fee	\$31,139	\$3,113,860
Fee Scenario 3	\$9,075	\$907,500
Fee Scenario 4	\$4,538	\$453,750
Financing		
Fee Scenario 1: Existing Fee		\$1,814,574
Fee Scenario 2: Maximum Justified Fee		\$2,012,796
Fee Scenario 3		\$1,860,998
Fee Scenario 4		\$1,829,780
Developer Overhead & Fee		
Fee Scenario 1: Existing Fee		\$988,176
Fee Scenario 2: Maximum Justified Fee		\$1,111,350
Fee Scenario 3		\$1,017,024
Fee Scenario 4		\$997,625

Source: Strategic Economics, 2019.

FIGURE 40: PRO FORMA MODEL RESULTS, APARTMENT PROTOTYPE, CONT.

Multifamily Apartments		
Total Development Costs (TDC) with Various Nexus Fee Levels		
	TDC per Unit	TDC
Fee Scenario 1: Existing Fee	\$291,774	\$29,177,371
Fee Scenario 2: Maximum Justified Fee	\$323,799	\$32,379,897
Fee Scenario 3	\$299,274	\$29,927,413
Fee Scenario 4	\$294,230	\$29,423,046
Revenues		
Annual NOI		\$1,805,700
Net Sales Proceeds/Capitalized Value		\$40,126,667
Return on Cost/ Yield on Cost		
		YOC
Fee Scenario 1: Existing Fee		6.19%
Fee Scenario 2: Maximum Justified Fee		5.58%
Fee Scenario 3		6.03%
Fee Scenario 4		6.14%
Threshold for feasibility		6.0% - 7.0%
Nexus Fee Level as % of TDC		
	Fee per Unit	% of TDC
Fee Scenario 1: Existing Fee	\$2,327	1%
Fee Scenario 2: Maximum Justified Fee	\$31,139	10%
Fee Scenario 3	\$9,075	3%
Fee Scenario 4	\$4,538	2%

Source: Strategic Economics, 2019.

Inclusionary Housing Policy Considerations

The City of Santa Rosa is considering updating its inclusionary housing policy in coordination with updating the affordable housing fee. Policy options include requiring that affordable units be built on-site without the option of paying a fee and adjusting the percentage of affordable units and housing impact fee option. The City may also consider policies to encourage developers to provide the units on-site instead of paying the impact fee. To better understand the likely financial impact of changes to the inclusionary policies, Strategic Economics tested the impact of a range of inclusionary requirement scenarios on development feasibility. The scenarios were tested with and without incentives including a waiver of impact fees on the affordable units. Please note that in all inclusionary variations, the inclusionary units replace any affordable housing fee.

For-Sale Single-Family Detached

As discussed above, and based on input from developers, for-sale projects with a return on cost of at least 15.0 to 18.0 percent were considered financially feasible for the single-family detached and attached prototypes. The following summarizes the financial feasibility results for potential inclusionary housing policies at different levels:

- An inclusionary level of 15 percent inclusionary for moderate income households results in a calculated return on cost of 12.59 percent, which does not meet the feasibility threshold. Waiving development impact fees on the affordable units had a marginal effect on the calculated return on cost, which increased to 13.24, but it still would not meet the feasibility threshold.
- An inclusionary level of 10 percent inclusionary for moderate income households results in a calculated return on cost of 16.01 percent, which meets the feasibility threshold. Waiving development impact fees on the affordable units results in a calculated return on cost of 16.43, which meets the feasibility threshold.

For-Sale Single-Family Attached

Similar to single-family detached, a return on cost of at least 15.0 to 18.0 percent is considered financially feasible for the single-family attached prototype. The following summarizes the financial feasibility results for potential inclusionary housing policies at different levels:

- An inclusionary level of 15 percent inclusionary for moderate income households results in a calculated return on cost of 14.81 percent, which does not meet the feasibility threshold. Waiving development impact fees on the affordable units resulted in a calculated return on cost of 15.59, which does meet the minimum feasibility threshold.
- An inclusionary level of 10 percent inclusionary for moderate income households results in a calculated return on cost of 16.84 percent, which meets the feasibility threshold. Waiving development impact fees on the affordable units would result in a calculated return on cost of 17.34, which also meets the feasibility threshold.

