KEYSER MARSTON ASSOCIATES

ATTACHMENT B

DRAFT
NON-RESIDENTIAL NEXUS ANALYSIS

Prepared for
City of Sonoma

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TABLE OF CONTENTS

I. INTRODUCTION

The following report is a Jobs Housing Nexus Analysis, an analysis of the linkages between non-residential development and the need for additional affordable housing in the City of Sonoma. This Jobs Housing Nexus Analysis has been prepared in support of affordable housing impact fees that may be levied on non-residential development. 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.

The City of Sonoma has an inclusionary housing program that requires residential projects with five or more units to provide affordable housing within projects. In addition, the City is considering adopting a housing fee for smaller projects (one to four units). Another measure to increase funding resources for affordable housing would be an impact fee on non-residential development. This nexus analysis provides documentation enabling the City to adopt an affordable housing impact fee on commercial development in Sonoma.

Purpose

The purpose of a Jobs-Housing Nexus Analysis is to quantify and document the impact of the development of new workplace buildings (commercial) and the employees that work in them, on the demand for affordable housing. Because jobs in all buildings cover a range of compensation levels, there are housing needs at all affordability levels. This analysis quantifies the need for lower and moderate income housing created by each type of workplace building.

The analysis may be used as the foundation for enacting an affordable housing impact fee or "commercial linkage fee" to be levied on non-residential development in the City of Sonoma. The conclusions of the analysis represent maximum supportable or legally defensible impact fee levels based on the impact of new non-residential development on the need for affordable housing. Findings are not recommended fee levels. The City is free to take a range of policy considerations into account in setting fees anywhere below the maximums identified in this report.

The relationships established in this analysis may also be useful for other applications such as negotiation of an affordable housing component as part of a development agreement for a large commercial project.

Analysis Scope

This analysis examines three types of workplace buildings, per direction of City staff.

- Office, which includes traditional office users such as law firms, accountants, real estate and insurance agencies, as well as high tech and medical office space.

- Hotel, which covers the range from full service hotels to minimum service extended stay lodging.
- Retail, which includes all types of retail, restaurants, and personal services.

The household income categories addressed in the analysis are:

- 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 four sections and three appendices, as follows:

- Section I provides an introduction and describes the purpose and organization of this report.

- Section II presents a summary of the nexus concept and some of the key issues and underlying assumptions in the analyses linking jobs and housing demand.

- Section III presents an analysis of the jobs and housing relationships associated with each workplace building type and concludes with a quantification of the number of households at each income level associated with each building type.

- Section IV contains a summary of the costs of delivering housing units affordable to households at the income levels under study, allocated to each square foot of building area, and provides the conclusions regarding maximum supported fee levels.

- Appendix A provides a discussion of various specific factors and assumptions in relation to the nexus concept to supplement the overview provided in Section II.

- Appendix B contains support information on worker occupations and incomes for each building type.

- Appendix C provides an analysis to address the potential for overlap between jobs counted in the Residential and Non-Residential Nexus Analyses.

Data Sources and Qualifications

The analyses in this report have been prepared using the best and most recent data available. Local and current data were used whenever possible. Sources such as the American Community Survey of the U.S. Census, the 2010 Census, Bureau of Labor Statistics and California Employment Department (EDD) data were used extensively. Other sources and analyses used are noted in the text and footnotes. While we believe all sources utilized are sufficiently accurate for the purposes of the analyses, we cannot guarantee their accuracy. KMA assumes no liability for information from these or other sources.

II. THE NEXUS CONCEPT

This section outlines the nexus concept and some of the key issues surrounding the impact of new non-residential development on the demand for affordable housing units in Sonoma. The nexus analysis and discussion focus on the relationships among development, growth, employment, income of workers and demand for affordable housing. The analysis describes the impact of new construction of workplace buildings and the need for additional affordable housing, quantified both in terms of number of units and the justified fee to provide those affordable units.

