



# KEYSER MARSTON ASSOCIATES

## ATTACHMENT A

### **DRAFT RESIDENTIAL NEXUS ANALYSIS**

*Prepared for:*  
**City of Sonoma**

*Prepared by:*  
**Keyser Marston Associates, Inc.**

**February 2018**

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## I. INTRODUCTION

The following report is a Residential Nexus Analysis, an analysis of the linkages between the development of new residential units and the need for additional affordable housing in the City of Sonoma. The report has been prepared by Keyser Marston Associates, Inc. (KMA) for the City of Sonoma pursuant to a contract. This report is an attachment to the Summary & Recommendations report.

### **Background, Context and Use of the Analysis**

The analysis addresses market rate residential projects in Sonoma and the various types of units that are subject to the City's affordable housing requirements at this time and potentially in the future. The nexus analysis quantifies the linkages between new market rate units and the demand for affordable housing in Sonoma.

The City of Sonoma currently requires new for-sale developments with five units or more to designate 20% of the units as affordable to Moderate Income households (households earning between 80% and 120% of Area Median Income (AMI)). Moderate prices are set to be affordable to households earning 110% of AMI. Projects located within the Sonoma Residential District are required to set aside half of the affordable units for Low Income households (earning between 50% and 80% of AMI). The City requires rental projects to set aside 20% of units as affordable to Moderate Income households. Affordable rental rates are set at 110% of AMI. As with for-sale developments, rental projects located within the Sonoma Residential District are required to set aside half of the affordable units for Low Income households (earning between 50% and 80% of AMI), with affordable rents set at 80% AMI. The City does not currently offer an in-lieu fee option for developers.

The nexus analysis provided herein enables the City to adopt affordable housing impact fees applicable to residential development in the City of Sonoma, including fees for small projects (four or fewer units), which are currently exempt from the program. The conclusions of the analysis represent maximum supportable or legally defensible impact fee levels based on the impact of new residential development on the need for affordable housing. Findings are not recommended fee levels.

Inclusionary requirements need not be bound by the findings of this nexus analysis in accordance with the ruling in *C.B.I.A.*, discussed below. As such, in-lieu fees, which are offered to the developer as an option in-lieu of providing affordable units onsite, are also not governed by the findings of the nexus analysis. However, if the City chooses to adopt inclusionary requirements for small projects, it is generally recommended that in-lieu fees be kept within the nexus maximums given on-site compliance with inclusionary requirements may not be practical and so the fee becomes the only real option. Alternatively, the City could adopt an *impact* fee for small residential projects, as opposed to an inclusionary requirement.

## **Background on Key Legal Cases**

The following provides background regarding key legal cases pertaining to inclusionary programs which in recent years have motivated many California cities to undertake residential nexus studies. This section is intended as general background only; nothing in this report should be interpreted as providing specific legal guidance, which KMA is not qualified to provide.

The *Palmer* case (*Palmer/Sixth Street Properties L.P. v. City of Los Angeles* [2009] 175 Cal. App. 4th 1396) was decided in 2009 and precluded California cities from requiring long term rent restrictions or inclusionary requirements on rental units. In response to the *Palmer* ruling, many California cities adopted affordable housing impact fees on rental projects supported by residential nexus studies similar to this one. However, on September 29, 2017, the Governor signed into law California Assembly Bill (AB) 1505, which went into effect on January 1, 2018. The legislation, known as the 'Palmer Fix,' explicitly authorizes cities and counties to adopt ordinances that require, as a condition of the development of residential rental units, that the development includes a certain percentage of residential rental units affordable to moderate-income, low-income, very low-income, or extremely low-income households. Given the recent change in the law, Sonoma can once again enforce its inclusionary policy on rental units and can consider adopting in lieu fees on rental units.

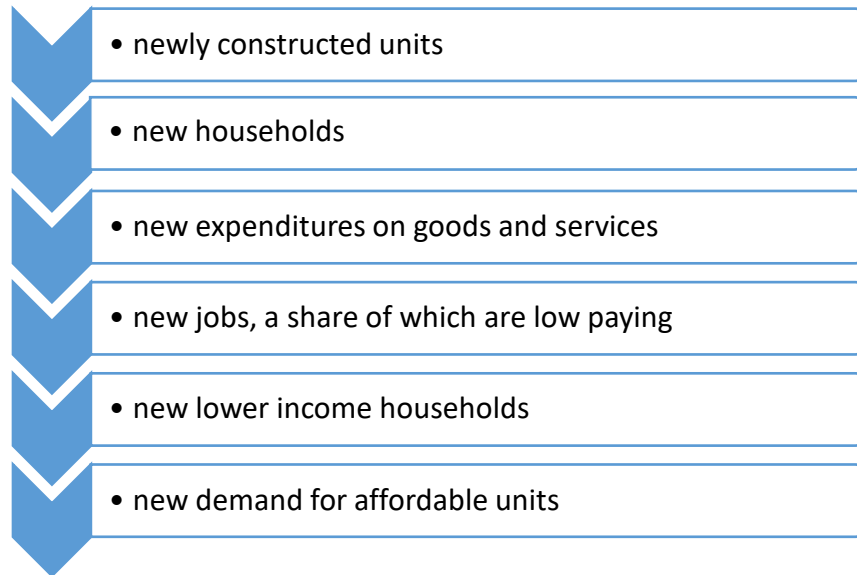
In *C.B.I.A.*, (*California Building Industry Association v. City of San Jose*, California Supreme Court Case No. S212072, June 15, 2015), also referred to as 'the San Jose Case,' the California Building Industry Association (C.B.I.A) challenged the City of San Jose's newly adopted inclusionary program. A core contention of C.B.I.A. was that the City's inclusionary program constituted an exaction that required a nexus study to support it. The case was pending in the courts from 2010 through February 2016. Ultimately, the case was decided by the California Supreme Court in favor of the City of San Jose, finding San Jose's inclusionary program to be a valid exercise of the City's power to regulate land use and not an exaction. The U.S. Supreme Court denied C.B.I.A.'s petition to review the case. While the case was pending, there was speculation that the courts would rule in favor of C.B.I.A. and this possibility was one of the motivations for cities to prepare residential nexus studies as an additional "backup" support measure for inclusionary programs.

## **The Nexus Concept**

A residential nexus analysis demonstrates and quantifies the impact of new market rate housing development on the demand for affordable housing. The underlying nexus concept is that the newly constructed market rate units represent net new households in Sonoma. These households represent new income in Sonoma that will consume goods and services, either through purchases of goods and services or 'consumption' of government services. New consumption translates to jobs; a portion of the jobs are at lower compensation levels; low

compensation jobs relate to lower income households that cannot afford market rate units in Sonoma and therefore need affordable housing.

### Nexus Analysis Concept



### Methodology and Models Used

The nexus analysis methodology starts with the sales price or rental rate of a new market rate residential unit, and moves through a series of linkages to the gross income of the household that purchased or rented the unit, the income available for expenditures on goods and services, the jobs associated with the purchases and delivery of those services, the income of the workers doing those jobs, the household income of the workers and, ultimately, the affordability level of the housing needed by the worker households. The steps of the analysis from household income available for expenditures to jobs generated were performed using the IMPLAN model, a model widely used for the past 35 years to quantify the impacts of changes in a local economy, including employment impacts from changes in personal income. From job generation by industry, KMA used its own jobs housing nexus model to quantify the income of worker households by affordability level.

To illustrate the linkages by looking at a simplified example, we can take an average household that buys a house at a certain price. From that price, we estimate the gross income of the household (from mortgage rates and lending practices) and the portion of income available for expenditures. Households will “purchase” or consume a range of goods and services, such as purchases at the supermarket or services at the bank. Purchases in the local economy in turn generate employment. The jobs generated are at different compensation levels. Some of the jobs are low paying and as a result, even when there is more than one worker in the household,

there are some lower and middle-income households who cannot afford market rate housing in Sonoma.

The IMPLAN model quantifies jobs generated at establishments that serve new residents directly (e.g., supermarkets, banks or schools), jobs generated by increased demand at firms which service or supply these establishments, and jobs generated when the new employees spend their wages in the local economy and generate additional jobs. The IMPLAN model estimates the total impact combined.

### **Net New Underlying Assumption**

An underlying assumption of the analysis is that households that purchase or rent new units represent net new households in Sonoma. If purchasers or renters have relocated from elsewhere in the city, vacancies have been created that will be filled. An adjustment to new construction of units would be warranted if Sonoma were experiencing demolitions or loss of existing housing inventory. However, the rate of housing unit removal is so low as to not warrant an adjustment or offset.

On an individual project basis, if existing units are removed to redevelop a site to higher density, then there could be a need for recognition of the existing households in that all new units might not represent net new households, depending on the program design and number of units removed relative to new units.

Since the analysis addresses net new households in Sonoma and the impacts generated by their consumption expenditures, it quantifies net new demand for affordable units to accommodate new worker households. As such, the impact results do not address nor in any way include existing deficiencies in the supply of affordable housing.

### **Geographic Area of Impact**

The analysis quantifies impacts occurring within Sonoma County. While much of the impact will occur within Sonoma, some impacts will be experienced elsewhere in the county and beyond. The IMPLAN model computes the jobs generated within the county and sorts out those that occur beyond the county boundaries. The KMA Jobs Housing Nexus Model analyzes the income structure of jobs and their worker households, without assumptions as to where the worker households live.

In summary, the KMA nexus analysis quantifies all the job impacts occurring within Sonoma County and related worker households. Job impacts, like most types of impacts, occur irrespective of political boundaries. And like other types of impact analyses, such as traffic, impacts beyond city boundaries are experienced, are relevant, and are important. See the Addendum: Additional Background and Notes on Specific Assumptions at the end of this report for further discussion.

## **Market Rate Residential Project Types**

Four prototypical residential project types were selected by the City and KMA for analysis in this nexus study. The prototypes were intended to represent the range of product types currently being built in Sonoma or which are expected in the future including:

- Larger Lot Single Family Detached;
- Smaller Lot Single Family Detached;
- Townhome/Condominium; and,
- Rental Apartments.

## **Affordability Tiers**

The nexus analysis addresses the following four income or affordability tiers:

- Extremely Low Income: households earning up to 30% Area Median Income (AMI);
- Very Low Income: households earning over 30% AMI up to 50% of AMI;
- Low Income: households earning over 50% AMI up to 80% of AMI; and,
- Moderate Income: households earning over 80% AMI up to 120% of AMI.

## **Report Organization**

The report is organized into the following sections:

- Section A presents information regarding the prototypical new market rate residential units and the estimated household income of purchases or renters of those units.
- Section B describes the IMPLAN model, which is used in the nexus analysis to translate household income into the estimated number of jobs in retail, restaurants, healthcare, and other sectors serving new residents.
- Section C presents the linkage between employment growth associated with residential development and the need for new lower income housing units required in each of the four income categories.
- Section D quantifies the nexus or mitigation cost based on the cost of delivering affordable units to new worker households in each of the four income categories.
- An Addendum section provides a supplemental discussion of specific factors in relation to the nexus concept.
- Appendix A contains the market survey.

- Appendix B includes detailed tables on worker occupations and compensation levels that are a key input into the analysis.

## **Disclaimers**

This report has been prepared using the best and most recent data available at the time of the analysis. Local data and sources were used wherever possible. Major sources include the U.S. Census Bureau's American Community Survey, California Employment Development Department (EDD) and the IMPLAN model. While we believe all sources utilized are sufficiently sound and accurate for the purposes of this analysis, we cannot guarantee their accuracy. Keyser Marston Associates, Inc. assumes no liability for information from these and other sources.



## **II. RESIDENTIAL NEXUS ANALYSIS**

### **A. Market Rate Units and Household Income**

This section describes the prototypical market rate residential units and the income of the purchaser and renter households. Market rate prototypes are representative of new residential units currently being built in Sonoma or that are likely to be built in Sonoma over the next five to ten years. Household income is estimated based on the amount necessary for the mortgage or rent payments associated with the prototypical new market rate units and becomes the basis for the input to the IMPLAN model. These are the starting points of the chain of linkages that connect new market rate units to additional demand for affordable residential units.

This section presents a summary of the market rate prototypes and the estimated household income of purchasers or renters of the market rate units.

#### **Recent Housing Market Activity and Prototypical Units**

KMA worked with City staff to select four representative residential development prototypes envisioned to be built in Sonoma in the future. City staff provided general project information on current or recent examples of each prototype. KMA then undertook a market survey of residential projects to estimate current pricing and rent levels. More details on the market survey can be found in Appendix A.

The market survey was conducted in 2016. To develop estimates of sales prices for new units, KMA reviewed sales prices and asking prices for recently built units in the city. To supplement this, KMA also reviewed market rate sales prices for units built since 2005 and sold since 2013. For rental units, KMA gathered current asking rents for apartments in Sonoma, although the data is limited by the small number of units available. KMA also gathered current asking rents for newer apartment buildings in nearby communities including Santa Rosa and Petaluma. KMA also interviewed an active local realtor to discuss the residential real estate market in Sonoma and confirm sales price and rental rate estimates.

The four residential prototypes are summarized in the table below. More detail can be found on Table A-1 at the end of this section. The main objective of the survey was to review current market sales prices or rents, per unit and per square foot, for the various residential project types in Sonoma.

In summary, the residential prototypes analyzed in the nexus analysis are as follows:

<b>Prototypical Residential Units for City of Sonoma</b>				
	<i>Larger Lot Single Family Detached</i>	<i>Smaller Lot Single Family Detached</i>	<i>Townhome / Condominium</i>	<i>Rental Apartments</i>
Avg. Unit Size	2,500 SF	1,400 SF	1,050 SF	950 SF
Avg. No. of Bedrooms	3.50	3.00	2.00	1.75
Avg. Sales Price / Rent	\$1,300,000	\$675,000	\$550,000	\$2,100
Per Square Foot	\$520 /SF	\$482 /SF	\$524 /SF	\$2 /SF

Source: KMA market study; see Appendix A.

It is important to note that the residential prototypes analysis is intended to reflect average or typical new residential projects in the local market rather than any specific project. It would be expected that specific projects would vary to some degree from the residential prototypes analyzed.

### **Income of Housing Unit Purchaser or Renter**

After the prototypes are established, the next step in the analysis is to determine the income of the purchasing or renting households in the prototypical units.

#### *Ownership Units*

To make the determination for ownership units, terms for the purchase of residential units used in the analysis are slightly less favorable than what can be achieved at the current time since current terms are not likely to endure. The selected terms for the analysis are: a down-payment of 20%, which is representative of new purchase loans originated locally.<sup>1</sup> A 30-year fixed rate loan at a 5.5% interest is assumed. The interest rate at 5.5%, which includes fees and points, reflects a longer term average rate based on data for the last fifteen years, from 2001 to 2015.<sup>2</sup> An interest rate premium of 0.25% is added to non-conforming loans that exceed the \$554,000 limit established by the Federal Housing Finance Agency (FHFA). Tables A-2 to A-4 at the end of this section provide the details.

All ownership product types include an estimate of homeowners' insurance and property taxes. The townhome/condominium units also include an estimate of homeowner's association dues. These are included along with the mortgage payment as part of housing expenses for purposes of determining mortgage eligibility.<sup>3</sup> The analysis estimates gross household income based on the assumption that these housing costs represent, on average, approximately 35% of gross income.

<sup>1</sup> Reflects the median down payment for new purchase loans originated in zip codes starting with 954, which includes Sonoma, derived from Freddie Mac dataset for loans issued in the 1st Quarter of 2015.

<sup>2</sup> Based on Freddie Mac Primary Mortgage Market Survey. Reflects weekly average rates for 30 year fixed rate mortgages during the period from 1/2001 through 12/2015 applicable to the West Region.

<sup>3</sup> Housing expenses are combined with other debt payments such as credit cards and auto loans to compute a Debt To Income (DTI) ratio which is a key criteria used for determining mortgage eligibility.

The assumption that housing expenses represent 35% of gross income is reflective of the local average for new purchase loans<sup>4</sup> and is consistent with criteria used by lenders to determine mortgage eligibility.<sup>5</sup>

### *Apartment Units*

Household income for renter households is estimated based on the assumption that housing costs, including rent and utilities, represents on average 30% of gross household income. The 30% factor was selected for consistency with the California Health and Safety Code standard for relating income to affordable rent levels.<sup>6</sup> The resulting relationship is that annual household income is 3.3 times annual rent.

The estimated gross household incomes of the purchasers or renters of the prototype units are calculated in Tables A-2 through A-5 and summarized below.

<b>Gross Household Income</b>				
	<i>Larger Lot Single Family Detached</i>	<i>Smaller Lot Single Family Detached</i>	<i>Townhome / Condominium</i>	<i>Rental Apartments</i>
Gross Household Income	\$253,000	\$128,000	\$112,000	\$87,680

### **Income Available for Expenditures**

The input into the IMPLAN model used in this analysis is the net income available for expenditures. To arrive at income available for expenditures, gross income must be adjusted for Federal and State income taxes, contributions to Social Security and Medicare, savings, and payments on household debt. Per KMA correspondence with the producers of the IMPLAN model (IMPLAN Group LLC), other taxes including sales tax, gas tax, and property tax are handled internally within the model as part of the analysis of expenditures. Payroll deduction for medical benefits and pre-tax medical expenditures are also handled internally within the model. Housing costs are addressed separately, as described below, and so are not deducted as part of this adjustment step. Table A-6 at the end of this section shows the calculation of income available for expenditures.

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<sup>4</sup> Freddie Mac data on new purchase loans originated in zip codes beginning with 954xx (including Sonoma County) for the 1st Quarter of 2015 indicates an average debt to income ratio of 39%; however, most households have other forms of debt such as credit cards, student loans, and auto loans that are included as part of this ratio and the ratio considering housing costs only would be lower. Application of a 35% ratio is also consistent with the California Health and Safety Code standard for relating income to housing costs for ownership units.

<sup>5</sup> Fannie Mae mortgage underwriting eligibility criteria establishes a debt to income threshold of 36% above which tighter credit standards apply. A debt to income ratio of up to 45% is permitted for borrowers meeting specified credit criteria; however, most households have other forms of debt such as credit cards, student loans, and auto loans that would be considered as part of this ratio.

<sup>6</sup> Health and Safety Code Section 50052.5 defines affordable rent levels based on 30% of income.

Income available for expenditures is estimated at approximately 58% to 72% of gross income, depending on the market rate prototype. The estimates are based on a review of data from the Internal Revenue Service and California Franchise Tax Board tax tables. Per the Internal Revenue Service, households earning between \$100,000 and \$200,000 per year, or the residents of the smaller single family detached and the townhome/condominium ownership units, who itemize deductions on their tax returns will pay an average of 12.4% of gross income for federal taxes. Households in the larger single family units are estimated to pay 19.5% of gross income for federal taxes based on the average for the \$200,000 - \$500,000 income ranges. Residents of the market rate rental units are estimated to pay an average of 10.1% of gross income in federal income taxes, the average for households in the \$75,000 - \$100,000 income range not itemizing deductions on their taxes. State taxes are estimated to average 3% to 6% of gross income based on tax rates per the California Franchise Tax Board. The employee share of FICA payroll taxes for Social Security and Medicare is 7.65% of gross income. A ceiling of \$118,500 per employee applies to the 6.2% Social Security portion of this tax rate.