Apartments

Based on research described in a previous section, projects with a yield on cost of at least 6.0 to 7.0 percent were considered financially feasible for the purposes of this analysis. The following summarizes the financial feasibility results for potential inclusionary housing policies at different levels:

- An inclusionary level of 15 percent for low-income households results in a calculated yield on cost of 5.83 percent, which does not meet the feasibility threshold. Waiving development impact fees on the affordable units had a marginal effect on the calculated yield on cost, which increased to 5.87, but it still would not meet the feasibility threshold.
- An inclusionary level of 10 percent for low-income households results in a calculated yield on cost of 5.96 percent, which does not meet the feasibility threshold. Waiving development impact fees on the affordable units would result in a calculated yield on cost of 5.99, which also does not meet the feasibility threshold.
- An inclusionary level of 8 percent for low-income households results in a calculated yield on cost of 6.01 percent, which meets the feasibility threshold marginally. Waiving development impact fees on the affordable units would result in a calculated yield on cost of 6.04, which also marginally meets the feasibility threshold.

This analysis demonstrates the need for additional regulatory and financial incentives if the City of Santa Rosa has a policy goal that affordable housing units be included in market rate projects at a level above 8-10 percent. In addition, developers interviewed for this study described difficulties in obtaining financing for projects including both affordable and market rate housing units in the same

building. Such barriers to financing would significantly impact development feasibility for inclusionary projects including affordable housing units on-site.

V. POLICY CONSIDERATIONS AND IMPLEMENTATION OPTIONS

While the nexus study provides the necessary economic analysis for updating the affordable housing impact fee, it is up to policymakers to decide what fee level will be charged on new development. As discussed in the preceding chapter financial feasibility is one important factor to examine. In addition, there are a number of additional policy considerations that cities take into account when considering an update to impact fees.

Role of the Affordable Housing Fee in Santa Rosa’s Overall Housing Strategy

Affordable housing in Santa Rosa is currently funded through the use of a variety of financing sources, including funding provided by the City’s existing impact fee. Under the City’s existing inclusionary housing program, developers may elect to build units on-site or pay the existing affordable housing impact fee. The existing inclusionary housing policy has not resulted in a significant number of affordable housing units built as most developers elect to pay the impact fee rather than build units on-site.

Total Development Cost

Currently, the total development costs (including building and onsite improvements, land, parking, indirect costs, financing costs, developer profit, and the existing affordable housing fee) are \$280 per net square foot for the single-family detached prototype, \$262 per net square foot for the townhouse prototype, and \$322 per net square foot for the apartment prototype. As shown in Figure 41 below, the existing affordable housing impact fees represents 3 percent, 3 percent, and 1 percent of total development cost of the single-family detached, single-family attached/townhouse, and apartment prototypes, respectively. The maximum housing impact fees represent 9 percent, 8 percent, and 10 percent of total development cost of the single-family detached, single-family attached/townhouse, and apartment prototypes, respectively. A fee of \$26,000 per unit or \$13 per square foot represents 5 percent of total development costs for single-family detached units, while a fee of \$16,000 per unit or \$10 per square foot represents 4 percent for single-family attached/townhouse, and a fee of \$9,075 per unit or \$10 per square foot represents 3 percent for apartments.

FIGURE 41: FEE SCENARIOS AS PERCENT OF TOTAL DEVELOPMENT COST

	Single-Family Detached		Single-Family Attached		Multifamily Apartments	
	Fee per Unit	Fee as % of TDC	Fee per Unit	Fee as % of TDC	Fee per Unit	Fee as % of TDC
Fee Scenario 1: Existing Fee*	\$16,500	3%	\$12,200	3%	\$2,327	1%
Fee Scenario 2: Max Justified Fee	\$50,982	9%	\$33,727	8%	\$31,139	10%
Fee Scenario 3	\$26,000	5%	\$16,000	4%	\$9,075	3%
Fee Scenario 4	\$20,000	4%	\$14,400	3%	\$4,538	2%

* Santa Rosa’s existing fee is 2.5 percent of sales price for single family detached and attached for-sale homes. The existing fee varies based on square footage for multifamily units.