Background

The first jobs-housing linkage fee programs were adopted by the cities of San Francisco and Boston in the mid-1980s. To support the fees, the City of San Francisco commissioned an early version of a nexus analysis.

In 1987, the California legislature enacted AB 1600, the Mitigation Fee Act, which requires local agencies proposing an impact fee on a development project to identify the purpose and use of the fee, and to determine that there is a reasonable relationship between the fee's use and the development project on which the fee is imposed. The local agency must also demonstrate that there is a reasonable relationship between the fee amount and the cost of mitigating the problem that the fee addresses. Studies by local governments designed to fulfill the requirements of AB 1600 are often referred to as "nexus" studies. While commercial linkage fees for affordable housing are not clearly "fees" as defined by the Mitigation Fee Act, the methodology and findings specified by the Act are appropriate for any nexus study.

Commercial linkage fees were upheld in *Commercial Builders of Northern California v. City of Sacramento*. Commercial builders in Sacramento sued the City following the City's adoption of a housing linkage fee. Both the U.S. District Court and the Ninth Circuit Court of Appeals upheld the commercial linkage fees adopted by the City of Sacramento. The Supreme Court of the United States denied the builders' petition to hear the case, allowing the ruling of the Ninth Circuit to stand.

The Nexus Methodology

An overview of the basic nexus concept and methodology is helpful to understand the discussion and concepts presented in this section. The nexus analysis links new commercial buildings with new workers; these workers demand additional housing in proximity to the jobs, a portion of which needs to be affordable to the workers in lower income households.

Below is a description of the major calculations of the analysis. For analysis purposes, buildings of 100,000 square feet are assumed and then the following calculations are made:

- The total number of employees working in the building is estimated based on average employment density data.
- Occupation and income information for typical job types in the building is used to calculate how many of those jobs pay compensation at the various income levels (Extremely Low, Very Low, Low, and Moderate) addressed in the analysis. Compensation data is from the California Employment Development Department (EDD) and is specific to Sonoma County. Worker occupations by building type are derived from the 2015 Occupational Employment Survey by the U.S. Bureau of Labor Statistics and weighted to reflect the industry mix in Sonoma County.
- Census data indicate that many workers are members of households where more than one person is employed and that there is a range of household sizes; factors derived from the Census are used to translate the workers in the building into Extremely Low, Very Low, Low, and Moderate-income households of various sizes.
- Then, the Extremely Low, Very Low-, Low- and Moderate-Income households are divided by the building size to arrive at the number of housing units per square foot of building area, for each income category.
- In the last step, the number of households per square foot in each income category is multiplied by the costs of delivering housing units affordable to these income groups.

Discount for Changing Industries

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 activities employment. Jobs lost over the last decade in these declining sectors were replaced by job growth in other industry sectors.

The analysis makes an adjustment to take these declines, changes and shifts within all sectors of 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%[1]. 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 represents a conservative assumption because many displaced workers may exit the workforce entirely by retiring. In addition, development of new workspace buildings will typically occur only to the extent there is positive net demand after re-occupancy of buildings vacated by businesses in declining sectors of the economy. To the extent existing buildings are re-occupied, the discount for changing industries is unnecessary because new buildings would represent net new growth in employment. The 15% adjustment is conservative in that it is mainly necessary to cover a special case in which buildings vacated by declining industries cannot be readily occupied by other users due to their special purpose nature or because of obsolescence.

Other Factors and Assumptions

Appendix A provides a discussion of other specific factors in relation to the nexus concept including housing needs of the existing population, multiplier effects (indirect and induced jobs), and economic cycles.

[1] 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%.

III. JOBS HOUSING NEXUS ANALYSIS

This section presents a summary of the analysis linking the development of the three types of workplace buildings to the estimated number of lower income housing units required in each of four income categories. This section should not be read or reproduced without the narrative presented in the previous sections.

Analysis Approach and Framework

The analysis establishes the jobs housing nexus for individual commercial land use categories, quantifying the connection between employment growth in Sonoma and affordable housing demand.