Savings and repayment of household debt represent another necessary adjustment to gross income. Savings includes various IRA and 401k type programs as well as non-retirement household savings and investments. Debt repayment includes auto loans, credit cards, and all other non-mortgage debt. For the apartment, townhome and the small single family detached prototypes, the savings and repayment of debt are estimated to represent a combined 8% of gross income based on the 20-year average derived from United States Bureau of Economic Analysis data. For households in the large single family detached prototype, the savings rates is estimated at 10% of income based on savings rates applicable to higher income households derived from data published by the National Bureau of Economic Research, "Wealth Inequality in the United States Since 1913: Evidence from Capitalized Income Tax Data," October 2014.

The percentage of income available for expenditure for input into the IMPLAN model is prior to deducting housing costs. The reason is for consistency with the IMPLAN model which defines housing costs as expenditures. The IMPLAN model addresses the fact that expenditures on housing do not generate employment to the degree other expenditures such as retail or restaurants do, but there is some limited maintenance and property management employment generated.

After deducting income taxes, Social Security, Medicare, savings, and repayment of debt, for purchasers of one of the new ownership prototypes, the estimated income available for expenditures is 58% - 72%. These are the factors used to adjust from gross income to the income available for expenditures for input into the IMPLAN model. As indicated above, other forms of taxation such as property tax are handled internally within the IMPLAN model.

Another adjustment made to spending is to account for standard operational vacancy in rental units of 5%, a level of vacancy considered average for rental units in a healthy market. A

comparable adjustment is not applied to the ownership units as newly built ownership units are anticipated to have only a nominal level of vacancy.

Estimates of household income available for expenditures are presented below:

<b>Income Available for Expenditures</b>				
	<i>Larger Lot Single Family Detached</i>	<i>Smaller Lot Single Family Detached</i>	<i>Townhome / Condominium</i>	<i>Rental Apartments</i>
Gross Household Income	\$253,000	\$128,000	\$112,000	\$87,680
Percent Income available for Expenditures	58%	68%	68%	72%
Spending Adjustment / Rental Vacancy	N/A	N/A	N/A	95%
Household Income Available for Expenditure <sup>(1)</sup>				
One Unit	\$146,700	\$87,000	\$76,200	\$60,000
100 Units [input to IMPLAN]	\$14,670,000	\$8,700,000	\$7,620,000	\$6,000,000

(1) Calculated as gross household income X percent available for expenditures X spending adjustment for rental vacancy. Result includes the share of income spent on housing as the required input to the IMPLAN model is income after taxes but before deduction of housing costs as described above.

The nexus analysis is conducted on 100-unit building modules for ease of presentation, and to avoid awkward fractions. The spending associated with 100 market rate residential units is the input into the IMPLAN model. Tables A-7 and A-8 summarize the conclusions of this section and calculate the household income for the 100-unit building modules.

**TABLE A-1  
MARKET RATE RESIDENTIAL PROTOTYPES  
RESIDENTIAL NEXUS ANALYSIS  
CITY OF SONOMA, CA**

**DRAFT**

	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
<b>Example Projects</b>	557 Fourth St. East 448 Lovall Valley Road 153 Newcomb 205 Perkins St 790 Second St. East	800 West Spain St. 165 & 179 West MacArthur St. 821 - 845 West Spain St.	405 Fifth St. West 1181 Broadway	19323 Sonoma Highway 840 West Napa St. 165 East Spain St. 590 West Napa St.
Density / Lot Size	6,000 - 12,000 sf	8 - 10 dua 2,600 - 5,000 sf lots	10 - 20 dua	10 - 20 dua
Building Type	1-2 story homes	2-story homes	2-story townhomes	2-3 story buildings
Unit Mix	3 and 4 BR homes	3 BRs	2 BRs	Studios, 1 and 2 BR
Average Unit Size	2,500 sf	1,400 sf	1,050 sf	950 sf
Average No. of Bedrooms	3.5 BR	3.0 BR	2.0 BR	1.75 BR
Parking Type	Attached or Detached Garage	Attached garage	Attached garage	Carports & surface parking
Sales Price/Rent per square foot	\$1,300,000 \$520	\$675,000 \$482	\$550,000 \$524	\$2,100 \$2.21

**TABLE A-2  
 PROTOTYPE 1: LARGER LOT SINGLE FAMILY DETACHED  
 SALES PRICE TO INCOME RATIO  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA**

**DRAFT**

**Prototype 1  
 Larger Lot Single Family Detached**

Sales Price	\$520 /SF	2,500 SF <sup>1</sup>	\$1,300,000 <sup>1</sup>
<b>Mortgage Payment</b>			
Downpayment @ 20%		20% <sup>2</sup>	\$260,000
Loan Amount			\$1,040,000
Interest Rate			5.75% <sup>3</sup>
Term of Mortgage			30 years
Annual Mortgage Payment	\$6,100 /month		\$72,800
<b>Other Costs</b>			
Property Taxes	1.10% of sales price <sup>4</sup>		\$14,300
Homeowner Insurance	0.10% of sales price <sup>5</sup>		\$1,300
Total Annual Housing Cost	\$7,400 /month		\$88,400
% of Income Spent on Hsg			35% <sup>6</sup>
<b>Annual Household Income Required</b>			<b>\$253,000</b>
Sales Price to Income Ratio			5.1

Notes

(1) Based on KMA Market Survey.

(2) Reflects the median down payment for new purchase loans originated in zip codes beginning with 954, including the City of Sonoma, derived from Freddie Mac dataset for loans issued in the 1st Quarter of 2015.

(3) Average mortgage interest rate (including fees & points) for prior 15 years derived from Freddie Mac Primary Mortgage Market Survey, West Region (rounded to nearest half percentage). Based on weekly average rates for 30 year fixed rate mortgages during the period from 1/2001 through 12/2015. Includes a 0.25% premium to reflect the non-conforming nature of the loan (jumbo loan).

(4) Property tax rate is inclusive of ad valorem taxes and applicable voter approved rates, fixed charges, and assessments for the jurisdiction indicated. Source: ListSource.

(5) Estimated from quotes obtained from Progressive Insurance.

(6) While most purchasers of high value homes likely spend less than 35% of their income on housing, the analysis conservatively assumes 35% of income is spent on housing. Selection of a lower percentage of income spent on housing would have resulted in a higher estimate of household income and greater impacts from expenditures.

**TABLE A-3**  
**PROTOTYPE 2 : SMALLER LOT SINGLE FAMILY DETACHED**  
**SALES PRICE TO INCOME RATIO**  
**RESIDENTIAL NEXUS ANALYSIS**  
**SONOMA, CA**

**DRAFT**

**Prototype 2**  
**Smaller Lot Single Family Detached**

Sales Price	\$482 /SF	1,400 SF <sup>1</sup>	\$675,000 <sup>1</sup>
<b>Mortgage Payment</b>			
Downpayment @ 20%		20% <sup>2</sup>	\$135,000
Loan Amount			\$540,000
Interest Rate			5.50% <sup>3</sup>
Term of Mortgage			30 years
Annual Mortgage Payment	\$3,100 /month		\$36,800
<b>Other Costs</b>			
Property Taxes	1.10% of sales price <sup>4</sup>		\$7,425
Homeowner Insurance	0.10% of sales price <sup>5</sup>		\$700
Total Annual Housing Cost	\$3,700 /month		\$44,925
% of Income Spent on Hsg			35% <sup>6</sup>
<b>Annual Household Income Required</b>			<b>\$128,000</b>
Sales Price to Income Ratio			5.3

Notes

(1) Based on KMA Market Survey.

(2) Reflects the median down payment for new purchase loans originated in zip codes beginning with 954, including the City of Sonoma, derived from Freddie Mac dataset for loans issued in the 1st Quarter of 2015.

(3) Average mortgage interest rate (including fees & points) for prior 15 years derived from Freddie Mac Primary Mortgage Market Survey, West Region (rounded to nearest half percentage). Based on weekly average rates for 30 year fixed rate mortgages during the period from 1/2001 through 12/2015.

(4) Property tax rate is inclusive of ad valorem taxes and applicable voter approved rates, fixed charges, and assessments for the jurisdiction indicated. Source: ListSource.

(5) Estimated from quotes obtained from Progressive Insurance.

(6) Ratio is consistent with Fannie Mae mortgage underwriting eligibility criteria which establishes a debt to income threshold of 36% above which tighter credit standards apply. A debt to income ratio of up to 45% is permitted for borrowers meeting specified credit criteria. Ratio is also consistent with the California Health and Safety Code standard for relating income to housing costs for ownership units. Freddie Mac data on new purchase loans originated in zip codes beginning with 954xx (including Sonoma County) for the 1st Quarter of 2015 indicates an average debt to income ratio of 39%; however, most households have other forms of debt such as credit cards, student loans, and auto loans that are included as part of this ratio and the ratio considering housing costs only would be lower.



**TABLE A-4**  
**PROTOTYPE 3 : TOWNHOME / CONDOMINIUM**  
**SALES PRICE TO INCOME RATIO**  
**RESIDENTIAL NEXUS ANALYSIS**  
**SONOMA, CA**

**DRAFT**

		<b>Prototype 3</b>	
		<b>Townhome / Condominium</b>	
Sales Price	\$524 /SF	1,050 SF <sup>1</sup>	\$550,000 <sup>1</sup>
<b>Mortgage Payment</b>			
Downpayment @ 20%		20% <sup>2</sup>	\$110,000
Loan Amount			\$440,000
Interest Rate			5.50% <sup>3</sup>
Term of Mortgage			30 years
Annual Mortgage Payment	\$2,500 /month		\$30,000
<b>Other Costs</b>			
Property Taxes	1.10% of sales price <sup>4</sup>		\$6,050
HOA Dues	\$225 per month <sup>1</sup>		\$2,700
Homeowner Insurance	0.10% sale price <sup>5</sup>		\$600
<b>Total Annual Housing Cost</b>	<b>\$3,300 /month</b>		<b>\$39,350</b>
<b>% of Income Spent on Hsg</b>			<b>35% <sup>6</sup></b>
<b>Annual Household Income Required</b>			<b>\$112,000</b>
<b>Sales Price to Income Ratio</b>			<b>4.9</b>

Notes

(1) Based on KMA Market Survey.

(2) Reflects the median down payment for new purchase loans originated in zip codes beginning with 954, including the City of Sonoma, derived from Freddie Mac dataset for loans issued in the 1st Quarter of 2015.

(3) Average mortgage interest rate (including fees & points) for prior 15 years derived from Freddie Mac Primary Mortgage Market Survey, West Region (rounded to nearest half percentage). Based on weekly average rates for 30 year fixed rate mortgages during the period from 1/2001 through 12/2015.

(4) Property tax rate is inclusive of ad valorem taxes and applicable voter approved rates, fixed charges, and assessments for the jurisdiction indicated. Source: ListSource.

(5) Estimated from quotes obtained from Progressive Insurance.

(6) Ratio is consistent with Fannie Mae mortgage underwriting eligibility criteria which establishes a debt to income threshold of 36% above which tighter credit standards apply. A debt to income ratio of up to 45% is permitted for borrowers meeting specified credit criteria. Ratio is also consistent with the California Health and Safety Code standard for relating income to housing costs for ownership units. Freddie Mac data on new purchase loans originated in zip codes beginning with 954xx (including Sonoma County) for the 1st Quarter of 2015 indicates an average debt to income ratio of 39%; however, most households have other forms of debt such as credit cards, student loans, and auto loans that are included as part of this ratio and the ratio considering housing costs only would be lower.

**TABLE A-5  
 PROTOTYPE 4 : RENTAL APARTMENTS  
 SALES PRICE TO INCOME RATIO  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA**

**DRAFT**

			<u>Prototype 4 Rental Apartments</u>
Market Rent			
Monthly	\$2 /SF	950 SF <sup>1</sup>	\$2,100 <sup>1</sup>
Utilities <sup>2</sup>			\$92
Monthly housing cost			\$2,192
Annual housing cost			\$26,304
% of Income Spent on Rent			30%
<b>Annual Household Income Required</b>			<b>\$87,680</b>
Annual Rent to Income Ratio			3.3

Notes

(1) Based on KMA Market Survey.

(2) Monthly utilities include direct-billed utilities and landlord reimbursements estimated based on County Housing Authority utility allowance schedule.

(3) While landlords may permit rental payments to represent a slightly higher share of total income, 30% represents an average. This relationship is established in the California Health and Safety Code and used throughout housing policy to relate income to affordable rental housing costs.

**TABLE A-6**  
**INCOME AVAILABLE FOR EXPENDITURES<sup>1</sup>**  
**RESIDENTIAL NEXUS ANALYSIS**  
**SONOMA, CA**

**DRAFT**

	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>
	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
Gross Income	100%	100%	100%	100%
<u>Less:</u>				
Federal Income Taxes <sup>2</sup>	19.5%	12.4%	12.4%	10.1%
State Income Taxes <sup>3</sup>	6%	4%	4%	3%
FICA Tax Rate <sup>4</sup>	6.47%	7.65%	7.65%	7.65%
Savings & other deductions <sup>5</sup>	10%	8%	8%	8%
<b>Percent of Income Available for Expenditures <sup>6</sup> [Input to IMPLAN model]</b>	<b>58%</b>	<b>68%</b>	<b>68%</b>	<b>72%</b>

Notes:

- <sup>1</sup> Gross income after deduction of taxes and savings. Income available for expenditures is the input to the IMPLAN model which is used to estimate the resulting employment impacts. Housing costs are not deducted as part of this adjustment step because they are addressed separately as expenditures within the IMPLAN model.
- <sup>2</sup> Reflects average tax rates (as opposed to marginal) based on U.S. Internal Revenue Services, Tax Statistics, Tables 1.1 and 2.1 for 2013. Homeowners are assumed to itemize deductions. Renter households are assumed to take the standard deduction. Tax rates reflect averages for applicable income range.
- <sup>3</sup> Average tax rate estimated by KMA based on marginal rates per the California Franchise Tax Board and ratios of taxable income to gross income estimated based on U.S. Internal Revenue Service data.
- <sup>4</sup> For Social Security and Medicare. Social Security taxes estimated based upon the current ceiling on applicability of Social Security taxes of \$118,500 (ceiling applies per earner not per household) and the average number of earners per household.
- <sup>5</sup> Household savings including retirement accounts like 401k / IRA and other deductions such as interest costs on credit cards, auto loans, etc, necessary to determine the amount of income available for expenditures. The 8% rate used in the analysis for households earning less than \$225,000 is based on the average over the past 20 years computed from U.S. Bureau of Economic Analysis data, specifically the National Income and Product Accounts, Table 2.1 "Personal Income and Its Disposition." Households earning more than \$225,000 are assumed to save a higher percentage of their income, based on savings rates for the last 20 years from data published by the National Bureau of Economic Research, "Wealth Inequality in the United States Since 1913: Evidence From Capitalized Income Tax Data," October 2014.
- <sup>6</sup> Deductions from gross income to arrive at the income available for expenditures are consistent with the way the IMPLAN model and National Income and Product Accounts (NIPA) defines income available for personal consumption expenditures. Income taxes, contributions to Social Security and Medicare, and savings are deducted; however, property taxes and sales taxes are not. Housing costs are not deducted as part of the adjustment because they are addressed separately as expenditures within the IMPLAN model.

**TABLE A-7  
FOR SALE PROTOTYPES: SALES PRICE TO INCOME SUMMARY  
RESIDENTIAL NEXUS ANALYSIS  
SONOMA, CA**

**DRAFT**

	<u>Per Unit</u>	<u>Per Sq.Ft.</u>	<u>100 Unit Building Module</u> <i>(Per 100 Units)</i>
<b>PROTOTYPE 1 : LARGER LOT SINGLE FAMILY DETACHED</b>			
Building Sq.Ft. (excludes garage)	2,500		250,000
Sales Price	\$1,300,000	\$520	\$130,000,000
Sales Price to Income Ratio	5.1		5.1
Gross Household Income	\$253,000		\$25,300,000
Income Available for Expenditure <sup>1</sup> 58% of gross	\$146,700		<b>\$14,670,000</b>
<b>PROTOTYPE 2 : SMALLER LOT SINGLE FAMILY DETACHED</b>			
Building Sq.Ft. (excludes garage)	1,400		140,000
Sales Price	\$675,000	\$482	\$67,500,000
Sales Price to Income Ratio	5.3		5.3
Gross Household Income	\$128,000		\$12,800,000
Income Available for Expenditure <sup>1</sup> 68% of gross	\$87,000		<b>\$8,700,000</b>
<b>PROTOTYPE 3 : TOWNHOME / CONDOMINIUM</b>			
Building Sq.Ft. (excludes garage)	1,050		105,000
Sales Price	\$550,000	\$524	\$55,000,000
Sales Price to Income Ratio	4.9		4.9
Gross Household Income	\$112,000		\$11,200,000
Income Available for Expenditure <sup>1</sup> 68% of gross	\$76,200		<b>\$7,620,000</b>

Notes:

(1) Represents net income available for expenditures after income tax, payroll taxes, and savings. See Table A-6 for derivation.

Source: See Table A-1 through A-6.

**TABLE A-8  
 RENTAL PROTOTYPE: RENT TO INCOME SUMMARY  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA**

**DRAFT**

	<u>Per Unit</u>	<u>Per Sq.Ft.</u>	<u>100 Unit Building Module (Per 100 Units)</u>
<b>PROTOTYPE 4 : RENTAL APARTMENTS</b>			
Building Sq.Ft.	950		95,000
Rent			
Monthly	\$2,100	\$2.21 /SF	\$210,000
Monthly with Utilities	\$2,192		
Annual with Utilities	\$26,304		\$2,630,000
Rent to Income Ratio	3.3		3.3
Gross Household Income	\$87,680		\$8,768,000
Income Available for Expenditure <sup>1</sup>	72% of gross	\$63,000	\$6,310,000
Expenditures adjusted for vacancy <sup>2</sup>	5% vacancy	\$60,000	<b>\$6,000,000</b>

Notes:

(1) Represents net income available for expenditures after income tax, payroll taxes, and savings. See Table A-6 for derivation.

(2) Allowance to account for standard operational vacancy.

Source: See Tables A-1 through A-6.

## **B. The IMPLAN Model**

Consumer spending by residents of new housing units will create jobs, particularly in sectors such as restaurants, health care, and retail, which are closely connected to the expenditures of residents. The widely used economic analysis tool, IMPLAN (IMpact Analysis for PLANning), was used to quantify these new jobs by industry sector.

### **IMPLAN Model Description**

The IMPLAN model is an economic analysis software package now commercially available through the IMPLAN Group, LLC. IMPLAN was originally developed by the U.S. Forest Service, the Federal Emergency Management Agency, and the U.S. Department of the Interior Bureau of Land Management and has been in use since 1979 and refined over time. It has become a widely used tool for analyzing economic impacts for a broad range of applications from major construction projects to natural resource programs.

IMPLAN is based on an input-output accounting of commodity flows within an economy from producers to intermediate and final consumers. The model establishes a matrix of supply chain relationships between industries and also between households and the producers of household goods and services. Assumptions about the portion of inputs or supplies for a given industry likely to be met by local suppliers, and the portion supplied from outside the region or study area are derived internally within the model using data on the industrial structure of the region.