Source: Strategic Economics, 2019.

Incentives and Other Policy Considerations

The City of Santa Rosa has recently implemented several policies – reduced development fees, permit streamlining, opportunity zone investment, supplemental density bonuses -, to encourage development of high density residential development in its downtown core. Depending on the zoning and height, new residential developments in the downtown core may be eligible for reductions to the Capital Facilities Impact Fee (CFF) and Park Impact Fee ranging from 25 percent to 67 percent. Additional incentives include a temporary reduction in the CFF and Park Impact Fee for qualifying affordable units and deferred Water and Sewer Impact Fees for qualifying housing projects.¹⁵ Parcels located within a Station Area Specific Plan may be eligible for density bonuses of up to 100% for the inclusion of affordable units and provision of other community benefits.¹⁶

The feasibility analysis conducted for this study does not include the high density residential building types considered in the fee reduction programs, but another recent study found those building types to be challenged under current conditions and considered additional incentives for development in the downtown core.¹⁷

The fee scenarios and inclusionary levels discussed in this study represent an increase in development costs and/or reduction in potential revenues. If the City elects to increase its affordable housing impact fees it should consider an alternative fee schedule and/or additional incentives for high density development in the downtown core.

Comparison to Neighboring Jurisdictions.

A comparison to current housing impact fees charged in nearby or comparison cities can be a helpful consideration. Figure 42 provides available information on impact fees and inclusionary requirements to compare Santa Rosa's potential fee scenarios to existing residential impact fees and inclusionary requirements in selected jurisdictions.

If the maximum impact fees calculated for Santa Rosa were adopted, they would significantly exceed the fees charged in neighboring jurisdictions, as listed in Figure 42. The recommended fee level of \$13 per square foot, or \$26,000 for a prototypical single-family detached house, is higher than the fee levels in many of the cities shown, but comparable to the fee in place in Cotati and lower than the fee in place in Novato. The recommended inclusionary level of 10 percent is equivalent to or lower than the levels required in Berkeley, Petaluma, and San Rafael.

¹⁵ For more information, see <https://srcity.org/2983/Fees-and-Incentives>.

¹⁶ City Council adopted an update of the density bonus ordinance in January 2019 to be consistent with recent changes in State law and to provide for supplemental density bonus options. For more information, see <https://www.srcity.org/2555/Density-Bonus>

¹⁷ Keyser Marston Associates, Inc., September 6, 2018, *Memorandum: High-Density Multi-Family Residential Incentives*.

FIGURE 42: EXISTING HOUSING IMPACT FEES IN SELECTED CITIES

City	Single-Family Fee/Requirement
Windsor	\$7,220
Napa	\$9,500
Healdsburg	\$10,940
Pleasanton	\$11,939
Sonoma County	\$14,898
Santa Rosa ^a	\$16,500
Cotati ^b	\$23,800
Novato	\$35,242
San Rafael	Base requirement of 10-20 % affordable units on-site
Petaluma ^c	Base requirement of 15 % affordable units, or option to pay \$20,240
Berkeley	Base requirement of 20 % affordable units on-site

^a Fee amount for a \$660,000 home. Santa Rosa's current fee is 2.5 percent of sales price.

^b Fee amount for a \$660,000 home. Cotati's fee is based on sales price of unit.

^c Petaluma requires 15 % inclusionary for projects with more than 5 units, or option to pay fee with City Council approval. Petaluma's fee is based on square footage. Fee amount shown is for a 2,000 square foot home.

Source: Strategic Economics, 2019.