The analysis examines the employment associated with the development of workplace building prototypes. Then, through a series of steps, the number of employees is converted to households and housing units by income level. The findings are expressed in terms of numbers of households per 100,000 square feet, for ease of presentation. In the final step, we convert the numbers of households for an entire building to the number of households per square foot.

Household Income Limits

The analysis estimates demand for affordable housing in four household income categories: Extremely Low, Very Low, Low and Moderate Income. Household incomes for these affordability categories are published by the California Department of Housing and Community Development (HCD). The income limits are shown below.

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

Analysis Steps

The analysis is conducted using a model that KMA has developed for application in many jurisdictions for which the firm has conducted similar analyses. The model inputs are all local data to the extent possible, and are fully documented.

Tables 1 through 4 at the end of this section summarize the nexus analysis steps for the three building types. Following is a description of each step of the analysis:

Step 1 – Estimate of Total New Employees

The first step in Table 1 identifies the total number of direct employees who will work in the building type being analyzed. Average employment density factors are used to make the calculation.

The employment density estimates are drawn from several sources, including local information, KMA experience in other jurisdictions, some survey data, and other sources, tailored to the character of development in Sonoma and the types of tenancies expected in the commercial buildings in the City.

- *Office* – 300 square feet per employee. This represents an average of a range that includes primarily traditional office uses and medical offices, but also high tech and other office uses.
- *Retail* – 350 square feet per employee. This reflects a mix of retail and restaurant space and also a whole range of personal services. Restaurant space typically has a higher employment density, while retail space ranges widely depending on the type of retail, with furniture stores, for example, representing the lower end. The density range within this category is wide, with some types of retail as much as five times as dense as other types. The average of 350 square feet per employee reflects a heavier weighting on more employee dense retail uses such as restaurants and personal services than large retail spaces such as furniture stores and big box retailers.
- *Hotel* – 1,000 square feet per employee. The 1,000 square feet per employee average covers a range from higher service hotels, which are far more employment intensive, to minimal service hotels which have a lower employment density. KMA gathered data points on employment density of hotels built in Sonoma and Napa Counties to confirm that 1,000 square feet per employee was appropriate for the City of Sonoma.

KMA conducted the analysis on 100,000 square foot buildings. This facilitates the presentation of the nexus findings, as it allows jobs and housing units to be presented in whole numbers that can be more readily understood. At the conclusion of the analysis, the findings are divided by building size to express the linkages per square foot, so that the findings can be applied to buildings of any size.

Step 2 – Adjustment for Changing Industries

This step is an adjustment to take into account any declines, changes and shifts within all sectors of the economy and to recognize that new space is not always 100% equivalent to net new employees. A 15% downward adjustment is utilized to recognize long-term employment shifts and the likelihood of continuing changes in the local economy (see Section II discussion).

Step 3 – Adjustment from Employees to Employee Households

This step (Table 1) converts the number of employees to the number of employee households, recognizing that that there is, on average, more than one worker per household, and thus the number of housing units needed for new workers is less than the number of new workers. The workers-per-worker-household ratio eliminates from the equation all non-working households, such as retired persons and students.

The number of workers per household in a given geographic area is a function of household size, labor force participation rate and employment availability, as well as other factors. According to the 2011-2013 ACS, the number of workers per worker household in Sonoma County was 1.73, including full- and part-time workers. The total number of jobs created is divided by 1.73 to determine the number of new households. This is a conservative estimate because it excludes all non-worker households (such as students and the retired). If the average number of workers in all households was used, it would have produced a greater demand for housing units.

Step 4 – Occupational Distribution of Employees

Estimating the occupational breakdown of employees is the first step to arrive at income levels. The Bureau of Labor Statistics publishes data on the distribution of occupations within industries. The industries included in the analysis vary by building type.