The output or result of the model is generated by tracking changes in purchases for final use (final demand) as they filter through the supply chain. Industries that produce goods and services for final demand or consumption must purchase inputs from other producers, which in turn, purchase goods and services. The model tracks these relationships through the economy to the point where leakages from the region stop the cycle. This allows the user to identify how a change in demand for one industry will affect a list of over 500 other industry sectors. The projected response of an economy to a change in final demand can be viewed in terms of economic output, employment, or income.

Data sets are available for each county and state, so the model can be tailored to the specific economic conditions of the region being analyzed. This analysis utilizes the data set for Sonoma County. As will be discussed, much of the employment impact is in local-serving sectors, such as retail, eating and drinking establishments, and medical services. A significant portion of these jobs will be located in Sonoma or nearby. In addition, the employment impacts will extend throughout the county and beyond based on where jobs are located that serve Sonoma residents. In fact, Sonoma is part of the larger Bay Area economy and impacts will likewise extend throughout the region. However, consistent with the conservative approach taken in the nexus analysis, only the impacts that occur within Sonoma County are included in the analysis.

## Application of the IMPLAN Model to Estimate Job Growth

The IMPLAN model was applied to link income to household expenditures to job growth. Employment generated by the household income of residents is analyzed in modules of 100 residential units to simplify communication of the results and avoid awkward fractions. The IMPLAN model distributes spending among various types of goods and services (industry sectors) based on data from the Consumer Expenditure Survey and the Bureau of Economic Analysis Benchmark input-output study, to estimate employment generated.

Job creation, driven by increased demand for products and services, was projected for each of the industries that will serve the new households. The employment generated by this new household spending is summarized below.

<b>Jobs Generated Per 100 Units</b>				
	<i>Larger Lot Single Family Detached</i>	<i>Smaller Lot Single Family Detached</i>	<i>Townhome / Condominium</i>	<i>Rental Apartments</i>
Annual Household Expenditures (100 Units)	\$14,670,000	\$8,700,000	\$7,620,000	\$6,000,000
Total Jobs Generated (100 Units)	69.0	40.5	35.5	27.1

Table B-1 provides a detailed summary of employment generated by industry. The table shows industries sorted by projected employment. The Consumer Expenditure Survey published by the Bureau of Labor Statistics tracks expenditure patterns by income level. IMPLAN utilizes this data to reflect the pattern by income bracket. Estimated employment is shown for each IMPLAN industry sector representing 1% or more of total employment. The jobs that are generated are heavily retail jobs, jobs in restaurants and other eating establishments, and in services that are provided locally such as health care. The jobs counted in the IMPLAN model cover all jobs, full and part time, similar to the U.S. Census and all reporting agencies (unless otherwise indicated).

**TABLE B-1  
IMPLAN MODEL OUTPUT  
EMPLOYMENT GENERATED  
RESIDENTIAL NEXUS ANALYSIS  
SONOMA, CA**

**DRAFT**

<i>Per 100 Market Rate Units</i>	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>	
	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>	<b>% of Jobs</b>
<b>Household Expenditures</b> <i>(100 Market Rate Units)</i>	\$14,670,000	\$8,700,000	\$7,620,000	\$6,000,000	
<b>Jobs Generated by Industry <sup>1</sup></b>					
Full-service restaurants	4.9	3.1	2.7	2.2	8%
Individual and family services	4.0	2.3	2.0	1.4	6%
Limited-service restaurants	3.8	2.4	2.1	1.7	6%
All other food and drinking places	<u>2.5</u>	<u>1.6</u>	<u>1.4</u>	<u>1.1</u>	<u>4%</u>
Subtotal Restaurant	15.2	9.4	8.2	6.3	23%
Retail - Food and beverage stores	3.0	1.7	1.5	1.0	4%
Retail - General merchandise stores	2.1	1.2	1.0	0.7	3%
Personal care services	1.7	1.1	1.0	0.8	3%
Retail - Building material and garden equip.	1.3	0.7	0.7	0.5	2%
Other personal services	1.3	0.7	0.6	0.5	2%
Retail - Miscellaneous store retailers	1.1	0.6	0.6	0.4	2%
Retail - Motor vehicle and parts dealers	1.1	0.6	0.5	0.4	2%
Retail - Nonstore retailers	0.8	0.5	0.4	0.3	1%
Retail - Health and personal care stores	0.8	0.4	0.4	0.3	1%
Retail - Clothing and clothing accessories	<u>0.8</u>	<u>0.4</u>	<u>0.4</u>	<u>0.3</u>	<u>1%</u>
Subtotal Retail and Service	13.9	8.0	7.0	5.0	20%
Hospitals	2.3	1.6	1.4	1.2	4%
Nursing and community care facilities	2.2	1.5	1.4	1.1	4%
Offices of physicians	1.9	1.3	1.2	1.0	3%
Offices of other health practitioners	1.2	0.8	0.7	0.6	2%
Offices of dentists	1.0	0.7	0.6	0.5	2%
Home health care services	0.8	0.5	0.5	0.4	1%
Outpatient care centers	<u>0.6</u>	<u>0.4</u>	<u>0.4</u>	<u>0.3</u>	<u>1%</u>
Subtotal Healthcare	9.9	7.0	6.1	5.1	16%
Other educational services	2.0	0.7	0.6	0.4	2%
Elementary and secondary schools	<u>1.5</u>	<u>0.6</u>	<u>0.5</u>	<u>0.3</u>	<u>2%</u>
Subtotal Education	3.5	1.3	1.2	0.7	4%
Wholesale trade	2.4	1.3	1.2	0.8	3%
Child day care services	1.7	0.7	0.6	0.3	2%
Services to private households	1.6	0.9	0.8	0.6	2%
Automotive repair and maintenance	1.3	0.8	0.7	0.6	2%
Other financial investment activities	1.0	0.5	0.5	0.3	1%
Real estate	0.8	0.7	0.6	1.0	2%
Other local government enterprises	0.8	0.4	0.4	0.3	1%
Implan Residual	1.7	1.1	1.0	0.8	3%
Fitness and recreational sports centers	0.8	0.4	0.3	0.3	1%
All Other	14.4	7.8	6.8	5.0	20%
<b>Total Number of Jobs Generated</b>	69.0	40.5	35.5	27.1	100%

Estimated employment generated by expenditures of households within 100 prototypical market rate units for Industries representing more than 1% of total employment. Employment estimates are based on the IMPLAN Group's economic model, IMPLAN, for Sonoma County (uses 2014 IMPLAN data set, the most recent available as of October 2016). Includes both full- and part-time jobs.



## C. The KMA Jobs Housing Nexus Model

This section presents a summary of the analysis linking the employment growth associated with residential development, or the output of the IMPLAN model (see Section B), to the estimated number of lower income housing units required in each of four income categories, for each of the four residential prototype units.

### Analysis Approach and Framework

The analysis approach is to examine the employment growth for industries related to consumer spending by residents in the 100-unit modules. Then, through a series of linkage steps, the number of employees is converted to households and housing units by affordability level. The findings are expressed in terms of numbers of affordable units per 100 market rate units. The analysis addresses the affordable unit demand associated with the two single family detached units, townhome/condominiums, and rental units.

The table below shows the 2016 Area Median Income (AMI) for Sonoma County, as well as the income limits for the four categories that were evaluated: Extremely Low (30% of AMI), Very Low (50% of AMI), Low (80% of AMI), and Moderate (120% of AMI). The income definitions used in the analysis are those published by the California Department of Housing and Community Development (HCD).

**2016 INCOME LIMITS FOR SONOMA COUNTY**

	Household Size (Persons)					
	1	2	3	4	5	6 +
Extr. Low (Under 30% AMI)	\$17,400	\$19,850	\$22,350	\$24,800	\$28,440	\$32,580
Very Low (30-50% AMI)	\$28,950	\$33,050	\$37,200	\$41,300	\$44,650	\$47,950
Low (50-80% AMI)	\$46,150	\$52,750	\$59,350	\$65,900	\$71,200	\$76,450
Moderate (80-120% AMI)	\$69,350	\$79,300	\$89,200	\$99,100	\$107,050	\$114,950
Median (100% AMI)	\$57,800	\$66,100	\$74,350	\$82,600	\$89,200	\$95,800

*Source: California Department of Housing and Community Development*

The analysis is conducted using a model that KMA developed and has applied to similar evaluations in many other jurisdictions. The model inputs are all local data to the extent possible, and are fully documented in the following description.

### Analysis Steps

The tables at the end of this section present a summary of the nexus analysis steps for the prototype units. Following is a description of each step of the analysis.

### **Step 1 – Estimate of Total New Employees**

Table C-1 commences with the total number of employees associated with the new market rate units. The employees were estimated based on household expenditures of new residents using the IMPLAN model (see Section B).

### **Step 2 – Changing Industries Adjustment and Net New Jobs**

The local economy, like that of the U.S. as a whole, is constantly evolving, with job losses in some sectors and job growth in others. Over the past decade, employment in the manufacturing sector of the local economy has declined along with governmental employment, information and financial/insurance activities employment. Jobs lost over the last decade in these declining sectors were replaced by job growth in other industry sectors.

Step 2 makes an adjustment to take ongoing changes in the economy into account recognizing that jobs added are not 100% net new in all cases. A 15% adjustment is utilized based on the long term shifts in employment that have occurred in some sectors of the local economy and the likelihood of continuing changes in the future. Long term declines in employment experienced in some sectors of the economy mean that some of the new jobs are being filled by workers that have been displaced from another industry and who are presumed to already have housing locally. Existing workers downsized from declining industries are assumed to be available to fill a portion of the new retail, restaurant, health care, and other jobs associated with services to residents.

The 15% downward adjustment used for purposes of the analysis was derived from California Employment Development Department data on employment by industry in the Santa Rosa Metropolitan District which encompasses the City of Sonoma. Over the 20-year period from 1995 to 2015, approximately 8,000 jobs were lost in declining industry sectors. Over the same period, growing and stable industries added a total of 53,000 jobs. The figures are used to establish a ratio between jobs lost in declining industries to jobs gained in growing and stable industries at 15%<sup>7</sup>. The 15% factor is applied as an adjustment in the analysis, effectively assuming one in every six to seven new jobs is filled by a worker down-sized from a declining industry and who already lives locally.

The discount for changing industries is a conservative analysis assumption that may result in an understatement of impacts. The adjustment assumes workers down-sized from declining sectors of the local economy are available to fill a portion of the new service sector jobs documented in a residential nexus analysis. In reality, displaced workers from declining industry sectors of the economy are not always available to fill these new service jobs because they may retire or exit the

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<sup>7</sup> The 15% ratio is calculated as 7,800 jobs lost in declining sectors divided by 53,400 jobs gained in growing and stable sectors = 15%.

workforce or may be competitive for and seek employment in one of the other growing sectors of the local economy that is not oriented towards services to local residents.

### ***Step 3 – Adjustment from Employees to Employee Households***

This step (Table C-1) converts the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers is reduced. The workers-per-worker-household ratio eliminates from the equation all non-working households, such as retired persons, students, and those on public assistance. The County average of 1.73 workers per worker household (from the U. S. Census Bureau 2011-2013 American Community Survey) is used for this step in the analysis. The number of jobs is divided by 1.73 to determine the number of worker households. This ratio is distinguished from the overall number of workers per household in that the denominator includes only households with at least one worker. If the average number of workers in all households were used, it would have produced a greater demand for housing units. The 1.73 ratio covers all workers, full and part time.

### ***Step 4 – Occupational Distribution of Employees***

The occupational breakdown of employees is the first step to arrive at income level. The output from the IMPLAN model provides the number of employees by industry sector, shown in Table B-1. The IMPLAN output is paired with data from the Department of Labor, Bureau of Labor Statistics May 2015 Occupational Employment Survey (OES) to estimate the occupational composition of employees for each industry sector.

#### ***Step 4a – Translation from IMPLAN Industry Codes to NAICS Industry Codes***

The output of the IMPLAN model is jobs by industry sector using IMPLAN's own industry classification system, which consists of 536 industry sectors. The OES occupation data uses the North American Industry Classification System (NAICS). Estimates of jobs by IMPLAN sector must be translated into estimates by NAICS code for consistency with the OES data.

The NAICS system is organized into industry codes ranging from two- to six-digits. Two-digit codes are the broadest industry categories and six-digit codes are the most specific. Within a two-digit NAICS code, there may be several three-digit codes and within each three-digit code, several four-digit codes, etc. A chart published by IMPLAN relates each IMPLAN industry sector with one or more NAICS codes, with matching NAICS codes ranging from the two-digit level to the five-digit level. For purposes of the nexus analysis, all employment estimates must be aggregated to the four, or in some cases, five-digit NAICS code level to align with OES data which is organized by four and five-digit NAICS code. For some industry sectors, an allocation is necessary between more than one NAICS code. Where required, allocations are made proportionate to total employment at the national level from the OES.

The table below illustrates analysis Step 4a in which employment estimates by IMPLAN Code are translated to NAICS codes and then aggregated at the four and five digit NAICS code level. The examples used are Child Day Care Centers and Hospitals. The process is applied to all the industry sectors.

<b>Illustration of Model Step 4a.</b>						
A. IMPLAN Output by IMPLAN Industry Sector		B. Link to Corresponding NAICS Code		C. Aggregate at 4-Digit NAICS Code Level		
<u>Jobs</u>	<u>IMPLAN Sector</u>	<u>Jobs</u>	<u>NAICS Code</u>	<u>Jobs</u>	<u>% Total</u>	<u>4-Digit NAICS</u>
1.7	487 - Child day care services	1.7	6244 Child day care services	1.7	100%	6244 Child day care services
2.3	482 - Hospitals	2.3	622 Hospitals	2.1	92%	6221 General Medical and Surgical Hospitals
				0.1	4%	6222 Psychiatric and Substance Abuse Hospitals
				0.1	4%	6223 Specialty (except Psychiatric and Substance Abuse) Hospitals

Source: KMA, Bureau of Labor Statistics May 2015 Occupational Employment Survey.

#### **Step 4b – Apply OES Data to Estimate Occupational Distribution**

Employment estimates by four and five-digit NAICS code from step 4a are paired with data on occupational composition within each industry from the OES to generate an estimate of employment by detailed occupational category. As shown on Table C-1, new jobs will be distributed across a variety of occupational categories. The three largest occupational categories are food preparation and serving (17% - 19%), office and administrative support (14%), and sales and related (13% - 14%). Step 4 of Table C-1 indicates the percentage and number of employee households by occupation associated with 100 market rate units.

#### **Step 5 – Estimates of Employee Households Meeting the Lower Income Definitions**

In this step, occupations are translated to employee incomes based on recent Sonoma County wage and salary information from the California Employment Development Department (EDD). The wage and salary information summarized in Appendix B provided the income inputs to the model.

For each occupational category shown in Table C-1, the OES data provides a distribution of specific occupations within the category. For example, within the Food Preparation and Serving Category, there are Supervisors, Cooks, Bartenders, Waiters and Waitresses, Dishwashers,

etc. In total there are over 100 detailed occupation categories included in the analysis as shown in the Appendix B tables. Each of these over 100 occupation categories has a different distribution of wages which was obtained from EDD and is specific to workers in Sonoma County as of 2016.

For each detailed occupational category, the model uses the distribution of wages to calculate the percent of worker households that would fall into each income category. The calculation is performed for each possible combination of household size and number of workers in the household. For households with more than one worker, individual *employee* income data was used to calculate the household income by assuming multiple earner households are, on average, formed of individuals with similar incomes.

At the end of Step 5, the nexus model has established a matrix indicating the percentages of households that would qualify in the affordable income tiers for every detailed occupational category and every potential combination of household size and number of workers in the household.

#### ***Step 6 – Distribution of Household Size and Number of Workers***

In this step, we account for the distribution in household sizes and number of workers for Sonoma County households using local data obtained from the U.S. Census. Census data is used to develop a set of percentage factors representing the distribution of household sizes and number of workers within working households. The percentage factors are specific to Sonoma County and are derived from the 2011 – 2013 American Community Survey. Application of these percentage factors accounts for the following:

- Households have a range in size and a range in the number of workers.
- Large households generally have more workers than smaller households.

The result of Step 6 is a distribution of Sonoma County working households by number of workers and household size.

#### ***Step 7 – Estimate of Number of Households that Meet Size and Income Criteria***

Step 7 is the final step to calculate the number of worker households meeting the size and income criteria for the four affordability tiers. The calculation combines the matrix of results from Step 5 on percentage of worker households that would meet the income criteria at each potential household size / no. of workers combination, with Step 6, the percentage of worker household having a given household size / number of workers combination. The result is the percent of households that fall into each affordability tier. The percentages are then multiplied by the number of households from Step 3 to arrive at number of households in each affordability tier.

Table C-2A shows the result after completing Steps 5, 6, and 7 for the Extremely Low Income Tier. Tables C-2B, C-2C, C-2D show results for the Very Low, Low, and Moderate Income tiers.

## Summary Findings

Table C-3 indicates the results of the analysis for all of the affordability tiers. The table presents the number of households generated in each affordability category and the total number over 120% of Area Median Income.

The findings in Table C-3 are presented below. The table shows the total demand for affordable housing units associated with 100 market rate units.

<b>New Worker Households per 100 Market Rate Units</b>				
	<i>Larger Lot Single Family Detached</i>	<i>Smaller Lot Single Family Detached</i>	<i>Townhome / Condominium</i>	<i>Rental Apartments</i>
Extremely (0%-30% AMI)	2.1	1.3	1.1	0.8
Very Low (30%-50% AMI)	7.8	4.6	4.0	2.9
Low (50%-80% AMI)	10.0	5.7	5.0	3.7
Moderate (80%-120% AMI)	6.9	3.9	3.4	2.6
<b>Total, Less than 120% AMI</b>	<b>26.8</b>	<b>15.5</b>	<b>13.5</b>	<b>9.9</b>
Greater than 120% AMI	7.1	4.5	3.9	3.4
<b>Total, New Households</b>	<b>33.9</b>	<b>19.9</b>	<b>17.4</b>	<b>13.3</b>

Housing demand for new worker households earning less than 120% of AMI ranges from 26.8 units per 100 market rate units for single family detached units to 9.9 per 100 market rate units for rental apartments. Housing demand is distributed across the lower income tiers with the greatest numbers of households in the Very Low and Low tiers. The finding that the jobs associated with consumer spending tend to be low-paying jobs where the workers will require housing affordable at the lower income levels is not surprising. As noted above, direct consumer spending results in employment that is concentrated in lower paid occupations including food preparation, administrative, and retail sales.