Administrative Issues

When adopting or updating a residential impact fee, there are several administrative issues to consider. Similar to any impact fee, it will be necessary to adjust the residential impact fees on an annual basis. Adjustments will also be needed if conditions change and/or due to possible changes in the affordability gap. However, the connection between new residential construction and growth in employment derived from the IMPLAN3 Model is unlikely to change in the short run.

It is advisable that the City adjusts its residential impact fee annually by using an annual adjustment mechanism. An adjustment mechanism updates the fees to compensate for inflation in development costs. To simplify annual adjustments, it is recommended that the City select a cost index that is routinely published. While there is no index that tracks changes in Santa Rosa's development costs, including land, specifically, there are a few options to consider.

- The first option is the Consumer Price Index (CPI) Shelter component. The shelter component of the CPI covers costs for rent of primary residence, lodging away from home, owner's equivalent rent of primary residence, and household insurance. Of the total shelter index, costs associated with the owner's equivalent rent of primary residence constitute 70 percent of total costs entered into the index.
- A second option to adjust the fee for annual inflation is the construction cost index published in the Engineering News Record (ENR). This index is routinely used to update other types of impact fees. Cost index information for the San Francisco region, the smallest geographical area available for this purpose, is available on an annual basis. The ENR cost index measures inflation in construction costs, but it does not incorporate changes in land costs or public fees charged on new development.

Because these indices are readily available, reliable, and relatively simple to use, it is recommended that Santa Rosa use one of them for annual adjustments. However, because both understate the magnitude of inflation, it is recommended that the City base its annual adjustment mechanism on the higher of the two indices (CPI or ENR), using a five-year moving average as the inflation factor.

In addition to revising the fee annually for inflation, the City is encouraged to update the residential impact study every five years, or at the very least, update the Housing Affordability Gap used in the basic model. The purpose of these updates is to ensure that the fee is still based on a cost-revenue structure that remains applicable in the Santa Rosa housing market. In this way, the fee will more accurately reflect any potential structural changes in the relationships between affordable prices and rents, market-rate prices and rents, and development costs.

APPENDIX: INDUSTRY AND OCCUPATION DATA

FIGURE 43: INDUCED JOBS, SINGLE FAMILY DETACHED PROTOTYPE

NAICS Sector	Description	Induced Jobs
11	Agriculture, Forestry, Fishing and Hunting	0.2
21	Mining, Quarrying, and Oil and Gas Extraction	0.0
22	Utilities	0.0
23	Construction	0.6
31	Manufacturing	0.2
32	Manufacturing	0.1
33	Manufacturing	0.0
42	Wholesale Trade	1.3
44	Retail Trade	4.2
45	Retail Trade	2.9
48	Transportation and Warehousing	0.6
49	Transportation and Warehousing	0.3
51	Information	0.7
52	Finance and Insurance	1.9
53	Real Estate and Rental and Leasing	4.2
54	Professional, Scientific, and Technical Services	2.3
55	Management of Companies and Enterprises	0.2
56	Administrative and Support and Waste Management and Remediation Services	2.8
61	Educational Services	1.0
62	Health Care and Social Assistance	9.4
71	Arts, Entertainment, and Recreation	1.3
72	Accommodation and Food Services	5.5
81	Other Services (except Public Administration)	4.8
92	Public Administration	0.0
	Non-NAICs	0.5
	Total	45.1

Sources: IMPLAN3, 2018; Strategic Economics, 2019.