- For office buildings, the mix of industries was customized based on employment by industry sector in Sonoma County using California Employment Development Department (EDD) data. This category includes traditional office tenants, such as architectural & engineering firms, realtors, insurance agents, employment services, legal and business services, as well as medical office tenants such as doctors and dentists.
- For retail space, the industries include a mix of retail, restaurant and personal service uses tailored to Sonoma County based on current employment levels reported by EDD.
- For hotel buildings, the industry includes Hotels, Motels and other accommodations, excluding casino hotels.

Once the industries are selected, the May 2015 National Industry-Specific Occupational Estimates, published by the Bureau of Labor Statistics (BLS), are used to translate industries to occupations. At the end of this step, the occupational composition of employees in the three types of buildings has been estimated. The occupational compositions that reflect the expected mix of activities in the new buildings are presented in the tables in Appendix B.

- Office employment in Sonoma County includes a range of office and administrative support occupations (28%), healthcare practitioners (9%), and computer and mathematical occupations (7%), among others.

- Retail employment consists of predominantly food preparation and serving occupations (37%) and sales related occupations (33%), with office and administrative support occupations making up an additional 10%.
- Hotels employ workers primarily from three main occupation categories: building and grounds cleaning and maintenance (maid service, etc.), food preparation and serving related, and office and administrative support, which together make up 76% of Hotel workers. Other Hotel occupations include personal care, management, sales, production and maintenance and repair.

The results of Step #4 are shown on Table 1 at the end of this section; the table shows both the percentage of total employee households and the number of employee households in the prototype buildings.

Step 5 – Estimated Employee Household Income

In this step, occupations are translated to employee incomes based on recent Sonoma County wage and salary information from EDD. The wage and salary information summarized in the tables in Appendix B provided the income inputs to the analysis. Worker compensation used in the analysis assumes full time employment (40 hours per week) based on EDD's convention for reporting annual compensation.

In the even numbered Appendix B tables, EDD 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. 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 occupations with the lowest compensation levels are in Retail and Hotel buildings.

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. The model recognizes that many, but not all households have multiple incomes.

Step 6 – Distribution of Household Size and Number of Workers

In this step, the model examines the demographics of Sonoma County in order to identify the percentage of households applicable to each potential combination of household size and number of workers. Percentages are calculated using data from the 2011-2013 American Community Survey. This data enables the analysis to account 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 worker households by number of workers and household size.

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

This 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/number of workers combination, with Step 6, the percentage of worker households that have each 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 the number of households in each affordability tier.

Table 2-A shows the results after completing Steps 5, 6, and 7 for the Extremely Low Income Tier. The methodology is repeated for each of the lower income tiers (Tables 2-B, 2-C, and 2-D), resulting in a total count of worker households per 100 units.

Summary by Income Level

Table 3 at the end of this section indicates the results of the analysis for each of the building types and for all of the income categories. The table presents the number of households in each affordability category, the total number up to 120% of median, and the remaining households earning over 120% of median associated with a 100,000 square foot building.

The findings in Table 3 are summarized below:

New Worker Households by Income Level per 100,000 square feet

	Office	Retail	Hotel
Extremely Low (0%-30% AMI)	1.7	16.2	3.6
Very Low Income (30%-50% AMI)	15.7	44.2	15.2
Low Income (50%-80% AMI)	35.9	47.0	15.9
Moderate Income (80%-120% AMI)	38.5	22.7	9.8
Subtotal through 120% AMI	**91.8**	**130.0**	**44.5**
Above Moderate (over 120% AMI)	72.0	10.4	4.6
Total	**163.9**	**140.4**	**49.2**

The table below summarizes the percentage of total new worker households that falls into each income category. As indicated, over 90% of Retail / Restaurant and Hotel worker households are below the 120% of median income level. By contrast, in Office buildings, only approximately 56% of worker households fall below 120% of median.