**TABLE C-1**  
**NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION**  
**EMPLOYEE HOUSEHOLDS GENERATED**  
**RESIDENTIAL NEXUS ANALYSIS**  
**SONOMA, CA**

**DRAFT**

	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>
	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
Step 1 - Employees <sup>1</sup>	69.0	40.5	35.5	27.1
Step 2 - Adjustment for Changing Industries (15%) (2)	58.6	34.4	30.2	23.0
Step 3 - Adjustment for Number of Households (1.73) (3)	33.9	19.9	17.4	13.3
Step 4 - Occupation Distribution <sup>4</sup>				
Management Occupations	3.7%	3.6%	3.6%	3.7%
Business and Financial Operations	3.0%	2.8%	2.8%	2.8%
Computer and Mathematical	0.8%	0.8%	0.8%	0.8%
Architecture and Engineering	0.1%	0.1%	0.1%	0.1%
Life, Physical, and Social Science	0.2%	0.2%	0.2%	0.2%
Community and Social Services	2.6%	2.6%	2.6%	2.5%
Legal	0.5%	0.5%	0.5%	0.5%
Education, Training, and Library	4.9%	3.4%	3.4%	2.8%
Arts, Design, Entertainment, Sports, and Media	1.5%	1.2%	1.2%	1.1%
Healthcare Practitioners and Technical	7.1%	8.3%	8.3%	8.8%
Healthcare Support	4.9%	5.6%	5.6%	6.0%
Protective Service	1.1%	0.9%	0.9%	1.0%
Food Preparation and Serving Related	17.0%	18.3%	18.3%	18.8%
Building and Grounds Cleaning and Maint.	4.3%	4.1%	4.1%	4.3%
Personal Care and Service	9.1%	8.8%	8.8%	8.6%
Sales and Related	14.3%	13.9%	13.9%	13.3%
Office and Administrative Support	14.1%	14.2%	14.2%	14.2%
Farming, Fishing, and Forestry	0.1%	0.1%	0.1%	0.1%
Construction and Extraction	0.2%	0.2%	0.2%	0.3%
Installation, Maintenance, and Repair	3.4%	3.6%	3.6%	3.9%
Production	1.5%	1.4%	1.4%	1.4%
Transportation and Material Moving	<u>5.6%</u>	<u>5.2%</u>	<u>5.2%</u>	<u>5.0%</u>
<b>Totals</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Management Occupations	1.2	0.7	0.6	0.5
Business and Financial Operations	1.0	0.6	0.5	0.4
Computer and Mathematical	0.3	0.2	0.1	0.1
Architecture and Engineering	0.0	0.0	0.0	0.0
Life, Physical, and Social Science	0.1	0.0	0.0	0.0
Community and Social Services	0.9	0.5	0.5	0.3
Legal	0.2	0.1	0.1	0.1
Education, Training, and Library	1.7	0.7	0.6	0.4
Arts, Design, Entertainment, Sports, and Media	0.5	0.2	0.2	0.2
Healthcare Practitioners and Technical	2.4	1.6	1.4	1.2
Healthcare Support	1.7	1.1	1.0	0.8
Protective Service	0.4	0.2	0.2	0.1
Food Preparation and Serving Related	5.8	3.7	3.2	2.5
Building and Grounds Cleaning and Maint.	1.5	0.8	0.7	0.6
Personal Care and Service	3.1	1.7	1.5	1.1
Sales and Related	4.8	2.8	2.4	1.8
Office and Administrative Support	4.8	2.8	2.5	1.9
Farming, Fishing, and Forestry	0.0	0.0	0.0	0.0
Construction and Extraction	0.1	0.0	0.0	0.0
Installation, Maintenance, and Repair	1.2	0.7	0.6	0.5
Production	0.5	0.3	0.2	0.2
Transportation and Material Moving	<u>1.9</u>	<u>1.0</u>	<u>0.9</u>	<u>0.7</u>
<b>Totals</b>	<b>33.9</b>	<b>19.9</b>	<b>17.4</b>	<b>13.3</b>

**Notes:**

- <sup>1</sup> Estimated employment generated by expenditures of households within 100 prototypical market rate units from Table B-1.
- <sup>2</sup> The 15% adjustment is based upon job losses in declining sectors of the local economy over the past 10 years. "Downsized" workers from declining sectors are assumed to fill a portion of new jobs in sectors serving residents.
- <sup>3</sup> Adjustment from number of workers to households using county-wide average of 1.73 workers per worker household derived from the U.S. Census American Community Survey 2011 to 2013.
- <sup>4</sup> See Appendix B Tables 1 - 6 for additional information on Major Occupation Categories.

TABLE C-2A

EXTREMELY LOW-INCOME (ELI) EMPLOYEE HOUSEHOLDS<sup>1</sup> GENERATED  
RESIDENTIAL NEXUS ANALYSIS  
SONOMA, CA

DRAFT

Per 100 Market Rate Units

	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>
	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
<b>Step 5 &amp; 6 - Extremely Low Income Households (under 30% AMI) within Major Occupation Categories <sup>2</sup></b>				
Management	-	-	-	-
Business and Financial Operations	0.00	0.00	0.00	-
Computer and Mathematical	-	-	-	-
Architecture and Engineering	-	-	-	-
Life, Physical and Social Science	-	-	-	-
Community and Social Services	0.01	0.01	0.00	0.00
Legal	-	-	-	-
Education Training and Library	0.05	0.02	0.02	0.01
Arts, Design, Entertainment, Sports, & Media	-	-	-	-
Healthcare Practitioners and Technical	0.00	0.00	0.00	0.00
Healthcare Support	0.07	0.04	0.04	0.03
Protective Service	-	-	-	-
Food Preparation and Serving Related	0.81	0.51	0.45	0.35
Building Grounds and Maintenance	0.07	0.04	0.04	0.02
Personal Care and Service	0.25	0.15	0.13	0.06
Sales and Related	0.47	0.27	0.23	0.17
Office and Admin	0.09	0.05	0.05	0.03
Farm, Fishing, and Forestry	-	-	-	-
Construction and Extraction	-	-	-	-
Installation Maintenance and Repair	0.00	-	-	0.00
Production	-	-	-	-
Transportation and Material Moving	0.13	0.08	0.07	0.05
<b>ELI Households - Major Occupations</b>	<b>1.94</b>	<b>1.16</b>	<b>1.02</b>	<b>0.73</b>
<b>ELI Households<sup>1</sup> - all other occupations</b>	<b>0.18</b>	<b>0.10</b>	<b>0.09</b>	<b>0.07</b>
<b>Total ELI Households<sup>1</sup></b>	<b>2.12</b>	<b>1.27</b>	<b>1.11</b>	<b>0.80</b>

(1) Includes households earning from zero through 30% of Sonoma County Area Median Income.

(2) See Appendix B Tables 1 - 6 for additional information on Major Occupation Categories. Note that the model places individual employees into households. Many households have multiple income sources and therefore household income is higher than the wages shown in Appendix B Table 2, 4, and 6. The distribution of the number of workers per worker household and the distribution of household size are based on American Community Survey data.



TABLE C-2B

**VERY LOW-INCOME EMPLOYEE HOUSEHOLDS<sup>1</sup> GENERATED  
RESIDENTIAL NEXUS ANALYSIS  
SONOMA, CA**

**DRAFT**

*Per 100 Market Rate Units*

	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>
	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
<b>Step 5 &amp; 6 - Very Low Income Households (30%-50% AMI) within Major Occupation Categories <sup>2</sup></b>				
Management	0.00	0.00	0.00	0.00
Business and Financial Operations	0.01	0.00	0.00	0.00
Computer and Mathematical	-	-	-	-
Architecture and Engineering	-	-	-	-
Life, Physical and Social Science	-	-	-	-
Community and Social Services	0.09	0.05	0.05	0.04
Legal	-	-	-	-
Education Training and Library	0.25	0.11	0.09	0.05
Arts, Design, Entertainment, Sports, & Media	-	-	-	-
Healthcare Practitioners and Technical	0.02	0.01	0.01	0.01
Healthcare Support	0.46	0.30	0.27	0.21
Protective Service	-	-	-	-
Food Preparation and Serving Related	1.96	1.24	1.08	0.85
Building Grounds and Maintenance	0.48	0.26	0.23	0.15
Personal Care and Service	1.09	0.63	0.55	0.25
Sales and Related	1.40	0.80	0.70	0.53
Office and Admin	0.83	0.48	0.42	0.31
Farm, Fishing, and Forestry	-	-	-	-
Construction and Extraction	-	-	-	-
Installation Maintenance and Repair	0.04	0.01	0.01	0.02
Production	-	-	-	-
Transportation and Material Moving	0.55	0.31	0.27	0.20
Very Low Households - Major Occupations	7.18	4.21	3.69	2.62
Very Low Households <sup>1</sup> - all other occupations	0.66	0.38	0.33	0.24
<b>Total Very Low Inc. Households<sup>1</sup></b>	<b>7.85</b>	<b>4.59</b>	<b>4.02</b>	<b>2.85</b>

(1) Includes households earning from 30% through 50% of Sonoma County Area Median Income.

(2) See Appendix B Tables 1 - 6 for additional information on Major Occupation Categories. Note that the model places individual employees into households. Many households have multiple income sources and therefore household income is higher than the wages shown in Appendix B Table 2, 4, and 6. The distribution of the number of workers per worker household and the distribution of household size are based on American Community Survey data.

**TABLE C-2C**  
**LOW-INCOME EMPLOYEE HOUSEHOLDS<sup>1</sup> GENERATED**  
**RESIDENTIAL NEXUS ANALYSIS**  
**SONOMA, CA**

**DRAFT**

*Per 100 Market Rate Units*

<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>
<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>

**Step 5 & 6 - Low Income Households (50%-80% AMI) within Major Occupation Categories<sup>2</sup>**

Management	0.08	0.03	0.02	0.03
Business and Financial Operations	0.10	0.05	0.04	0.04
Computer and Mathematical	-	-	-	-
Architecture and Engineering	-	-	-	-
Life, Physical and Social Science	-	-	-	-
Community and Social Services	0.24	0.15	0.13	0.10
Legal	-	-	-	-
Education Training and Library	0.46	0.19	0.17	0.09
Arts, Design, Entertainment, Sports, & Media	-	-	-	-
Healthcare Practitioners and Technical	0.13	0.09	0.08	0.06
Healthcare Support	0.55	0.37	0.33	0.27
Protective Service	-	-	-	-
Food Preparation and Serving Related	1.96	1.24	1.08	0.85
Building Grounds and Maintenance	0.51	0.28	0.25	0.17
Personal Care and Service	0.98	0.55	0.49	0.24
Sales and Related	1.54	0.88	0.77	0.57
Office and Admin	1.62	0.95	0.84	0.64
Farm, Fishing, and Forestry	-	-	-	-
Construction and Extraction	-	-	-	-
Installation Maintenance and Repair	0.30	0.13	0.11	0.13
Production	-	-	-	-
Transportation and Material Moving	0.65	0.35	0.31	0.23
Low Households - Major Occupations	9.13	5.27	4.61	3.40
Low Households <sup>1</sup> - all other occupations	0.84	0.47	0.41	0.31
<b>Total Low Inc. Households<sup>1</sup></b>	<b>9.98</b>	<b>5.74</b>	<b>5.03</b>	<b>3.71</b>

(1) Includes households earning from 50% through 80% of Sonoma County Area Median Income.

(2) See Appendix B Tables 1 - 6 for additional information on Major Occupation Categories. Note that the model places individual employees into households. Many households have multiple income sources and therefore household income is higher than the wages shown in Appendix B Table 2, 4, and 6. The distribution of the number of workers per worker household and the distribution of household size are based on American Community Survey data.

**TABLE C-2D  
 MODERATE-INCOME EMPLOYEE HOUSEHOLDS<sup>1</sup> GENERATED  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA**

**DRAFT**

*Per 100 Market Rate Units*

	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>
	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
<b>Step 5 &amp; 6 - Moderate Income Households (80%-120% AMI) within Major Occupation Categories<sup>2</sup></b>				
Management	0.21	0.10	0.09	0.08
Business and Financial Operations	0.22	0.09	0.08	0.08
Computer and Mathematical	-	-	-	-
Architecture and Engineering	-	-	-	-
Life, Physical and Social Science	-	-	-	-
Community and Social Services	0.24	0.14	0.12	0.09
Legal	-	-	-	-
Education Training and Library	0.44	0.18	0.16	0.08
Arts, Design, Entertainment, Sports, & Media	-	-	-	-
Healthcare Practitioners and Technical	0.44	0.30	0.26	0.21
Healthcare Support	0.37	0.25	0.22	0.18
Protective Service	-	-	-	-
Food Preparation and Serving Related	0.70	0.44	0.39	0.29
Building Grounds and Maintenance	0.31	0.18	0.15	0.11
Personal Care and Service	0.53	0.29	0.26	0.14
Sales and Related	0.84	0.48	0.42	0.31
Office and Admin	1.26	0.74	0.65	0.50
Farm, Fishing, and Forestry	-	-	-	-
Construction and Extraction	-	-	-	-
Installation Maintenance and Repair	0.37	0.16	0.14	0.16
Production	-	-	-	-
Transportation and Material Moving	0.36	0.19	0.17	0.12
<b>Moderate Households - Major Occupations</b>	<b>6.29</b>	<b>3.55</b>	<b>3.11</b>	<b>2.36</b>
<b>Moderate Households<sup>1</sup> - all other occupations</b>	<b>0.58</b>	<b>0.32</b>	<b>0.28</b>	<b>0.21</b>
<b>Total Moderate Inc. Households<sup>1</sup></b>	<b>6.87</b>	<b>3.86</b>	<b>3.38</b>	<b>2.57</b>

(1) Includes households earning from 80% through 120% of Sonoma County Area Median Income.

(2) See Appendix B Tables 1 - 6 for additional information on Major Occupation Categories. Note that the model places individual employees into households. Many households have multiple income sources and therefore household income is higher than the wages shown in Appendix B Table 2, 4, and 6. The distribution of the number of workers per worker household and the distribution of household size are based on American Community Survey data.

**TABLE C-3  
IMPACT ANALYSIS SUMMARY  
EMPLOYEE HOUSEHOLDS GENERATED  
RESIDENTIAL NEXUS ANALYSIS  
SONOMA, CA**

**DRAFT**

**RESIDENTIAL UNIT DEMAND IMPACTS - PER 100 MARKET RATE UNITS**

Number of New Households <sup>1</sup>	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>
	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
Under 30% AMI	2.1	1.3	1.1	0.8
30% to 50% AMI	7.8	4.6	4.0	2.9
50% to 80% AMI	10.0	5.7	5.0	3.7
80% to 120% AMI	6.9	3.9	3.4	2.6
Subtotal through 120% AMI	26.8	15.5	13.5	9.9
Over 120% AMI	7.1	4.5	3.9	3.4
<b>Total Employee Households</b>	33.9	19.9	17.4	13.3

**RESIDENTIAL UNIT DEMAND IMPACTS - PER EACH (1) MARKET RATE UNIT**

Number of New Households <sup>1</sup>	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>
	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
Under 30% AMI	0.02	0.01	0.01	0.01
30% to 50% AMI	0.08	0.05	0.04	0.03
50% to 80% AMI	0.10	0.06	0.05	0.04
80% to 120% AMI	0.07	0.04	0.03	0.03
Subtotal through 120% AMI	0.27	0.15	0.14	0.10
Over 120% AMI	0.07	0.04	0.04	0.03
<b>Total Employee Households</b>	0.34	0.20	0.17	0.13

Notes

<sup>1</sup> Households of retail, education, healthcare and other workers that serve residents of new market rate units.

AMI = Area Median Income

## **D. Mitigation Costs**

This section takes the conclusions of the previous section on the number of households in the lower income categories associated with the market rate units and identifies the total cost of assistance required to make housing affordable. This section puts a cost on the units for each income level to produce the “total nexus cost.” This is done for each of the prototype units.

A key component of the analysis is the size of the gap between what households can afford and the cost of producing new housing in Sonoma, known as the ‘affordability gap.’ Affordability gaps are calculated for each of the four categories of Area Median Income (AMI): Extremely Low (under 30% of median), Very Low (30% to 50%), Low (50% to 80%), and Moderate (80% to 120%). The following summarizes the analysis of mitigation cost which is based on the affordability gap or net cost to deliver units that are affordable to worker households in the lower income tiers.

### **City Assisted Affordable Unit Prototypes**

For estimating the affordability gap, there is a need to match a household of each income level with a unit type and size according to governmental regulations and City practices and policies. The analysis assumes that the City will assist Moderate Income households earning between 80% and 120% of Area Median Income with ownership units. The prototype affordable unit should reflect a modest unit consistent with what the City is likely to assist and appropriate for housing the average Moderate Income worker household. The typical project assumed for Sonoma is a two-bedroom unit for a three-person household. An attached townhome unit at approximately 18 units per acre is assumed.

For Low-, Very Low-, and Extremely Low-Income households, it is assumed that the City will assist in the development of multi-family rental units at a density of 20 units per acre. The analysis uses a two-bedroom affordable rental unit for a three-person household.

### **Development Costs**

KMA prepared an estimate of the total development cost for the two affordable housing prototypes described above (inclusive of land acquisition costs, direct construction costs, indirect costs of development, and financing). For the affordable rental unit, KMA reviewed development pro formas for recent affordable projects in Sonoma and the surrounding area, including for the 20269 Broadway project currently in the development process. KMA estimates that the new affordable multi-family apartment unit would have a total development cost of approximately \$425,000.

The City has not assisted the development of new affordable ownership units in recent years. Therefore, KMA estimated total development costs for a 2-bedroom townhome unit using a variety of sources, including recent land sale transaction data, the findings of the financial

feasibility analysis, and third-party construction cost estimators such as R.S. Means. The market rate townhome prototype is comparable in size and configuration, although many development cost line items would vary for an affordable unit. For example, an affordable project that receives City assistance would be subject to prevailing wages, but the finishes on an affordable project may be less expensive than for a market rate unit. The market rate unit would include developer profit, while the affordable unit would include a developer fee. KMA conservatively estimates that the new affordable for-sale townhome unit would have a total development cost of approximately \$475,000.

**Development Costs for Affordable Units**

Income Group	Unit Tenure / Type	Development Cost
Under 30% AMI	Rental	\$425,000
30% to 50% AMI	Rental	\$425,000
50% to 80% AMI	Rental	\$425,000
80% to 120% AMI	Ownership	\$475,000

Tables D-1 and D-3 provide further details on the affordable units.

**Unit Values**

For affordable ownership units, unit values are based on an estimate of the restricted affordable purchase prices for a qualifying Moderate Income household. For a 2-bedroom unit, KMA calculated the affordable sales price for the matching 3-person household at \$289,000. Details of the calculation are presented in Table D-2.

For the Extremely Low, Very Low, and Low-Income rental units, unit values are based upon the funding sources assumed to be available for the project. The funding sources include tax-exempt permanent debt financing supported by the project’s operating income, a deferred developer fee, and equity generated by 4% federal low income housing tax credits. The highly competitive 9% federal tax credits are not assumed because of the extremely limited number of projects that receive an allocation of 9% tax credits in any given year per geographic region. Other affordable housing subsidy sources such as CDBG, HOME, AHP, Section 8, and various Federal and State funding programs are also limited and difficult to obtain and therefore are not assumed in this analysis as available to offset the cost of mitigating the affordable housing impacts of new development.

On this basis, KMA estimated the unit value (total permanent funding sources) of the Extremely Low-Income rental units at \$141,000, the Very Low-Income units at \$198,000, and the Low-income units at \$226,000. Details for these calculations are presented in Table D-3.

**Unit Values for Affordable Units**

Income Group	Unit Tenure / Type	Household Size	Unit Values / Sales Price
Under 30% AMI	Rental	3 persons	\$141,000
30% to 50% AMI	Rental	3 persons	\$198,000
50% to 80% AMI	Rental	3 persons	\$226,000
80% to 120% AMI	Ownership	3 persons	\$288,000

**Affordability Gap**

The affordability gap is the difference between the cost of developing the affordable units and the unit value based on the restricted affordable rent or sales price.