FIGURE 44: INDUCED JOBS, SINGLE FAMILY ATTACHED PROTOTYPE

NAICS Sector	Description	Induced Jobs
11	Agriculture, Forestry, Fishing and Hunting	0.1
21	Mining, Quarrying, and Oil and Gas Extraction	0.0
22	Utilities	0.0
23	Construction	0.4
31	Manufacturing	0.1
32	Manufacturing	0.1
33	Manufacturing	0.0
42	Wholesale Trade	0.9
44	Retail Trade	3.2
45	Retail Trade	2.2
48	Transportation and Warehousing	0.4
49	Transportation and Warehousing	0.2
51	Information	0.5
52	Finance and Insurance	2.0
53	Real Estate and Rental and Leasing	2.0
54	Professional, Scientific, and Technical Services	1.6
55	Management of Companies and Enterprises	0.1
56	Administrative and Support and Waste Management and Remediation Services	2.0
61	Educational Services	0.8
62	Health Care and Social Assistance	5.4
71	Arts, Entertainment, and Recreation	1.2
72	Accommodation and Food Services	4.2
81	Other Services (except Public Administration)	3.1
92	Public Administration	0.0
	Non-NAICs	0.4
	Total	31.0

Sources: IMPLAN3, 2018; Strategic Economics, 2019.

FIGURE 45: INDUCED JOBS, APARTMENT PROTOTYPE

NAICS Sector	Description	Induced Jobs
11	Agriculture, Forestry, Fishing and Hunting	0.2
21	Mining, Quarrying, and Oil and Gas Extraction	0.1
22	Utilities	0.0
23	Construction	0.7
31	Manufacturing	0.2
32	Manufacturing	0.1
33	Manufacturing	0.0
42	Wholesale Trade	1.6
44	Retail Trade	5.5
45	Retail Trade	3.8
48	Transportation and Warehousing	0.7
49	Transportation and Warehousing	0.4
51	Information	0.8
52	Finance and Insurance	3.3
53	Real Estate and Rental and Leasing	3.2
54	Professional, Scientific, and Technical Services	2.9
55	Management of Companies and Enterprises	0.2
56	Administrative and Support and Waste Management and Remediation Services	3.5
61	Educational Services	1.5
62	Health Care and Social Assistance	11.2
71	Arts, Entertainment, and Recreation	2.3
72	Accommodation and Food Services	8.1
81	Other Services (except Public Administration)	6.1
92	Public Administration	0.0
	Non-NAICs	0.7
	Total	57.3

Sources: IMPLAN3, 2018; Strategic Economics, 2019.

GLOSSARY OF TERMS AND ACRONYMS

Glossary of Terms

Affordable Housing: Under state and federal statutes, housing is defined as affordable if housing costs do not exceed 30 to 35 percent of gross household income.

Annual Adjustment Mechanism: Due to inflation in housing construction costs, it is frequently necessary to adjust impact fees. An index, such as the Consumer Price Index (CPI) or a published construction cost index (for example, from the Engineering News Record) is used to revise housing fees to reflect inflation in housing construction costs.

Assisted Housing: Housing that has received public subsidies (such as low interest loans, density bonuses, direct financial assistance, etc.) from federal, state, or local housing programs in exchange for restrictions requiring a certain number of housing units to be affordable to very low-, low-, and moderate-income households.

Capitalization rate: A project's capitalization (or "cap") rate is the ratio of net operating income divided by property value. Real estate brokerage firms typically calculate the market capitalization rate as the average capitalization rate for projects sold in a given period.

Consumer price index (CPI): Index that measures changes in the price level of a market basket of consumer goods and services purchased by households.

Employment Densities: The amount of square feet per employee is calculated for each property use that is subject to a commercial development housing linkage fee. Employment densities are used to estimate the number of employees that will work in a new commercial development.

Household: The US Census Bureau defines a household as all persons living in a housing unit whether or not they are related. A single person living in an apartment as well as a family living in a house is considered a household. Households do not include individuals living in dormitories, prisons, convalescent homes, or other group quarters.

Household Income: The total income of all the persons living in a household. Household income is commonly grouped into income categories based upon household size and income, relative to the regional median family income.

Housing Affordability Gap: The affordability gap is defined as the difference between what a household can afford to spend on housing and the market rate cost of housing. Affordable rents and sales prices are defined as a percentage of gross household income, generally between 30 percent and 35 percent of income.

For renters, rental costs are assumed to include the contract rent as well as the cost of utilities, excluding cable and telephone service. The difference between these gross rents and affordable rents is the Housing Affordability Gap for renters. This calculation assumes that 30% of income is paid for gross rent.