Nexus Analysis Result: Affordable Housing Need by Income Tier

	Office	Retail	Hotel
Extremely Low (0%-30% AMI)	1.0%	11.5%	7.4%
Very Low Income (30%-50% AMI)	9.6%	31.4%	30.9%
Low Income (50%-80% AMI)	21.9%	33.5%	32.4%
Moderate Income (80%-120% AMI)	23.5%	16.2%	19.9%
Subtotal through 120% AMI	**56.1%**	**92.6%**	**90.6%**
Above Moderate (over 120% AMI)	43.9%	7.4%	9.4%
Total	**100%**	**100%**	**100%**

Summary by Square Foot Building Area

The analysis thus far has used 100,000 square foot buildings. In this step, the conclusions are translated to households per square foot by income level (see Table 4).

For example, for office buildings, household generation per square foot is as follows:

New Worker Households Per Square Foot of New Office Space	
Extremely Low (0%-30% AMI)	0.00001660
Very Low Income (30%-50% AMI)	0.00015705
Low Income (50%-80% AMI)	0.00035940
Moderate Income (80%-120% AMI)	0.00038543
Total, Less than 120% AMI	0.00091848

This is the summary of the housing nexus analysis, or the linkage from buildings to employees to housing demand, by income level. We believe that it is a conservative approximation that most likely understates the households at each income level generated by these building types.

TABLE 1
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION BY BUILDING TYPE
JOBS HOUSING NEXUS ANALYSIS ***DRAFT***
CITY OF SONOMA, CA

Per 100,000 Sq.Ft. of Building Area	**Office**	**Retail**	**Hotel**
Step 1 - Estimate of Number of Employees			
Employment Density (SF/Employee)	300	350	1,000
Number of Employees Per 100,000 SF Building Area	333	286	100
Step 2 - Net New Employees after Declining Industries Adjustment (15%)	283	243	85
Step 3 - Adjustment for Number of Households (1.73)	163.9	140.4	49.2
Step 4 - Occupation Distribution[(1)]			
Management Occupations	7.3%	2.3%	4.7%
Business and Financial Operations	11.3%	0.6%	1.5%
Computer and Mathematical	7.0%	0.1%	0.1%
Architecture and Engineering	4.7%	0.0%	0.0%
Life, Physical, and Social Science	1.6%	0.0%	0.0%
Community and Social Services	0.4%	0.0%	0.0%
Legal	2.2%	0.0%	0.0%
Education, Training, and Library	0.4%	0.0%	0.0%
Arts, Design, Entertainment, Sports, and Media	1.5%	0.5%	0.2%
Healthcare Practitioners and Technical	9.5%	1.4%	0.0%
Healthcare Support	5.4%	0.3%	0.5%
Protective Service	0.4%	0.3%	1.6%
Food Preparation and Serving Related	0.4%	37.2%	24.8%
Building and Grounds Cleaning and Maint.	1.4%	0.7%	31.6%
Personal Care and Service	0.6%	2.5%	3.9%
Sales and Related	6.6%	33.0%	2.4%
Office and Administrative Support	28.3%	10.6%	20.0%
Farming, Fishing, and Forestry	0.1%	0.1%	0.0%
Construction and Extraction	0.9%	0.2%	0.1%
Installation, Maintenance, and Repair	3.5%	2.6%	5.1%
Production	3.2%	2.5%	2.2%
Transportation and Material Moving	3.3%	5.2%	1.1%
Totals	**100.0%**	**100.0%**	**100.0%**
Management Occupations	12.0	3.2	2.3
Business and Financial Operations	18.5	0.8	0.7
Computer and Mathematical	11.5	0.1	0.0
Architecture and Engineering	7.7	0.0	0.0
Life, Physical, and Social Science	2.7	0.0	0.0
Community and Social Services	0.6	0.0	0.0
Legal	3.6	0.0	0.0
Education, Training, and Library	0.6	0.0	0.0
Arts, Design, Entertainment, Sports, and Media	2.5	0.7	0.1
Healthcare Practitioners and Technical	15.5	2.0	0.0
Healthcare Support	8.8	0.4	0.3
Protective Service	0.7	0.4	0.8
Food Preparation and Serving Related	0.6	52.2	12.2
Building and Grounds Cleaning and Maint.	2.3	0.9	15.5
Personal Care and Service	1.0	3.5	1.9
Sales and Related	10.9	46.4	1.2
Office and Administrative Support	46.4	14.8	9.8
Farming, Fishing, and Forestry	0.1	0.1	0.0
Construction and Extraction	1.4	0.2	0.1
Installation, Maintenance, and Repair	5.7	3.6	2.5
Production	5.3	3.5	1.1
Transportation and Material Moving	5.4	7.3	0.5
Totals	**163.9**	**140.4**	**49.2**