The resulting affordability gaps are as follows:

**Affordability Gap Calculation**

	Unit Value / Sales Price	Development Cost	Affordability Gap
<i>Affordable Rental Units</i>			
Extremely Low (Under 30% AMI)	\$141,000	\$425,000	(\$284,000)
Very Low (30% to 50% AMI)	\$198,000	\$425,000	(\$227,000)
Low (50% to 80% AMI)	\$226,000	\$425,000	(\$199,000)
<i>Affordable Ownership Units</i>			
Moderate (80% to 120% AMI)	\$288,000	\$475,000	(\$187,000)

AMI = Area Median Income

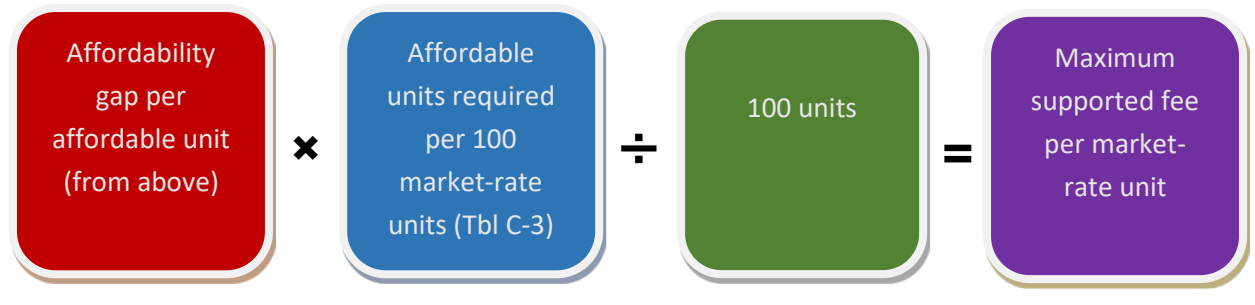
Tables D-1 through D-3 present the detailed affordability gap calculations. Note that the affordability gaps are the same as those assumed in the non-residential nexus analysis.

**Total Nexus Cost / Maximum Fee Levels**

The last step in the linkage fee analysis marries the findings on the numbers of households in each of the lower income ranges associated with the four prototypes to the affordability gaps, or the costs of delivering housing to them in Sonoma.

Table D-4 summarizes the analysis. The Affordability Gaps are drawn from the prior discussion. The “Total Nexus Cost per Market Rate Unit” shows the results of the following calculation:

**Calculation of Maximum Supported Fee Per Market-Rate Unit**



The total nexus costs or maximum supported fee per market rate unit for each of the prototypes are as follows:

<b>Total Nexus Cost Per Market Rate Unit, City of Sonoma</b>				
<i>Income Category</i>	<i>Larger Lot Single Family Detached</i>	<i>Smaller Lot Single Family Detached</i>	<i>Townhome / Condominium</i>	<i>Rental Apartments</i>
Extremely (0%-30% AMI)	\$6,000	\$3,600	\$3,200	\$2,300
Very Low (30%-50% AMI)	\$17,800	\$10,400	\$9,100	\$6,500
Low (50%-80% AMI)	\$19,900	\$11,400	\$10,000	\$7,400
Moderate (80%-120% AMI)	\$12,900	\$7,200	\$6,300	\$4,800
<b>Total Supported Fee/ Nexus Costs</b>	<b>\$56,600</b>	<b>\$32,600</b>	<b>\$28,600</b>	<b>\$21,000</b>

The Total Nexus Costs, or Mitigation Costs, indicated above, may also be expressed on a per square foot level. The square foot area of the prototype unit used throughout the analysis becomes the basis for the calculation (the per unit findings from above are divided by unit size to get the per square foot findings). The results per square foot of building area (based on net rentable or sellable square feet excluding external corridors and other common areas) are as follows:

<b>Total Nexus Cost Per Sq. Ft., City of Sonoma</b>				
	<i>Larger Lot Single Family Detached</i>	<i>Smaller Lot Single Family Detached</i>	<i>Townhome / Condominium</i>	<i>Rental Apartments</i>
<i>Unit Size (Sq Ft)</i>	<i>2,500 SF</i>	<i>1,400 SF</i>	<i>1,050 SF</i>	<i>950 SF</i>
Extremely (0%-30% AMI)	\$2.40	\$2.60	\$3.00	\$2.40
Very Low (30%-50% AMI)	\$7.10	\$7.40	\$8.70	\$6.80
Low (50%-80% AMI)	\$8.00	\$8.10	\$9.50	\$7.80
Moderate (80%-120% AMI)	\$5.20	\$5.10	\$6.00	\$5.10
<b>Total Nexus Costs</b>	<b>\$22.70</b>	<b>\$23.20</b>	<b>\$27.20</b>	<b>\$22.10</b>

These costs express the total linkage or nexus costs for the four prototype developments in the City of Sonoma. These total nexus costs represent the ceiling for any requirement placed on market rate development. **The totals are not recommended levels for fees; they represent only the maximums established by the analysis, below which impact fees may be set.**



**TABLE D-1  
 AFFORDABILITY GAP CALCULATION FOR MODERATE INCOME  
 RESIDENTIAL NEXUS ANALYSIS  
 CITY OF SONOMA, CA**

**DRAFT**

**I. Affordable Prototype**

Tenure	For-Sale
Density	18 du/acre
Unit Size	1,050 SF
Bedrooms	2-Bedrooms
Construction Type	Townhomes

**II. Development Costs** Per Unit

Total Costs	\$475,000
-------------	-----------

**III. Affordable Sales Price** Per Unit

Household Size	3 person HH
110% of Median Income <sup>[2]</sup>	\$81,785
Maximum Affordable Sales Price	\$288,000 <sup>[3]</sup>

**IV. Affordability Gap** Per Unit

Affordable Sales Price	\$288,000
(Less) Development Costs	<u>(\$475,000)</u>
Affordability Gap - Moderate Income	(\$187,000)

<sup>[1]</sup> Construction costs include prevailing wages.

<sup>[2]</sup> Per the City's current practice, the affordable sale price for a Moderate Income household is based on 110% of AMI, whereas qualifying income can be up to 120% of AMI.

<sup>[3]</sup> See Table D-2 for Moderate Income home price estimate.

**TABLE D-2**  
**ESTIMATED AFFORDABLE HOME PRICES - MODERATE INCOME**  
**RESIDENTIAL NEXUS ANALYSIS**  
**CITY OF SONOMA, CA**

**DRAFT**

Unit Size	2-Bedroom Unit
Household Size	3-person HH
100% AMI Sonoma County 2016	\$74,350
110% of AMI	\$81,785
% for Housing Costs	35%
Available for Housing Costs	\$28,625
(Less) Property Taxes	(\$3,168)
(Less) HOA	(\$2,700)
(Less) Insurance	(\$430)
(Less) Mortgage Insurance	(\$3,686)
Income Available for Mortgage	\$18,641
Mortgage Amount	\$273,600
Down Payment (homebuyer cash)	\$14,400
Supported Home Price	\$288,000
<b>Key Assumptions</b>	
- Mortgage Interest Rate <sup>(1)</sup>	5.50%
- Down Payment <sup>(2)</sup>	5.0%
- Property Taxes (% of sales price) <sup>(3)</sup>	1.10%
- HOA (per month) <sup>(4)</sup>	\$225
- Mortgage Insurance (% of loan amount)	1.35%

(1) Mortgage interest rate based on 15-year Freddie Mac average including fees & points; assumes 30-year fixed rate mortgage.

(2) Down payment amount is an estimate for Moderate Income homebuyers.

(3) Property tax rate is an estimated average for new projects.

(4) Homeowners Association (HOA) dues is an estimate for an average new project.

**TABLE D-3  
AFFORDABILITY GAPS FOR EXTREMELY LOW, VERY LOW, AND LOW INCOME  
RESIDENTIAL NEXUS ANALYSIS  
CITY OF SONOMA, CA**

**DRAFT**

	Extremely Low	Very Low	Low Income
<b>I. Affordable Prototype</b>			
Tenure	Rental 880 square feet 20 dua		
Average Unit Size			
Density			
<b>II. Development Costs</b> <sup>[1]</sup>			
	Per Unit	Per Unit	Per Unit
Total Development Costs		\$425,000	
<b>III. Supported Financing</b>			
	Per Unit	Per Unit	Per Unit
<u>Affordable Rents</u>			
Average Number of Bedrooms	2 Bedrooms	2 Bedrooms	2 Bedrooms
Maximum TCAC Rent <sup>[2]</sup>	\$556	\$927	\$1,113
(Less) Utility Allowance <sup>[3]</sup>	(\$57)	(\$57)	(\$57)
Maximum Monthly Rent	\$499	\$870	\$1,056
<u>Net Operating Income (NOI)</u>			
Gross Potential Income			
Monthly	\$499	\$870	\$1,056
Annual	\$5,988	\$10,440	\$12,672
Other Income	\$100	\$100	\$100
(Less) Vacancy 5.0%	(\$304)	(\$527)	(\$639)
Effective Gross Income (EGI)	\$5,784	\$10,013	\$12,133
(Less) Operating Expenses	(\$6,500)	(\$6,500)	(\$6,500)
(Less) Property Taxes <sup>[4]</sup>	\$0	\$0	\$0
Net Operating Income (NOI)	(\$716)	\$3,513	\$5,633
<u>Permanent Financing</u>			
Permanent Loan (tax exempt) 5.0%	(\$10,000)	\$47,000	\$75,000
Deferred Developer Fee	\$7,000	\$7,000	\$7,000
4% Tax Credit Equity	\$144,000	\$144,000	\$144,000
Total Sources	\$141,000	\$198,000	\$226,000
<b>IV. Affordability Gap</b>			
	Per Unit	Per Unit	Per Unit
Supported Permanent Financing	\$141,000	\$198,000	\$226,000
(Less) Total Development Costs	(\$425,000)	(\$425,000)	(\$425,000)
Affordability Gap	(\$284,000)	(\$227,000)	(\$199,000)

<sup>[1]</sup> Development costs estimated by KMA based on affordable project pro formas in Sonoma County.

<sup>[2]</sup> Maximum rents per Tax Credit Allocation Committee (TCAC) for projects utilizing Low Income Housing Tax Credits.

<sup>[3]</sup> Utility allowances from Sonoma County Housing Authority (October 2016). Assumes tenant pays for gas heat, electric stove, and general electric.

<sup>[4]</sup> Assumes tax exemption for non-profit general partner.

**TABLE D-4  
SUPPORTED FEE / NEXUS SUMMARY  
RESIDENTIAL NEXUS ANALYSIS  
SONOMA, CA**

**DRAFT**

**TOTAL NEXUS COST PER MARKET RATE UNIT**

		<b>Nexus Cost Per Market Rate Unit<sup>3</sup></b>			
		Prototype 1	Prototype 2	Prototype 3	Prototype 4
		<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
<b>Affordability Gap Per Unit</b>					
<b>Household Income Level</b>					
Under 30% AMI	\$284,000 <sup>1</sup>	\$6,000	\$3,600	\$3,200	\$2,300
30% to 50% AMI	\$227,000 <sup>1</sup>	\$17,800	\$10,400	\$9,100	\$6,500
50% to 80% AMI	\$199,000 <sup>1</sup>	\$19,900	\$11,400	\$10,000	\$7,400
80% to 120% AMI	\$187,000 <sup>2</sup>	\$12,900	\$7,200	\$6,300	\$4,800
<b>Total Supported Fee Per Unit</b>		<b>\$56,600</b>	<b>\$32,600</b>	<b>\$28,600</b>	<b>\$21,000</b>

**TOTAL NEXUS COST PER SQUARE FOOT<sup>4</sup>**

		<b>Nexus Cost Per Square Foot<sup>4</sup></b>			
		Prototype 1	Prototype 2	Prototype 3	Prototype 4
		<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
<b>Avg. Unit Size (SF)</b>					
<b>Household Income Level</b>					
Under 30% AMI		\$2.40	\$2.60	\$3.00	\$2.40
30% to 50% AMI		\$7.10	\$7.40	\$8.70	\$6.80
50% to 80% AMI		\$8.00	\$8.10	\$9.50	\$7.80
80% to 120% AMI		\$5.20	\$5.10	\$6.00	\$5.10
<b>Total Supported Fee Per Sq.Ft.</b>		<b>\$22.70</b>	<b>\$23.20</b>	<b>\$27.20</b>	<b>\$22.10</b>

**Notes:**

<sup>1</sup> Assumes affordable rental units. Affordability gaps represent the remaining affordability gap after tax credit financing.

<sup>2</sup> Affordability gap for moderate income households based on ownership unit.

<sup>3</sup> Nexus cost per unit calculated by multiplying the affordable unit demand from Table C-3 by the affordability gap.

<sup>4</sup> Nexus cost per square foot computed by dividing the nexus cost per unit from above by the average unit size.

### **III. ADDENDUM: ADDITIONAL BACKGROUND AND NOTES ON SPECIFIC ASSUMPTIONS**

#### **No Excess Supply of Affordable Housing**

An assumption of this residential nexus analysis is that there is no excess supply of affordable housing available to absorb or offset new demand; therefore, new affordable units are needed to mitigate the new affordable housing demand generated by development of new market rate residential units. Based on a review of the current Census information for Sonoma, conditions are consistent with this underlying assumption. According to the Census (2010 to 2015 ACS), approximately 49% of all households in the City were paying thirty percent or more of their income on housing. In addition, housing vacancy is minimal.

#### **Geographic Area of Impact**

The analysis quantifies impacts occurring within Sonoma County. While many of the impacts will occur within the City, some impacts will be experienced elsewhere in Sonoma County and beyond. The IMPLAN model computes the jobs generated within the county and sorts out those that occur beyond the county boundaries. The KMA Jobs Housing Nexus Model analyzes the income structure of jobs and their worker households, without assumptions as to where the worker households live.

In summary, the nexus analysis quantifies all the jobs impacts occurring within the county and related worker households. Job impacts, like most types of impacts, occur irrespective of political boundaries. And like other types of impact analyses, such as traffic, impacts beyond jurisdictional boundaries are experienced, are relevant, and are important.

For clarification, counting all impacts associated with new housing units does not result in double counting, even if all jurisdictions were to adopt similar programs. The impact of a new housing unit is only counted once, in the jurisdiction in which it occurs. Obviously, within a metropolitan region such as the Bay Area, there is much commuting among jurisdictions, and cities house each other's workers in a very complex web of relationships. The important point is that impacts of residential development are only counted once.

#### **Affordability Gap**

The use of the affordability gap for establishing a maximum fee supported from the nexus analysis is grounded in the concept that a jurisdiction will be responsible for delivering affordable units to mitigate impacts. The nexus analysis has established that units will be needed at one or more different affordability levels and the type of unit to be delivered depends on the income/affordability level. In Sonoma, the City is anticipated to assist in the development of rental units for households with incomes up to 80% of AMI and ownership units for moderate income households with incomes from 80% to 120% of AMI.

The units assisted by the public sector for affordable households are usually small in square foot area (for the number of bedrooms) and modest in finishes and amenities. As a result, in some communities these units are similar in physical configuration to what the market is delivering at market rate; in other communities (particularly very high income communities), they may be smaller and more modest than what the market is delivering. Parking, for example, is usually the minimum permitted by the code. Where there is a wide range in land cost per acre or per unit, it may be assumed that affordable units are built on land parcels in the lower portion of the cost range. KMA tries to develop a total development cost summary that represents the lower half of the average range, but not so low as to be unrealistic.

### **Excess Capacity of Labor Force**

In the context of economic downturns such as the last recession, the question is sometimes raised as to whether there is excess capacity in the labor force to the extent that consumption impacts generated by new households will be in part, absorbed by existing jobs and workers, thus resulting in fewer net new jobs. In response, an impact analysis of this nature is a one-time impact requirement to address impacts generated over the life of the project. Recessions are temporary conditions; a healthy economy will return and the impacts will be experienced. The economic cycle also self-adjusts. Development of new residential units is likely to be reduced until conditions improve or there is confidence that improved conditions are imminent. When this occurs, the improved economic condition of the households in the local area will absorb the current underutilized capacity of existing workers, employed and unemployed. By the time new units become occupied, economic conditions will have likely improved.

### **The Burden of Paying for Affordable Housing**

Sonoma's inclusionary housing program does not place all burden for the creation of affordable housing on new residential construction. The burden of affordable housing is also borne by many sectors of the economy and society. A most important source in recent years of funding for affordable housing development comes from the federal government in the form of tax credits (which result in reduced income tax payment by tax credit investors in exchange for equity funding). Additionally, there are other federal grant and loan programs administered by the Department of Housing and Urban Development and other federal agencies. The State of California also plays a major role with a number of special financing and funding programs. Much of the state money is funded by voter approved bond measures paid for by all Californians.

Local governments play a large role in affordable housing. In addition, private sector lenders play an important role, some voluntarily and others less so with the requirements of the Community Reinvestment Act. Then there is the non-profit sector, both sponsors and developers that build much of the affordable housing.

In summary, all levels of government and many private parties, for profit and non-profit contribute to supplying affordable housing. Residential developers are not being asked to bear the burden alone any more than they are assumed to be the only source of demand or cause for needing affordable housing in our communities. Based on past experience, affordable housing requirements placed on residential development will satisfy only a small percentage of the affordable housing needs in the City of Sonoma.

**APPENDIX A: RESIDENTIAL MARKET SURVEY**

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## I. INTRODUCTION

One of the underlying components of the Residential Nexus Study is the identification of residential building prototypes that are expected to be developed in the City of Sonoma both today and in the future, and what the market prices and rents for those prototypes will be. These market prices and rents are then used to estimate the incomes of the new households that will live in the new units and quantify the number and types of jobs created as a result of their demand for goods and services. In this Appendix A, KMA describes the residential building prototypes utilized for the analysis, summarizes the residential market data researched, and describes the market price point conclusions drawn therefrom.

## II. RESIDENTIAL PROTOTYPES

KMA worked with City staff to select representative development prototypes envisioned to be developed in Sonoma in the future. The City provided examples of recently built projects, approved projects, projects under construction, and projects that have not yet submitted formal applications. KMA synthesized the examples into four prototypes. The prototypes are presented on Appendix A Table 1 and summarized below.

### Sonoma Residential Prototypes

	<i>Lot Size / Density</i>	<i>Average Unit Size</i>
<b><i>For-Sale Prototypes</i></b>		
1) Larger Single Family Detached	6,000 – 12,000 sq. ft.	2,500 sq. ft.
2) Smaller Single Family Detached	2,600 – 5,000 sq. ft.	1,400 sq. ft.
3) Townhomes /Condominiums	10-20 du/acre	1,050 sq. ft.
<b><i>Rental Prototypes</i></b>		
4) Rental Apartments	10-20 du/acre	950 sq. ft.

*Source: KMA in collaboration with City of Sonoma.*

## III. MARKET SURVEY & PRICING ESTIMATES

### A. Residential Building Activity

At the time of the market survey in mid-2016, there were many recently built, under construction or proposed residential developments in Sonoma, including single family detached units, townhome projects, and apartment projects. To develop an understanding of the types of units being built, KMA gathered development program and pricing information (when available) for recent or current projects in Sonoma. The list of projects that we reviewed is shown in the table below.