For owners, costs include mortgage payments, mortgage insurance, property taxes, property insurance, and homeowner association dues.¹⁸ The difference between these housing expenses and affordable ownership costs is the Housing Affordability Gap for owners. This calculation assumes that 35% of income is paid for housing costs.

Housing Subsidy: Housing subsidies refer to government assistance aimed at reducing housing sales prices or rents to more affordable levels.

Housing Unit: A housing unit can be a room or group of rooms used by one or more individuals living separately from others in the structure, with direct access to the outside or to a public hall and containing separate toilet and kitchen facilities.

IMPLAN3: A software model that is used to provide a quantitative assessment of the interdependencies between different branches of a regional (or national) economy. The latest model, IMPLAN3, was used in the nexus studies. The major input is household income, and the major output is direct and induced employment reported by industries

Inclusionary Zoning: Inclusionary zoning, also known as inclusionary housing, refers to a planning ordinance that requires that a given percentage of new construction be affordable to households with very low, low, moderate, or workforce incomes.

In-Lieu Fee: A literal definition for an in-lieu fee for inclusionary units would be a fee adopted “in place of” providing affordable units. For the purposes of operating an inclusionary housing program, a public jurisdiction may adopt a fee option for developers that prefer paying fees over providing housing units on- or off-site. A fee study is frequently undertaken to establish the maximum fee that can be charged as an in-lieu fee. This fee study must show that there is a reasonable relationship between the fee and the cost of providing affordable housing.

Market-Rate Housing: Housing which is available on the open market without any public subsidy. The price for housing is determined by the market forces of supply and demand and varies by location.

Nexus Study: In order to adopt a residential housing impact fee or a commercial linkage fee, a nexus study is required. A nexus requires local agencies proposing a fee on a development project to identify the purpose of the fee, the use of the fee, and to determine that there is “a reasonable relationship between the fee’s use and the type of development project on which the fee is imposed.” A nexus study establishes and quantifies a causal link or “nexus” between new residential and commercial development and the need for additional housing affordable to new employees.

Prototypes: Prototypes are used for residential and commercial developments in order to define housing impact fees. The prototypes generally represent new development projects built in a community and are used to estimate affordable housing impacts associated with new market rate

¹⁸ Mortgage terms for first-time homebuyers typically allow down payment of five percent; these terms require private mortgage insurance.

commercial and residential developments. While the prototypes should be “typical” of what is built, for ease of mathematical computation, they are often expressed as larger developments in order to avoid awkward fractions.

Residential or Housing Impact Fee: A fee imposed on residential development to pay for a development’s impact on the need for affordable housing. The fee is based on projected incomes of new employees associated with the expansion of market rate developments. Two steps are needed to define the fees. The first step is the completion of a nexus study, and the second step entails selection of the actual fee amount, which can be below the amount justified by the fee study, but not above that amount.

Return on cost (ROC): Return on cost is a commonly used metric indicating profitability of development projects. It is calculated by tallying all development costs, including land, direct construction costs, indirect or soft costs (including financing) and developer fees. Total revenues from the sale of the for-sale units are then estimated. Developer profit is calculated by subtracting total revenues minus costs. Finally, ROC is calculated by dividing developer profit into total development cost.

Yield on cost (YOC): Yield on cost is a commonly used metric indicating profitability of development projects. It is calculated by dividing a project’s expected net annual operating income at full lease-up by total development costs (including construction costs, soft costs, fees, and land costs but excluding financing costs). Using YOC as a metric for feasibility allows for a comparison of rates of return among different rental projects, without skewing the results based on the specific financing arrangements (such as the particular combination of debt and equity) that can be highly variable from project to project.

RS Means: Data source of information for construction cost data.

Definition of Acronyms

AMI:	Area Median Income
GBA:	Gross Building Area
HCD:	Department of Housing and Community Development (State of California)
NSF:	Net Square Feet
SF:	Square Feet
TDC:	Total Development Costs