Notes:
(1) Appendix B Tables 1 through 6 contain additional information regarding worker occupation categories.

TABLE 2-A
ESTIMATE OF QUALIFYING HOUSEHOLDS - EXTREMELY LOW INCOME
JOBS HOUSING NEXUS ANALYSIS
CITY OF SONOMA, CA ***DRAFT***

Analysis for Households Earning up to 30% of Median

	Office	Retail	Hotel
Per 100,000 Sq.Ft. of Building Area			
Step 5, 6, & 7 - Households Earning up to 30% of Median[(1)]			
Management	0.00	0.00	0.00
Business and Financial Operations	0.00	0.00	0.00
Computer and Mathematical	0.00	0.00	0.00
Architecture and Engineering	0.00	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00
Community and Social Services	0.00	0.00	0.00
Legal	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00
Healthcare Practitioners and Technical	0.00	0.00	0.00
Healthcare Support	0.09	0.00	0.00
Protective Service	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	7.93	1.45
Building Grounds and Maintenance	0.00	0.00	1.26
Personal Care and Service	0.00	0.33	0.24
Sales and Related	0.42	5.53	0.07
Office and Admin	0.41	0.77	0.30
Farm, Fishing, and Forestry	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00
Installation Maintenance and Repair	0.01	0.02	0.01
Production	0.20	0.23	0.11
Transportation and Material Moving	0.36	0.67	0.00
HH earning up to 30% of Median - major occupations	1.49	15.49	3.44
HH earning up to 30% of Median - all other occupations	0.16	0.67	0.19
Total Households Earning up to 30% of Median	**1.7**	**16.2**	**3.6**

Notes:
(1) Appendix B Tables 1 through 6 contain additional information regarding worker occupation categories.

TABLE 2-B
ESTIMATE OF QUALIFYING HOUSEHOLDS - VERY LOW INCOME
JOBS HOUSING NEXUS ANALYSIS
CITY OF SONOMA, CA ***DRAFT***

Analysis for Households Earning from 30% to 50% of Median

	Office	Retail	Hotel
Per 100,000 Sq.Ft. of Building Area			
Step 5, 6, & 7 - Households Earning from 30% to 50% of Median[(1)]			
Management	0.04	0.01	0.06
Business and Financial Operations	0.08	0.00	0.00
Computer and Mathematical	0.08	0.00	0.00
Architecture and Engineering	0.00	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00
Community and Social Services	0.00	0.00	0.00
Legal	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00
Healthcare Practitioners and Technical	0.21	0.00	0.00
Healthcare Support	1.28	0.00	0.00
Protective Service	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	18.18	4.02
Building Grounds and Maintenance	0.00	0.00	6.02
Personal Care and Service	0.00	1.29	0.70
Sales and Related	1.51	15.28	0.22
Office and Admin	7.42	3.76	2.70
Farm, Fishing, and Forestry	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00
Installation Maintenance and Repair	0.38	0.33	0.21
Production	1.41	1.09	0.47
Transportation and Material Moving	1.73	2.38	0.00
HH earning from 30%-50% of Median - major occupations	14.14	42.32	14.40
HH earning from 30%-50% of Median - all other occupation	1.56	1.83	0.79
Total Households Earning from 30%-50% of Median	**15.7**	**44.2**	**15.2**

Notes:
(1) Appendix B Tables 1 through 6 contain additional information regarding worker occupation categories.