### Current & Recent Development Projects

<i>Project</i>	<i>Unit Type</i>
557 Fourth St. East	Single Family Detached
153 Newcomb	Single Family Detached
205 Perkins St	Single Family Detached
790 Second St. East	Single Family Detached
448 Lovall Valley Road	Single Family Detached
821 - 845 West Spain St.	Single Family Detached
165 & 179 West MacArthur St.	Single Family Detached
800 West Spain St.	Single Family Detached
405 Fifth St. West	Townhomes
1181 Broadway	Townhomes
19323 Sonoma Highway	Apartments
840 West Napa St.	Apartments
165 East Spain St.	Apartments
590 West Napa St.	Apartments

### B. Recent Home Prices of Newer Residential Units

The market survey was conducted in mid-2016. To develop estimates of sales prices for new units, KMA reviewed sales prices and asking prices for recently built and new units in the city. To supplement this, KMA also reviewed market rate sales prices for units built since 2005 and sold since 2013. Appendix A Table 2 presents market sales prices for these units.

Because the City of Sonoma is a small city with relatively few new residential projects, KMA then interviewed an active local realtor to discuss the residential real estate market in Sonoma and confirm sales price and rental rate estimates.

### C. For-Sale Prototype Price Estimates

The current and recent pricing for new homes, the resale pricing of newer home developments, consultation from an active local realtor, input from City staff and KMA's experience in other jurisdictions formed the basis for KMA's prototype price estimates. The prototype pricing estimates took into consideration that in general, newly built homes sell for a premium over re-sales, all else being equal. The pricing of the units is intended to err on the conservative side; this makes the nexus analysis conservative and also ensures that the analysis covers the range of units that might be built in Sonoma, as higher priced units generate higher nexus results.

The market data for the larger single family detached unit shows a wide range in unit values, reflecting a range of locations, lot size, unit size and age and other market factors. Many of these units, which are developed as individual single unit projects, are built by the owner and not sold upon completion. KMA's sales price estimate is intended to reflect a custom built unit on the east side of Sonoma, although many brand new custom built homes in Sonoma would sell for more than \$1.3 million.

The table below summarizes KMA's conclusions regarding current for-sale prototype unit size and pricing.

#### **For-Sale Prototype Price Estimates**

	<i>Unit Size</i>	<i>Price</i>	<i>Price PSF</i>
Larger Lot Single Family Detached	2,500 sq. ft.	\$1,300,000	\$520
Smaller Lot Single Family Detached	1,400 sq. ft.	\$675,000	\$482
Townhomes / Condominiums	1,050 sq. ft.	\$550,000	\$524

*Source: KMA market study in collaboration with the City of Sonoma.*

#### **D. Rental Housing Market**

For rental units, KMA gathered current asking rents for apartments in Sonoma, although the data is limited by the small number of units available. KMA also gathered current asking rents for newer apartment buildings in nearby communities including Santa Rosa and Petaluma. Our findings are shown on Appendix A Table 3. There are a few projects under consideration in Sonoma, although no new rental projects have been built in recent years. KMA also discussed the rental housing market with a local realtor, who confirmed KMA's rental rate estimates.

Based on the market rent data, KMA estimates that the average rent for a newly developed apartment project in Sonoma, assuming an average unit size of 950 square feet, would be in the range of \$2,000 - \$2,200 (or \$2.10 - \$2.32 per square foot). KMA selected the midpoint of this range for the prototype. This is slightly higher than the asking rents for older units in Sonoma, but below asking rents for newer units in Santa Rose and Petaluma.

#### **IV. MARKET SURVEY CONCLUSIONS**

A full description of the prototypes, including examples of recent developments, average unit sizes, bedroom mix, and densities are shown in Appendix A Table 1. The prototypes are the starting point of the nexus analysis.

**APPENDIX A TABLE A-1  
MARKET RATE RESIDENTIAL PROTOTYPES  
RESIDENTIAL NEXUS ANALYSIS  
CITY OF SONOMA, CA**

**DRAFT**

	<b>Larger Lot Single Family Detached</b>	<b>Smaller Lot Single Family Detached</b>	<b>Townhome / Condominium</b>	<b>Rental Apartments</b>
<b>Example Projects</b>	557 Fourth St. East 448 Lovall Valley Road 153 Newcomb 205 Perkins St 790 Second St. East	800 West Spain St. 165 & 179 West MacArthur St. 821 - 845 West Spain St.	405 Fifth St. West 1181 Broadway	19323 Sonoma Highway 840 West Napa St. 165 East Spain St. 590 West Napa St.
Density / Lot Size	6,000 - 12,000 sf	8 - 10 dua 2,600 - 5,000 sf lots	10 - 20 dua	10 - 20 dua
Building Type	1-2 story homes	2-story homes	2-story townhomes	2-3 story buildings
Unit Mix	3 and 4 BR homes	3 BRs	2 BRs	Studios, 1 and 2 BR
Average Unit Size	2,500 sf	1,400 sf	1,050 sf	950 sf
Average No. of Bedrooms	3.5 BR	3.0 BR	2.0 BR	1.75 BR
Parking Type	Attached or Detached Garage	Attached garage	Attached garage	Carports & surface parking
Sales Price/Rent per square foot	\$1,300,000 \$520	\$675,000 \$482	\$550,000 \$524	\$2,100 \$2.21

**APPENDIX A TABLE 2  
RECENT HOME SALES AND LISTINGS  
RESIDENTIAL NEXUS ANALYSIS  
CITY OF SONOMA, CA**

**DRAFT**

**Units Built Since 2005 and Sold Since June 2013**

	Yr. Built	BA	BD	Net SF	Lot SF	Sale Price	\$/SF	Sale Date
<b>Condominiums</b>								
1254 Broadway 1	2006	2	2	646	646	\$339,000	\$525	06/19/2015
649 1st St W APT 5	2005	3	3	2,178	2,178	\$525,000	\$241	7/7/2016
649 1st St W APT 19	2005	3	3	1,823	1,742	\$540,000	\$296	1/29/2016
649 1st St W APT 4	2005	3	3	2,045	2,178	\$565,000	\$276	1/8/2016
649 1st St W APT 18	2005	2	2.5	1,850		\$539,000	\$291	6/17/2015
649 1st St W 11	2005	3	3	2,030	2,178	\$550,000	\$271	06/19/2013
<b>For Sale</b>								
507 W Spain St #5A	2016	2	2	1,252		\$674,000	\$538	for sale
513 W Spain St #2B	2016	2	2	1,103		\$629,000	\$570	for sale
511 W Spain St #3A	2016	2	2	1,252		\$659,000	\$526	for sale
515 W Spain St # 1D	2016	2	2	1,235		\$659,000	\$534	for sale
509 W Spain St #4E	2016	2	2	1,138		\$629,000	\$553	for sale
505 W Spain St #6B	2016	2	2	1,103		\$629,000	\$570	for sale
649 1st St W APT 30	2005	1	1.5	1,398		\$550,000	\$393	for sale
<b>Average, Condo Units</b>		2	2	1,466		\$575,923	\$430	
<b>Townhomes</b>								
	Yr. Built	BA	BD	Net SF	Lot SF	Sale Price	\$/SF	Sale Date
892 Lyon St*	2009	2	3	1,231	1,846	\$340,000	\$276	07/10/2013
880 Lyon St	2013	3	3	1,803	3,049	\$405,000	\$225	12/23/2013
884 Lyon St	2013	2.5	3	1,841	3,049	\$410,000	\$223	9/13/2013
876 Lyon St.	2013	2.5	2	1,932		\$389,000		3/2013
*unit listed for sale								
<b>For Sale</b>								
892 Lyon St.	2009	2	2	1,231		\$499,000	\$405	for sale
<b>Average, Townhome Units</b>	2011	2	3	1,608	2,648	\$408,600	\$282	
<b>Single Family Units</b>								
	Yr. Built	BD	BA	Net SF	Lot SF	Sale Price	\$/SF	Sale Date
<b>Lots Over One Acre</b>								
625 Quarry Hill Rd	2005	3	5	5,353	655,578	\$7,240,000	\$1,353	05/12/2014
124 Loma Vista Dr	2012	3	3	4,942	577,606	\$5,820,000	\$1,178	08/11/2015
855 Quail Run Way	2007	4	3	3,855	422,096	\$4,200,000	\$1,089	03/28/2016
19165 Mesquite Ct	2007	2	3	2,438	217,800	\$1,600,000	\$656	02/12/2014
16795 Park Ave	2007	5	1	4,484	202,118	\$1,900,000	\$424	10/16/2013
18707 Carriger Rd	2014	4	1	3,945	111,514	\$3,300,000	\$837	03/30/2014
23247 S Central Ave	2008	2	4	3,417	110,207	\$710,000	\$208	09/19/2013
20420 5th St E	2007	4	6	5,048	94,090	\$3,412,500	\$676	08/06/2014
19430 Sleepy Hollow Ct	2014	4	1	4,660	64,033	\$3,300,000	\$708	12/05/2014
19765 7th St E	2008	4	3	5,861	54,886	\$4,950,000	\$845	06/13/2014
1290 Lovall Valley Rd	2015	2	1	1,742	53,579	\$1,445,000	\$830	02/05/2016
19870 7th St E	2006	5	6	6,245	52,708	\$4,100,000	\$657	10/22/2013
16779 Sonoma Hwy	2006	3	3	3,254	48,352	\$1,249,000	\$384	04/02/2014
180 Serres Dr	2005	4	4	2,369	45,302	\$1,430,000	\$604	06/27/2014

**APPENDIX A TABLE 2  
RECENT HOME SALES AND LISTINGS  
RESIDENTIAL NEXUS ANALYSIS  
CITY OF SONOMA, CA**

**DRAFT**

**Units Built Since 2005 and Sold Since June 2013**

	Yr. Built	BA	BD	Net SF	Lot SF	Sale Price	\$/SF	Sale Date
<b>Larger Lots (5,000 - 25,000 sf)</b>								
551 Baxter Ave	2013	3	2	1,535	6,534	\$645,000	\$420	04/12/2016
456 2nd St E	2010	2	2	1,843	6,250	\$2,375,100	\$1,289	04/05/2016
958 Lark Ave	2008	3	2	2,160	23,522	\$1,285,000	\$595	03/24/2016
408 Brockman Ln	2006	4	3	2,380	8,253	\$975,000	\$410	02/02/2016
18428 4th Ave	2014	4	4	2,430	6,098	\$750,000	\$309	12/22/2015
502 5th St E	2006	4	5	4,122	24,394	\$2,335,000	\$566	12/07/2015
405 Brockman Ln	2006	4	3	2,380	7,159	\$1,150,000	\$483	10/12/2015
419 Brockman Ln	2006	4	3	2,515	7,440	\$975,000	\$388	06/24/2015
481 San Lorenzo Ct	2005	2	1	1,102	8,712	\$765,000	\$694	04/17/2015
255 Richards Blvd	2009	3	4	3,259	10,295	\$1,300,000	\$399	02/19/2015
436 San Lorenzo Ct	2005	4	3	2,993	9,148	\$1,590,000	\$531	02/04/2015
455 Montini Way	2006	2	2	1,928	7,405	\$877,000	\$455	11/07/2014
421 San Lorenzo Ct	2005	4	3	2,582	8,712	\$1,395,000	\$540	09/25/2014
404 Montini Way	2006	3	3	2,327	8,276	\$1,215,000	\$522	07/01/2014
17264 Park Ave	2013	2	2	1,480	8,250	\$580,000	\$392	04/28/2014
136 Sierra Pl	2008	4	3	2,205	17,859	\$627,000	\$284	03/11/2014
771 Donner Ave	2013	3	2	2,316	10,019	\$1,800,000	\$777	03/07/2014
68 5th St W	2006	3	2	1,928	7,405	\$750,000	\$389	02/04/2014
350 Church St	2013	3	2	1,890	6,300	\$1,200,000	\$635	11/14/2013
510 Denmark St	2005	3	3	2,657	7,841	\$1,000,000	\$376	08/16/2013
1344 Jones St	2006	3	2	1,669	6,094	\$626,500	\$375	06/28/2013
<b>Average</b>	<b>2008</b>	<b>3</b>	<b>3</b>	<b>2,271</b>	<b>9,808</b>	<b>\$1,153,124</b>	<b>\$508</b>	
<b>Smaller Lots (&lt;5,000 sf)</b>								
906 Bocoli St	2014	3	2	1,524	2,751	\$721,000	\$473	08/10/2015
914 Bocoli St	2014	3	3	1,507	2,785	\$770,000	\$511	05/12/2016
922 Bocoli St	2014	3	3	1,371	2,971	\$645,000	\$470	04/17/2015
930 Bocoli St	2014	3	3	1,322	3,080	\$685,000	\$518	01/15/2015
907 Bocoli St	2014	3	3	1,551	2,953	\$722,000	\$466	10/20/2014
915 Bocoli St	2014	3	2	1,524	2,953	\$689,000	\$452	05/22/2015
919 Bocoli St	2014	3	3	1,551	2,991	\$729,000	\$470	01/19/2015
177 W Macarthur St	2014	3	2	1,397	3,009	\$694,500	\$497	09/29/2015
951 Bocoli St	2014	3	3	1,551	2,953	\$739,000	\$476	
947 Bocoli St	2014	3	2	1,524	2,991	\$742,000	\$487	07/24/2015
938 Bocoli St	2014	3	3	1,371	4,227	\$741,500	\$541	
962 Bocoli St	2014	3	3	1,551	2,727	\$729,000	\$470	04/16/2015
946 Bocoli St	2014	3	3	1,507	2,767	\$699,000	\$464	07/30/2015
942 Bocoli St	2014	3	2	1,524	4,253	\$756,100	\$496	04/16/2015
<b>Average</b>		<b>3</b>	<b>2.64</b>	<b>1,484</b>	<b>3,101</b>	<b>\$718,721</b>	<b>\$485</b>	
309 Baudin Way	2007	3	3	2,087	4,811	\$725,000	\$347	07/05/2013
155 Fetters Ave	2006	3	2	1,400	4,792	\$535,000	\$382	06/20/2014
950 Amedeo Ct	2005	3	2	1,522	4,792	\$613,000	\$403	08/17/2015
960 Amedeo Ct	2005	3	2	1,522	4,792	\$619,000	\$407	09/19/2013
18470 Lucas Ave	2006	2	1	853	4,600	\$419,500	\$492	10/29/2014
423 Montini Way	2006	2	2	1,096	3,485	\$445,000	\$406	12/30/2015
1372 Pueblo Ave	2007	3	2	1,264	2,614	\$375,500	\$297	11/04/2014
964 1st St W	2005	3	3	1,609	2,614	\$540,000	\$336	06/04/2014
990 1st St W	2005	3	2	1,124	2,614	\$421,000	\$375	02/05/2015
<b>Average, incl. Bocoli St.</b>	<b>2011</b>	<b>2.91</b>	<b>2.43</b>	<b>1,446</b>	<b>3,414</b>	<b>\$641,526</b>	<b>\$444</b>	

Note: Includes all units with City of Sonoma address, although units may not be located within city limits.  
Sources: ListSource, Redfin.com, zillow.com, August 2016.

**APPENDIX A TABLE 3  
CURRENT ASKING RENTS, SONOMA AND OTHER LOCAL COMMUNITIES  
RESIDENTIAL NEXUS ANALYSIS  
CITY OF SONOMA, CA**

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**Sonoma Apartment Listings**

*Sonoma addresses, but not necessarily within City limits.*

	<b>BR</b>	<b>BA</b>	<b>SF</b>	<b>Rent</b>	<b>Rent/SF</b>
18179 Happy Ln (Sonoma Mission Apts, 1972)	2	1	850	\$1,825	\$2.15
18179 Happy Ln (Sonoma Mission Apts, 1972)	2	1	843	\$1,525	\$1.81
885 Broadway	2	1.5	1,000	\$1,995	\$2.00
128 Buena Vida Ct.	1	1		\$1,800	
162 Tuscany Place (1987)	1	1	800	\$1,725	\$2.16
170 Tuscany Place (1987)	2	2	1,200	\$2,150	\$1.79
108 Tuscany Place (1987)	2	2	1,200	\$2,350	\$1.96
210 Tuscany Place (1987)	1	1	800	\$1,725	\$2.16
210 Tuscany Place (1987)	2	1.5	1,200	\$2,050	\$1.71
755 Spain St	2	1		\$1,800	
863 2nd Street West (townhome)	3	2	1,488	\$1,950	\$1.31
192 W Agua Caliente Rd	2	2	1,030	\$1,995	\$1.94
401 W Napa St (1981)	1	1	560	\$1,495	\$2.67
464 Bernice Lane (1986)	2	2	922	\$1,750	\$1.90
329 Las Casitas Court (	2	1.5		\$2,200	
19052 Lomita Ave	2	1		\$1,695	

**Outside of Sonoma**

**Annadel Apartments (Built in 2014)**

Santa Rosa	1	1	688	\$1,830	\$2.66
	1	1	835	\$2,055	\$2.46
	2	2	1,009	\$2,437	\$2.42
	2	2	1,036	\$2,465	\$2.38
	2	1	950	\$2,360	\$2.48
	2	2	1,039	\$2,514	\$2.42
	2	2	1,079	\$2,650	\$2.46
	3	2	1,191	\$3,068	\$2.58

**Renaissance Apartment Homes (Built in 2002)**

Santa Rosa	1	1	716	\$2,353	\$3.29
	2	2	995	\$2,730	\$2.74
	2	2	995	\$2,745	\$2.76
	2	2	995	\$2,788	\$2.80
	2	2	995	\$2,660	\$2.67

**Harvest Park (built in 2004)**

Santa Rosa	1	1	852	\$2,143	\$2.51
Two-story buildings, carports, surface parking.	2	2	1,265	\$2,628	\$2.08
	2	2	1,315	\$2,668	\$2.03

**APPENDIX A TABLE 3  
 CURRENT ASKING RENTS, SONOMA AND OTHER LOCAL COMMUNITIES  
 RESIDENTIAL NEXUS ANALYSIS  
 CITY OF SONOMA, CA**

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<b>Addision Ranch (renovated 2013)</b>	1	1	616	\$1,855	\$3.01
Petaluma	1	1	626	\$1,923	\$3.07
	2	1	804	\$2,092	\$2.60
	2	1	794	\$2,071	\$2.61
<b>Theater Square</b>					
Petaluma	0	1	626	\$2,093	\$3.34
Downtown, garage parking.	0	1	626	\$2,651	\$4.23
	0	1	626	\$2,676	\$4.27
	0	1	626	\$3,013	\$4.81
	1	1	729	\$2,085	\$2.86
	1	1	729	\$2,204	\$3.02
	1	1	729	\$2,214	\$3.04
	1	1	729	\$2,214	\$3.04
	1	1	833	\$2,215	\$2.66

August 2016.

Sources: apartments.com, Craigslist, apartment complex websites.



## **APPENDIX B: WORKER OCCUPATIONS AND COMPENSATION LEVELS**

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**RESIDENTIAL NEXUS APPENDIX B TABLE 1  
 WORKER OCCUPATION DISTRIBUTION, 2015  
 SERVICES TO HOUSEHOLDS EARNING \$75 TO \$100K, RESIDENT SERVICES  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA**

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<p><b>Worker Occupation Distribution<sup>1</sup></b>  <b>Services to Households Earning</b>  <b>\$75,000 to \$100,000</b></p>
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**Major Occupations (2% or more)**

Management Occupations	3.6%
Business and Financial Operations Occupations	2.7%
Community and Social Service Occupations	2.4%
Education, Training, and Library Occupations	2.7%
Healthcare Practitioners and Technical Occupations	8.6%
Healthcare Support Occupations	5.8%
Food Preparation and Serving Related Occupations	18.2%
Building and Grounds Cleaning and Maintenance Occupations	4.1%
Personal Care and Service Occupations	8.3%
Sales and Related Occupations	12.9%
Office and Administrative Support Occupations	13.8%
Installation, Maintenance, and Repair Occupations	3.8%
Transportation and Material Moving Occupations	4.8%
All Other Worker Occupations - Services to Households Earning \$75,000 to \$100,000	<u>8.3%</u>
<b>INDUSTRY TOTAL</b>	<b>100.0%</b>

<sup>1</sup> Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

RESIDENTIAL NEXUS APPENDIX B TABLE 2  
 AVERAGE ANNUAL WORKER COMPENSATION, 2016  
 SERVICES TO HOUSEHOLDS EARNING \$75,000 TO \$100,000  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA

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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Page 1 of 4</i>			
<i>Management Occupations</i>			
Chief Executives	\$205,800	3.0%	0.1%
General and Operations Managers	\$119,900	38.8%	1.4%
Sales Managers	\$119,000	4.5%	0.2%
Administrative Services Managers	\$89,400	3.7%	0.1%
Financial Managers	\$128,900	8.1%	0.3%
Food Service Managers	\$56,000	7.8%	0.3%
Medical and Health Services Managers	\$117,400	8.6%	0.3%
Property, Real Estate, and Community Association Managers	\$65,600	9.2%	0.3%
Social and Community Service Managers	\$81,100	5.3%	0.2%
All other Management Occupations (Avg. All Categories)	<u>\$108,600</u>	<u>11.0%</u>	<u>0.4%</u>
	<b>Weighted Mean Annual Wage</b>	<b>100.0%</b>	<b>3.6%</b>
<i>Business and Financial Operations Occupations</i>			
Human Resources Specialists	\$72,700	6.0%	0.2%
Management Analysts	\$90,000	4.9%	0.1%
Compensation, Benefits, and Job Analysis Specialists	\$73,500	3.6%	0.1%
Training and Development Specialists	\$77,900	5.1%	0.1%
Market Research Analysts and Marketing Specialists	\$87,700	7.0%	0.2%
Business Operations Specialists, All Other	\$71,900	11.8%	0.3%
Accountants and Auditors	\$78,100	22.5%	0.6%
Financial Analysts	\$76,200	9.4%	0.3%
Personal Financial Advisors	\$96,800	9.5%	0.3%
Loan Officers	\$75,000	4.7%	0.1%
All Other Business and Financial Operations Occupations (Avg. All Categories)	<u>\$79,800</u>	<u>15.4%</u>	<u>0.4%</u>
	<b>Weighted Mean Annual Wage</b>	<b>100.0%</b>	<b>2.7%</b>
<i>Community and Social Service Occupations</i>			
Substance Abuse and Behavioral Disorder Counselors	\$51,900	5.0%	0.1%
Educational, Guidance, School, and Vocational Counselors	\$62,400	3.9%	0.1%
Mental Health Counselors	\$45,900	8.9%	0.2%
Rehabilitation Counselors	\$48,300	5.8%	0.1%
Child, Family, and School Social Workers	\$45,700	13.8%	0.3%
Healthcare Social Workers	\$73,400	8.0%	0.2%
Mental Health and Substance Abuse Social Workers	\$44,500	6.5%	0.2%
Social and Human Service Assistants	\$36,200	23.6%	0.6%
Community and Social Service Specialists, All Other	\$50,300	4.1%	0.1%
Clergy	\$53,900	5.1%	0.1%
All Other Community and Social Service Occupations (Avg. All Categories)	<u>\$47,600</u>	<u>15.3%</u>	<u>0.4%</u>
	<b>Weighted Mean Annual Wage</b>	<b>100.0%</b>	<b>2.4%</b>

RESIDENTIAL NEXUS APPENDIX B TABLE 2  
 AVERAGE ANNUAL WORKER COMPENSATION, 2016  
 SERVICES TO HOUSEHOLDS EARNING \$75,000 TO \$100,000  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA

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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<b>Page 2 of 4</b>			
<i>Education, Training, and Library Occupations</i>			
Vocational Education Teachers, Postsecondary	\$62,600	3.9%	0.1%
Preschool Teachers, Except Special Education	\$36,300	18.5%	0.5%
Elementary School Teachers, Except Special Education	\$59,200	8.3%	0.2%
Middle School Teachers, Except Special and Career/Technical Education	\$65,500	3.7%	0.1%
Secondary School Teachers, Except Special and Career/Technical Education	\$68,900	5.7%	0.2%
Self-Enrichment Education Teachers	\$47,500	13.8%	0.4%
Teachers and Instructors, All Other, Except Substitute Teachers	\$53,900	8.0%	0.2%
Substitute Teachers	\$36,400	4.0%	0.1%
Teacher Assistants	\$30,700	17.8%	0.5%
All Other Education, Training, and Library Occupations (Avg. All Categories)	<u>\$45,600</u>	<u>16.4%</u>	<u>0.4%</u>
	<b>Weighted Mean Annual Wage</b>	<b>100.0%</b>	<b>2.7%</b>
<i>Healthcare Practitioners and Technical Occupations</i>			
Pharmacists	\$143,800	3.1%	0.3%
Physicians and Surgeons, All Other	\$155,200	3.8%	0.3%
Physical Therapists	\$97,800	3.9%	0.3%
Registered Nurses	\$101,600	28.1%	2.4%
Dental Hygienists	\$90,400	5.0%	0.4%
Pharmacy Technicians	\$46,000	4.2%	0.4%
Licensed Practical and Licensed Vocational Nurses	\$54,500	9.8%	0.8%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	<u>\$94,100</u>	<u>42.1%</u>	<u>3.6%</u>
	<b>Weighted Mean Annual Wage</b>	<b>100.0%</b>	<b>8.6%</b>
<i>Healthcare Support Occupations</i>			
Home Health Aides	\$25,300	21.9%	1.3%
Nursing Assistants	\$31,400	31.6%	1.8%
Massage Therapists	\$59,100	4.7%	0.3%
Dental Assistants	\$44,900	11.5%	0.7%
Medical Assistants	\$41,300	14.6%	0.8%
All Other Healthcare Support Occupations (Avg. All Categories)	<u>\$34,900</u>	<u>15.7%</u>	<u>0.9%</u>
	<b>Weighted Mean Annual Wage</b>	<b>100.0%</b>	<b>5.8%</b>
<i>Food Preparation and Serving Related Occupations</i>			
First-Line Supervisors of Food Preparation and Serving Workers	\$36,200	6.9%	1.3%
Cooks, Fast Food	\$22,100	4.0%	0.7%
Cooks, Restaurant	\$29,300	8.7%	1.6%
Food Preparation Workers	\$24,800	6.6%	1.2%
Bartenders	\$31,200	6.8%	1.2%
Combined Food Preparation and Serving Workers, Including Fast Food	\$21,900	25.0%	4.5%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$25,700	3.5%	0.6%
Waiters and Waitresses	\$31,200	19.7%	3.6%
Dishwashers	\$22,700	4.0%	0.7%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$22,400	3.0%	0.5%
All Other Food Preparation and Serving Related Occupations (Avg. All Categories)	<u>\$27,000</u>	<u>11.8%</u>	<u>2.1%</u>
	<b>Weighted Mean Annual Wage</b>	<b>100.0%</b>	<b>18.2%</b>

RESIDENTIAL NEXUS APPENDIX B TABLE 2  
 AVERAGE ANNUAL WORKER COMPENSATION, 2016  
 SERVICES TO HOUSEHOLDS EARNING \$75,000 TO \$100,000  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA

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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Building and Grounds Cleaning and Maintenance Occupations</i>			
First-Line Supervisors of Housekeeping and Janitorial Workers	\$45,500	3.0%	0.1%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$41,400	3.1%	0.1%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$29,800	47.2%	1.9%
Maids and Housekeeping Cleaners	\$27,700	14.0%	0.6%
Landscaping and Groundskeeping Workers	\$33,500	27.1%	1.1%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. All Categ	<u>\$31,400</u>	<u>5.6%</u>	<u>0.2%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$31,400</b>	<b>100.0%</b>	<b>4.1%</b>
<i>Personal Care and Service Occupations</i>			
First-Line Supervisors of Personal Service Workers	\$44,500	3.9%	0.3%
Nonfarm Animal Caretakers	\$30,400	6.8%	0.6%
Amusement and Recreation Attendants	\$23,800	3.1%	0.3%
Hairdressers, Hairstylists, and Cosmetologists	\$27,100	16.8%	1.4%
Manicurists and Pedicurists	\$23,600	4.3%	0.4%
Childcare Workers	\$29,800	9.2%	0.8%
Personal Care Aides	\$25,000	33.8%	2.8%
Fitness Trainers and Aerobics Instructors	\$57,200	6.2%	0.5%
Recreation Workers	\$27,800	4.6%	0.4%
All Other Personal Care and Service Occupations (Avg. All Categories)	<u>\$29,500</u>	<u>11.3%</u>	<u>0.9%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$29,500</b>	<b>100.0%</b>	<b>8.3%</b>
<i>Sales and Related Occupations</i>			
First-Line Supervisors of Retail Sales Workers	\$44,700	9.4%	1.2%
Cashiers	\$25,400	28.9%	3.7%
Counter and Rental Clerks	\$31,000	4.8%	0.6%
Retail Salespersons	\$28,700	36.2%	4.7%
Sales Representatives, Services, All Other	\$64,300	3.9%	0.5%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	\$68,500	4.6%	0.6%
All Other Sales and Related Occupations (Avg. All Categories)	<u>\$33,100</u>	<u>12.1%</u>	<u>1.6%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$33,100</b>	<b>100.0%</b>	<b>12.9%</b>
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors of Office and Administrative Support Workers	\$60,700	6.8%	0.9%
Billing and Posting Clerks	\$43,400	3.0%	0.4%
Bookkeeping, Accounting, and Auditing Clerks	\$47,700	7.5%	1.0%
Customer Service Representatives	\$42,300	10.9%	1.5%
Receptionists and Information Clerks	\$34,600	10.4%	1.4%
Stock Clerks and Order Fillers	\$28,700	11.9%	1.6%
Medical Secretaries	\$44,200	5.5%	0.8%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$42,100	11.0%	1.5%
Office Clerks, General	\$38,200	13.9%	1.9%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$40,800</u>	<u>19.1%</u>	<u>2.6%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$40,800</b>	<b>100.0%</b>	<b>13.8%</b>

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RESIDENTIAL NEXUS APPENDIX B TABLE 2  
 AVERAGE ANNUAL WORKER COMPENSATION, 2016  
 SERVICES TO HOUSEHOLDS EARNING \$75,000 TO \$100,000  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA

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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors of Mechanics, Installers, and Repairers	\$83,000	8.0%	0.3%
Telecommunications Equipment Installers and Repairers, Except Line Installers	\$54,200	3.4%	0.1%
Automotive Body and Related Repairers	\$57,200	8.2%	0.3%
Automotive Service Technicians and Mechanics	\$49,600	23.9%	0.9%
Bus and Truck Mechanics and Diesel Engine Specialists	\$54,800	3.5%	0.1%
Maintenance and Repair Workers, General	\$47,700	28.6%	1.1%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	<u>\$53,700</u>	<u>24.3%</u>	<u>0.9%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$53,700</b>	<b>100.0%</b>	<b>3.8%</b>
<i>Transportation and Material Moving Occupations</i>			
Bus Drivers, School or Special Client	\$34,100	6.1%	0.3%
Driver/Sales Workers	\$35,100	8.9%	0.4%
Heavy and Tractor-Trailer Truck Drivers	\$47,800	10.9%	0.5%
Light Truck or Delivery Services Drivers	\$37,800	10.0%	0.5%
Taxi Drivers and Chauffeurs	\$35,400	3.9%	0.2%
Parking Lot Attendants	\$24,700	11.2%	0.5%
Automotive and Watercraft Service Attendants	\$24,800	3.5%	0.2%
Cleaners of Vehicles and Equipment	\$25,100	10.2%	0.5%
Laborers and Freight, Stock, and Material Movers, Hand	\$30,200	16.1%	0.8%
Packers and Packagers, Hand	\$24,700	6.3%	0.3%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	<u>\$32,400</u>	<u>12.9%</u>	<u>0.6%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$32,400</b>	<b>100.0%</b>	<b>4.8%</b>
			91.7%

<sup>1</sup> The methodology utilized by the California Employment Development Department (EDD) assumes that hourly paid employees are employed full-time. Annual compensation is calculated by EDD by multiplying hourly wages by 40 hours per work week by 52 weeks.

<sup>2</sup> Occupation percentages are based on the 2015 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2015 Occupational Employment Survey data applicable to Sonoma County updated by the California Employment Development Department to 2016 wage levels.

<sup>3</sup> Including occupations representing 3% or more of the major occupation group

**RESIDENTIAL NEXUS APPENDIX B TABLE 3  
 WORKER OCCUPATION DISTRIBUTION, 2015  
 SERVICES TO HOUSEHOLDS EARNING \$100 - \$150K, RESIDENT SERVICES  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA**

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<p><b>Worker Occupation Distribution<sup>1</sup></b>  <b>Services to Households Earning</b>  <b>\$100,000 to \$150,000</b></p>
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**Major Occupations (2% or more)**

Management Occupations	3.5%
Business and Financial Operations Occupations	2.8%
Community and Social Service Occupations	2.5%
Education, Training, and Library Occupations	3.3%
Healthcare Practitioners and Technical Occupations	8.0%
Healthcare Support Occupations	5.5%
Food Preparation and Serving Related Occupations	17.8%
Building and Grounds Cleaning and Maintenance Occupations	4.0%
Personal Care and Service Occupations	8.5%
Sales and Related Occupations	13.5%
Office and Administrative Support Occupations	13.8%
Installation, Maintenance, and Repair Occupations	3.5%
Transportation and Material Moving Occupations	5.1%
All Other Worker Occupations - Services to Households Earning \$100,000 to \$150,000	<u>8.2%</u>
<b>INDUSTRY TOTAL</b>	<b>100.0%</b>

<sup>1</sup> Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

RESIDENTIAL NEXUS APPENDIX B TABLE 4  
 AVERAGE ANNUAL WORKER COMPENSATION, 2016  
 SERVICES TO HOUSEHOLDS EARNING \$100,000 TO \$150,000  
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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<b>Page 1 of 4</b>			
<i>Management Occupations</i>			
Chief Executives	\$205,800	3.1%	0.1%
General and Operations Managers	\$119,900	40.6%	1.4%
Sales Managers	\$119,000	4.9%	0.2%
Administrative Services Managers	\$89,400	3.8%	0.1%
Financial Managers	\$128,900	8.6%	0.3%
Food Service Managers	\$56,000	7.8%	0.3%
Medical and Health Services Managers	\$117,400	8.2%	0.3%
Property, Real Estate, and Community Association Managers	\$65,600	5.1%	0.2%
Social and Community Service Managers	\$81,100	5.8%	0.2%
All other Management Occupations (Avg. All Categories)	<u>\$110,900</u>	<u>12.0%</u>	<u>0.4%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$110,900</b>	<b>100.0%</b>
<i>Business and Financial Operations Occupations</i>			
Human Resources Specialists	\$72,700	5.9%	0.2%
Management Analysts	\$90,000	5.0%	0.1%
Fundraisers	\$53,700	3.1%	0.1%
Compensation, Benefits, and Job Analysis Specialists	\$73,500	3.8%	0.1%
Training and Development Specialists	\$77,900	5.3%	0.1%
Market Research Analysts and Marketing Specialists	\$87,700	6.8%	0.2%
Business Operations Specialists, All Other	\$71,900	11.8%	0.3%
Accountants and Auditors	\$78,100	22.3%	0.6%
Financial Analysts	\$76,200	9.9%	0.3%
Personal Financial Advisors	\$96,800	10.2%	0.3%
Loan Officers	\$75,000	4.9%	0.1%
Financial Specialists, All Other	\$61,100	3.0%	0.1%
All Other Business and Financial Operations Occupations (Avg. All Categories)	<u>\$78,400</u>	<u>7.9%</u>	<u>0.2%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$78,400</b>	<b>100.0%</b>
<i>Community and Social Service Occupations</i>			
Substance Abuse and Behavioral Disorder Counselors	\$51,900	4.7%	0.1%
Educational, Guidance, School, and Vocational Counselors	\$62,400	4.4%	0.1%
Mental Health Counselors	\$45,900	8.5%	0.2%
Rehabilitation Counselors	\$48,300	5.9%	0.1%
Child, Family, and School Social Workers	\$45,700	14.3%	0.4%
Healthcare Social Workers	\$73,400	7.5%	0.2%
Mental Health and Substance Abuse Social Workers	\$44,500	6.1%	0.2%
Social and Human Service Assistants	\$36,200	23.8%	0.6%
Community and Social Service Specialists, All Other	\$50,300	4.2%	0.1%
Clergy	\$53,900	5.3%	0.1%
All Other Community and Social Service Occupations (Avg. All Categories)	<u>\$47,500</u>	<u>15.3%</u>	<u>0.4%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$47,500</b>	<b>100.0%</b>



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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Page 2 of 4</i>			
<i>Education, Training, and Library Occupations</i>			
Vocational Education Teachers, Postsecondary	\$62,600	4.1%	0.1%
Preschool Teachers, Except Special Education	\$36,300	18.5%	0.6%
Elementary School Teachers, Except Special Education	\$59,200	7.9%	0.3%
Middle School Teachers, Except Special and Career/Technical Education	\$65,500	3.5%	0.1%
Secondary School Teachers, Except Special and Career/Technical Education	\$68,900	5.5%	0.2%
Self-Enrichment Education Teachers	\$47,500	13.4%	0.4%
Teachers and Instructors, All Other, Except Substitute Teachers	\$53,900	8.0%	0.3%
Substitute Teachers	\$36,400	3.9%	0.1%
Teacher Assistants	\$30,700	17.4%	0.6%
All Other Education, Training, and Library Occupations (Avg. All Categories)	<u>\$45,600</u>	<u>17.8%</u>	<u>0.6%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$45,600</b>	<b>100.0%</b>
<i>Healthcare Practitioners and Technical Occupations</i>			
Pharmacists	\$143,800	3.5%	0.3%
Physicians and Surgeons, All Other	\$155,200	3.7%	0.3%
Physical Therapists	\$97,800	3.9%	0.3%
Registered Nurses	\$101,600	27.7%	2.2%
Dental Hygienists	\$90,400	4.9%	0.4%
Pharmacy Technicians	\$46,000	4.8%	0.4%
Licensed Practical and Licensed Vocational Nurses	\$54,500	9.7%	0.8%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	<u>\$93,900</u>	<u>41.9%</u>	<u>3.4%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$93,900</b>	<b>100.0%</b>
<i>Healthcare Support Occupations</i>			
Home Health Aides	\$25,300	22.9%	1.3%
Nursing Assistants	\$31,400	31.2%	1.7%
Massage Therapists	\$59,100	4.7%	0.3%
Dental Assistants	\$44,900	11.2%	0.6%
Medical Assistants	\$41,300	14.2%	0.8%
All Other Healthcare Support Occupations (Avg. All Categories)	<u>\$34,800</u>	<u>15.7%</u>	<u>0.9%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$34,800</b>	<b>100.0%</b>
<i>Food Preparation and Serving Related Occupations</i>			
First-Line Supervisors of Food Preparation and Serving Workers	\$36,200	6.9%	1.2%
Cooks, Fast Food	\$22,100	4.0%	0.7%
Cooks, Restaurant	\$29,300	8.6%	1.5%
Food Preparation Workers	\$24,800	6.7%	1.2%
Bartenders	\$31,200	6.8%	1.2%
Combined Food Preparation and Serving Workers, Including Fast Food	\$21,900	25.0%	4.5%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$25,700	3.5%	0.6%
Waiters and Waitresses	\$31,200	19.6%	3.5%
Dishwashers	\$22,700	4.0%	0.7%
All Other Food Preparation and Serving Related Occupations (Avg. All Categories)	<u>\$27,100</u>	<u>14.8%</u>	<u>2.6%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$27,100</b>	<b>100.0%</b>