TABLE 2-C
ESTIMATE OF QUALIFYING HOUSEHOLDS - LOW INCOME
JOBS HOUSING NEXUS ANALYSIS
CITY OF SONOMA, CA ***DRAFT***

Analysis for Households Earning from 50% to 80% of Median

	Office	Retail	Hotel
Per 100,000 Sq.Ft. of Building Area			
Step 5, 6, & 7 - Households Earning from 50% to 80% of Median[(1)]			
Management	0.52	0.29	0.34
Business and Financial Operations	2.30	0.00	0.00
Computer and Mathematical	0.77	0.00	0.00
Architecture and Engineering	0.21	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00
Community and Social Services	0.00	0.00	0.00
Legal	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00
Healthcare Practitioners and Technical	1.77	0.00	0.00
Healthcare Support	3.14	0.00	0.00
Protective Service	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	18.03	4.26
Building Grounds and Maintenance	0.00	0.00	5.16
Personal Care and Service	0.00	1.23	0.64
Sales and Related	2.97	15.74	0.32
Office and Admin	15.55	5.01	3.32
Farm, Fishing, and Forestry	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00
Installation Maintenance and Repair	1.37	1.00	0.69
Production	1.87	1.20	0.35
Transportation and Material Moving	1.90	2.56	0.00
HH earning from 50%-80% of Median - major occupations	32.37	45.06	15.09
HH earning from 50%-80% of Median - all other occupation	3.57	1.95	0.83
Total Households Earning from 50%-80% of Median	**35.9**	**47.0**	**15.9**

Notes:
(1) Appendix B Tables 1 through 6 contain additional information regarding worker occupation categories.

TABLE 2-D
ESTIMATE OF QUALIFYING HOUSEHOLDS - MODERATE INCOME
JOBS HOUSING NEXUS ANALYSIS
CITY OF SONOMA, CA ***DRAFT***

Analysis for Households Earning from 80% to 120% of Median

	Office	Retail	Hotel
Per 100,000 Sq.Ft. of Building Area			
Step 5, 6, & 7 - Households Earning from 80% to 120% of Median[(1)]			
Management	1.60	0.66	0.59
Business and Financial Operations	4.55	0.00	0.00
Computer and Mathematical	2.03	0.00	0.00
Architecture and Engineering	1.28	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00
Community and Social Services	0.00	0.00	0.00
Legal	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00
Healthcare Practitioners and Technical	2.77	0.00	0.00
Healthcare Support	2.47	0.00	0.00
Protective Service	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	6.40	1.94
Building Grounds and Maintenance	0.00	0.00	2.69
Personal Care and Service	0.00	0.56	0.32
Sales and Related	2.50	7.65	0.27
Office and Admin	13.32	3.44	2.50
Farm, Fishing, and Forestry	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00
Installation Maintenance and Repair	1.88	1.14	0.84
Production	1.22	0.65	0.14
Transportation and Material Moving	1.10	1.26	0.00
HH earning from 80%-120% of Median - major occupations	34.71	21.76	9.29
HH earning from 80%-120% of Median - all other occupatio	3.83	0.94	0.51
Total Households Earning from 80%-120% of Median	**38.5**	**22.7**	**9.8**

Notes:
(1) Appendix B Tables 1 through 6 contain additional information regarding worker occupation categories.