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 AVERAGE ANNUAL WORKER COMPENSATION, 2016  
 SERVICES TO HOUSEHOLDS EARNING \$100,000 TO \$150,000  
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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Building and Grounds Cleaning and Maintenance Occupations</i>			
First-Line Supervisors of Housekeeping and Janitorial Workers	\$45,500	3.0%	0.1%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$41,400	3.1%	0.1%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$29,800	47.4%	1.9%
Maids and Housekeeping Cleaners	\$27,700	13.2%	0.5%
Landscaping and Groundskeeping Workers	\$33,500	27.4%	1.1%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. All Categories)	<u>\$31,500</u>	<u>5.9%</u>	<u>0.2%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$31,500</b>	<b>100.0%</b>	<b>4.0%</b>
<i>Personal Care and Service Occupations</i>			
First-Line Supervisors of Personal Service Workers	\$44,500	3.9%	0.3%
Nonfarm Animal Caretakers	\$30,400	6.9%	0.6%
Amusement and Recreation Attendants	\$23,800	3.0%	0.3%
Hairdressers, Hairstylists, and Cosmetologists	\$27,100	15.6%	1.3%
Manicurists and Pedicurists	\$23,600	4.0%	0.3%
Childcare Workers	\$29,800	10.6%	0.9%
Personal Care Aides	\$25,000	34.3%	2.9%
Fitness Trainers and Aerobics Instructors	\$57,200	6.3%	0.5%
Recreation Workers	\$27,800	4.6%	0.4%
All Other Personal Care and Service Occupations (Avg. All Categories)	<u>\$29,500</u>	<u>10.8%</u>	<u>0.9%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$29,500</b>	<b>100.0%</b>	<b>8.5%</b>
<i>Sales and Related Occupations</i>			
First-Line Supervisors of Retail Sales Workers	\$44,700	9.7%	1.3%
Cashiers	\$25,400	29.5%	4.0%
Counter and Rental Clerks	\$31,000	3.7%	0.5%
Retail Salespersons	\$28,700	37.7%	5.1%
Securities, Commodities, and Financial Services Sales Agents	\$94,100	3.1%	0.4%
Sales Representatives, Services, All Other	\$64,300	3.8%	0.5%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$68,500	4.7%	0.6%
All Other Sales and Related Occupations (Avg. All Categories)	<u>\$35,100</u>	<u>7.7%</u>	<u>1.0%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$35,100</b>	<b>100.0%</b>	<b>13.5%</b>
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors of Office and Administrative Support Workers	\$60,700	6.9%	0.9%
Bookkeeping, Accounting, and Auditing Clerks	\$47,700	7.4%	1.0%
Customer Service Representatives	\$42,300	11.3%	1.6%
Receptionists and Information Clerks	\$34,600	9.9%	1.4%
Stock Clerks and Order Fillers	\$28,700	13.0%	1.8%
Medical Secretaries	\$44,200	5.0%	0.7%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$42,100	10.6%	1.5%
Office Clerks, General	\$38,200	13.4%	1.8%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$40,600</u>	<u>22.6%</u>	<u>3.1%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$40,600</b>	<b>100.0%</b>	<b>13.8%</b>

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 SERVICES TO HOUSEHOLDS EARNING \$100,000 TO \$150,000  
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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors of Mechanics, Installers, and Repairers	\$83,000	8.0%	0.3%
Telecommunications Equipment Installers and Repairers, Except Line Installers	\$54,200	3.2%	0.1%
Automotive Body and Related Repairers	\$57,200	8.7%	0.3%
Automotive Service Technicians and Mechanics	\$49,600	26.0%	0.9%
Bus and Truck Mechanics and Diesel Engine Specialists	\$54,800	3.9%	0.1%
Maintenance and Repair Workers, General	\$47,700	22.7%	0.8%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	<u>\$54,100</u>	<u>27.5%</u>	<u>1.0%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$54,100</b>	<b>100.0%</b>	<b>3.5%</b>
<i>Transportation and Material Moving Occupations</i>			
Bus Drivers, School or Special Client	\$34,100	6.7%	0.3%
Driver/Sales Workers	\$35,100	8.7%	0.4%
Heavy and Tractor-Trailer Truck Drivers	\$47,800	10.8%	0.5%
Light Truck or Delivery Services Drivers	\$37,800	10.1%	0.5%
Taxi Drivers and Chauffeurs	\$35,400	4.0%	0.2%
Parking Lot Attendants	\$24,700	10.8%	0.5%
Automotive and Watercraft Service Attendants	\$24,800	3.3%	0.2%
Cleaners of Vehicles and Equipment	\$25,100	9.5%	0.5%
Laborers and Freight, Stock, and Material Movers, Hand	\$30,200	16.3%	0.8%
Packers and Packagers, Hand	\$24,700	6.6%	0.3%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	<u>\$32,400</u>	<u>13.2%</u>	<u>0.7%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$32,400</b>	<b>100.0%</b>	<b>5.1%</b>
			91.8%

<sup>1</sup> The methodology utilized by the California Employment Development Department (EDD) assumes that hourly paid employees are employed full-time. Annual compensation is calculated by EDD by multiplying hourly wages by 40 hours per work week by 52 weeks.

<sup>2</sup> Occupation percentages are based on the 2015 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2015 Occupational Employment Survey data applicable to Sonoma County updated by the California Employment Development Department to 2016 wage levels.

<sup>3</sup> Including occupations representing 3% or more of the major occupation group

**RESIDENTIAL NEXUS APPENDIX B TABLE 5  
 WORKER OCCUPATION DISTRIBUTION, 2015  
 SERVICES TO HOUSEHOLDS EARNING \$150K+, RESIDENT SERVICES  
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<b>Major Occupations (2% or more)</b>	<b>Worker Occupation Distribution<sup>1</sup> Services to Households Earning \$150,000 and up</b>
Management Occupations	3.6%
Business and Financial Operations Occupations	2.9%
Community and Social Service Occupations	2.6%
Education, Training, and Library Occupations	4.7%
Healthcare Practitioners and Technical Occupations	7.0%
Healthcare Support Occupations	4.7%
Food Preparation and Serving Related Occupations	16.6%
Building and Grounds Cleaning and Maintenance Occupations	4.2%
Personal Care and Service Occupations	8.8%
Sales and Related Occupations	13.9%
Office and Administrative Support Occupations	13.8%
Installation, Maintenance, and Repair Occupations	3.3%
Transportation and Material Moving Occupations	5.4%
All Other Worker Occupations - Services to Households Earning \$150,000 and up	<u>8.4%</u>
<b>INDUSTRY TOTAL</b>	100.0%

<sup>1</sup> Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

**RESIDENTIAL NEXUS APPENDIX B TABLE 6  
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SERVICES TO HOUSEHOLDS EARNING \$150,000 AND UP  
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<b>Occupation <sup>3</sup></b>	<b>2016 Avg. Compensation <sup>1</sup></b>	<b>% of Total Occupation Group <sup>2</sup></b>	<b>% of Total No. of Service Workers</b>
<b>Page 1 of 4</b>			
<i>Management Occupations</i>			
Chief Executives	\$205,800	3.2%	0.1%
General and Operations Managers	\$119,900	41.5%	1.5%
Sales Managers	\$119,000	5.0%	0.2%
Administrative Services Managers	\$89,400	3.8%	0.1%
Financial Managers	\$128,900	8.7%	0.3%
Education Administrators, Preschool and Childcare Center/Program	\$56,400	3.2%	0.1%
Food Service Managers	\$56,000	7.1%	0.3%
Medical and Health Services Managers	\$117,400	6.9%	0.2%
Property, Real Estate, and Community Association Managers	\$65,600	3.4%	0.1%
Social and Community Service Managers	\$81,100	5.9%	0.2%
All other Management Occupations (Avg. All Categories)	<u>\$110,300</u>	<u>11.4%</u>	<u>0.4%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$110,300</b>	<b>100.0%</b>
<i>Business and Financial Operations Occupations</i>			
Human Resources Specialists	\$72,700	5.8%	0.2%
Management Analysts	\$90,000	5.1%	0.1%
Meeting, Convention, and Event Planners	\$54,600	3.1%	0.1%
Fundraisers	\$53,700	3.5%	0.1%
Compensation, Benefits, and Job Analysis Specialists	\$73,500	3.8%	0.1%
Training and Development Specialists	\$77,900	5.8%	0.2%
Market Research Analysts and Marketing Specialists	\$87,700	6.7%	0.2%
Business Operations Specialists, All Other	\$71,900	12.1%	0.3%
Accountants and Auditors	\$78,100	21.9%	0.6%
Financial Analysts	\$76,200	9.7%	0.3%
Personal Financial Advisors	\$96,800	10.1%	0.3%
Loan Officers	\$75,000	4.7%	0.1%
Financial Specialists, All Other	\$61,100	3.0%	0.1%
All Other Business and Financial Operations Occupations (Avg. All Categories)	<u>\$77,600</u>	<u>4.6%</u>	<u>0.1%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$77,600</b>	<b>100.0%</b>
<i>Community and Social Service Occupations</i>			
Substance Abuse and Behavioral Disorder Counselors	\$51,900	4.3%	0.1%
Educational, Guidance, School, and Vocational Counselors	\$62,400	5.4%	0.1%
Mental Health Counselors	\$45,900	7.9%	0.2%
Rehabilitation Counselors	\$48,300	5.8%	0.1%
Child, Family, and School Social Workers	\$45,700	15.0%	0.4%
Healthcare Social Workers	\$73,400	6.9%	0.2%
Mental Health and Substance Abuse Social Workers	\$44,500	5.6%	0.1%
Social and Human Service Assistants	\$36,200	24.1%	0.6%
Community and Social Service Specialists, All Other	\$50,300	4.4%	0.1%
Clergy	\$53,900	5.3%	0.1%
Directors, Religious Activities and Education	\$53,000	3.0%	0.1%
All Other Community and Social Service Occupations (Avg. All Categories)	<u>\$47,700</u>	<u>12.3%</u>	<u>0.3%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$47,700</b>	<b>100.0%</b>

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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Page 2 of 4</i>			
<i>Education, Training, and Library Occupations</i>			
Vocational Education Teachers, Postsecondary	\$62,600	4.5%	0.2%
Preschool Teachers, Except Special Education	\$36,300	18.2%	0.9%
Elementary School Teachers, Except Special Education	\$59,200	8.0%	0.4%
Middle School Teachers, Except Special and Career/Technical Education	\$65,500	3.6%	0.2%
Secondary School Teachers, Except Special and Career/Technical Education	\$68,900	5.5%	0.3%
Self-Enrichment Education Teachers	\$47,500	13.3%	0.6%
Teachers and Instructors, All Other, Except Substitute Teachers	\$53,900	8.4%	0.4%
Substitute Teachers	\$36,400	4.0%	0.2%
Teacher Assistants	\$30,700	16.9%	0.8%
All Other Education, Training, and Library Occupations (Avg. All Categories)	<u>\$45,900</u>	<u>17.6%</u>	<u>0.8%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$45,900</b>	<b>100.0%</b>
<i>Healthcare Practitioners and Technical Occupations</i>			
Pharmacists	\$143,800	4.0%	0.3%
Physicians and Surgeons, All Other	\$155,200	3.5%	0.2%
Physical Therapists	\$97,800	3.8%	0.3%
Registered Nurses	\$101,600	27.0%	1.9%
Dental Hygienists	\$90,400	4.6%	0.3%
Pharmacy Technicians	\$46,000	5.6%	0.4%
Licensed Practical and Licensed Vocational Nurses	\$54,500	9.5%	0.7%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	<u>\$93,600</u>	<u>42.0%</u>	<u>2.9%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$93,600</b>	<b>100.0%</b>
<i>Healthcare Support Occupations</i>			
Home Health Aides	\$25,300	24.4%	1.2%
Nursing Assistants	\$31,400	30.4%	1.4%
Massage Therapists	\$59,100	4.7%	0.2%
Dental Assistants	\$44,900	10.7%	0.5%
Medical Assistants	\$41,300	13.6%	0.6%
All Other Healthcare Support Occupations (Avg. All Categories)	<u>\$34,500</u>	<u>16.2%</u>	<u>0.8%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$34,500</b>	<b>100.0%</b>
<i>Food Preparation and Serving Related Occupations</i>			
First-Line Supervisors of Food Preparation and Serving Workers	\$36,200	6.9%	1.1%
Cooks, Fast Food	\$22,100	4.0%	0.7%
Cooks, Restaurant	\$29,300	8.6%	1.4%
Food Preparation Workers	\$24,800	6.9%	1.1%
Bartenders	\$31,200	6.8%	1.1%
Combined Food Preparation and Serving Workers, Including Fast Food	\$21,900	24.9%	4.1%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$25,700	3.6%	0.6%
Waiters and Waitresses	\$31,200	19.4%	3.2%
Dishwashers	\$22,700	4.0%	0.7%
All Other Food Preparation and Serving Related Occupations (Avg. All Categories)	<u>\$27,100</u>	<u>14.9%</u>	<u>2.5%</u>
	<b>Weighted Mean Annual Wage</b>	<b>\$27,100</b>	<b>100.0%</b>

RESIDENTIAL NEXUS APPENDIX B TABLE 6  
 AVERAGE ANNUAL WORKER COMPENSATION, 2016  
 SERVICES TO HOUSEHOLDS EARNING \$150,000 AND UP  
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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Building and Grounds Cleaning and Maintenance Occupations</i>			
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$41,400	3.3%	0.1%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$29,800	47.8%	2.0%
Maids and Housekeeping Cleaners	\$27,700	11.7%	0.5%
Landscaping and Groundskeeping Workers	\$33,500	28.2%	1.2%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. All Categories)	<u>\$31,100</u>	<u>9.1%</u>	<u>0.4%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$31,100</b>	<b>100.0%</b>	<b>4.2%</b>
<i>Personal Care and Service Occupations</i>			
First-Line Supervisors of Personal Service Workers	\$44,500	4.0%	0.4%
Nonfarm Animal Caretakers	\$30,400	7.3%	0.6%
Amusement and Recreation Attendants	\$23,800	3.3%	0.3%
Hairdressers, Hairstylists, and Cosmetologists	\$27,100	13.4%	1.2%
Manicurists and Pedicurists	\$23,600	3.4%	0.3%
Childcare Workers	\$29,800	13.7%	1.2%
Personal Care Aides	\$25,000	32.8%	2.9%
Fitness Trainers and Aerobics Instructors	\$57,200	6.9%	0.6%
Recreation Workers	\$27,800	4.6%	0.4%
All Other Personal Care and Service Occupations (Avg. All Categories)	<u>\$29,900</u>	<u>10.7%</u>	<u>0.9%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$29,900</b>	<b>100.0%</b>	<b>8.8%</b>
<i>Sales and Related Occupations</i>			
First-Line Supervisors of Retail Sales Workers	\$44,700	9.8%	1.4%
Cashiers	\$25,400	29.5%	4.1%
Counter and Rental Clerks	\$31,000	3.3%	0.5%
Retail Salespersons	\$28,700	38.2%	5.3%
Securities, Commodities, and Financial Services Sales Agents	\$94,100	3.1%	0.4%
Sales Representatives, Services, All Other	\$64,300	3.9%	0.5%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$68,500	4.8%	0.7%
All Other Sales and Related Occupations (Avg. All Categories)	<u>\$35,200</u>	<u>7.4%</u>	<u>1.0%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$35,200</b>	<b>100.0%</b>	<b>13.9%</b>
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors of Office and Administrative Support Workers	\$60,700	6.8%	0.9%
Bookkeeping, Accounting, and Auditing Clerks	\$47,700	7.5%	1.0%
Customer Service Representatives	\$42,300	11.6%	1.6%
Receptionists and Information Clerks	\$34,600	9.2%	1.3%
Stock Clerks and Order Fillers	\$28,700	13.5%	1.9%
Medical Secretaries	\$44,200	4.2%	0.6%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$42,100	10.9%	1.5%
Office Clerks, General	\$38,200	13.5%	1.9%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$40,500</u>	<u>22.9%</u>	<u>3.2%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$40,500</b>	<b>100.0%</b>	<b>13.8%</b>

RESIDENTIAL NEXUS APPENDIX B TABLE 6  
 AVERAGE ANNUAL WORKER COMPENSATION, 2016  
 SERVICES TO HOUSEHOLDS EARNING \$150,000 AND UP  
 RESIDENTIAL NEXUS ANALYSIS  
 SONOMA, CA

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Occupation <sup>3</sup>	2016 Avg. Compensation <sup>1</sup>	% of Total Occupation Group <sup>2</sup>	% of Total No. of Service Workers
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors of Mechanics, Installers, and Repairers	\$83,000	7.9%	0.3%
Automotive Body and Related Repairers	\$57,200	8.5%	0.3%
Automotive Service Technicians and Mechanics	\$49,600	26.1%	0.9%
Bus and Truck Mechanics and Diesel Engine Specialists	\$54,800	4.2%	0.1%
Maintenance and Repair Workers, General	\$47,700	20.6%	0.7%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	<u>\$54,200</u>	<u>32.5%</u>	<u>1.1%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$54,200</b>	<b>100.0%</b>	<b>3.3%</b>
<i>Transportation and Material Moving Occupations</i>			
Bus Drivers, School or Special Client	\$34,100	8.4%	0.5%
Driver/Sales Workers	\$35,100	7.9%	0.4%
Heavy and Tractor-Trailer Truck Drivers	\$47,800	10.8%	0.6%
Light Truck or Delivery Services Drivers	\$37,800	9.6%	0.5%
Taxi Drivers and Chauffeurs	\$35,400	4.4%	0.2%
Parking Lot Attendants	\$24,700	11.0%	0.6%
Cleaners of Vehicles and Equipment	\$25,100	8.5%	0.5%
Laborers and Freight, Stock, and Material Movers, Hand	\$30,200	16.0%	0.9%
Packers and Packagers, Hand	\$24,700	6.4%	0.3%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	<u>\$32,800</u>	<u>17.0%</u>	<u>0.9%</u>
<b>Weighted Mean Annual Wage</b>	<b>\$32,800</b>	<b>100.0%</b>	<b>5.4%</b>
			<b>91.6%</b>

<sup>1</sup> The methodology utilized by the California Employment Development Department (EDD) assumes that hourly paid employees are employed full-time. Annual compensation is calculated by EDD by multiplying hourly wages by 40 hours per work week by 52 weeks.

<sup>2</sup> Occupation percentages are based on the 2015 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2015 Occupational Employment Survey data applicable to Sonoma County updated by the California Employment Development Department to 2016 wage levels.

<sup>3</sup> Including occupations representing 3% or more of the major occupation group