TABLE 3
WORKER HOUSEHOLDS BY AFFORDABILITY LEVEL
JOBS HOUSING NEXUS ANALYSIS ***DRAFT***
CITY OF SONOMA, CA

Per 100,000 Sq.Ft. of Building Area

	Office	Retail	Hotel
NUMBER OF HOUSEHOLDS BY INCOME TIER [(1)]			
Extremely Low (0% - 30% AMI)	1.7	16.2	3.6
Very Low Income (30% - 50% AMI)	15.7	44.2	15.2
Low Income (50% to 80% AMI)	35.9	47.0	15.9
Moderate Income (80% to 120% AMI)	38.5	22.7	9.8
Subtotal - Affordable Categories	**91.8**	**130.0**	**44.5**
Above Moderate Income (> 120% AMI)	72.0	10.4	4.6
Total New Worker Households	**163.9**	**140.4**	**49.2**
PERCENTAGE OF HOUSEHOLDS BY INCOME TIER			
Extremely Low (0% - 30% AMI)	1.0%	11.5%	7.4%
Very Low Income (30% - 50% AMI)	9.6%	31.4%	30.9%
Low Income (50% to 80% AMI)	21.9%	33.5%	32.4%
Moderate Income (80% to 120% AMI)	23.5%	16.2%	19.9%
Subtotal - Affordable Categories	**56.1%**	**92.6%**	**90.6%**
Above Moderate Income (> 120% AMI)	43.9%	7.4%	9.4%
Total	**100%**	**100%**	**100%**

Notes:
(1) Appendix B Tables 1 through 6 contain additional information regarding worker occupation categories.

TABLE 4
HOUSING DEMAND NEXUS FACTORS PER SQ.FT. OF BUILDING AREA
JOBS HOUSING NEXUS ANALYSIS
CITY OF SONOMA, CA ***DRAFT***

Number of Housing Units per Square Foot of Building Area[(1)]

	Office	Retail	Hotel
Extremely Low (0% - 30% AMI)	0.00001660	0.00016156	0.00003627
Very Low Income (30% - 50% AMI)	0.00015705	0.00044156	0.00015193
Low Income (50% to 80% AMI)	0.00035940	0.00047007	0.00015919
Moderate Income (80% to 120% AMI)	0.00038543	0.00022702	0.00009799
Total	**0.00091848**	**0.00130020**	**0.00044539**

Notes:
[(1)]Calculated by dividing number of household in Table 3 by 100,000 square feet to convert to households per square foot of building

IV. TOTAL HOUSING NEXUS COSTS

This section takes the conclusions of the previous section on the number of households in the Extremely Low, Very Low, Low, and Moderate Income categories associated with each building type, and identifies the total cost of assistance required to make housing affordable. This section puts a cost on the units at each income level to produce the "total nexus cost."

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 5-7 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 6.

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 7.

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
Affordable Rental Units			
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)
Affordable Ownership Units			
Moderate (80% to 120% AMI)	$288,000	$475,000	($187,000)

AMI = Area Median Income

Tables 5-7 present the detailed affordability gap calculations. Note that the affordability gaps are the same as those assumed in the residential nexus analysis.

Maximum Fees Supported by the Analysis

The last step in the nexus analysis calculates the cost of delivering affordable housing to the households created by new non-residential development.

Table 8 summarizes the analysis. The demand for affordable units in each income range that is generated per square foot of building area is drawn from Table 4 in the previous section. The "Maximum Fee per Square Foot" represents the results of the following calculation:

Affordability Gap (from above)	X	No. affordable units generated per square foot of building area. (from Table 4)	=	Maximum Fee Per Square Foot of Building Area

The maximum impact fees for the three building types in Sonoma are as follows:

Maximum Fee Per Square Foot of Building Area

Building Type	Maximum Supported Fee Per Square Foot
Office	$184.00
Retail	$282.10
Hotel	$94.80

Note: Nexus findings are not recommended fee levels.
See Table 8 for detail.

These totals represent the maximum impact fee that could be charged for new non-residential construction to mitigate its impacts on the need for affordable housing. The totals are not recommended fee levels; they represent only the maximums established by this analysis.

These total nexus or mitigation costs are high due to the low compensation levels of many jobs, coupled with the high cost of developing residential units. Higher employment densities also contribute to higher nexus costs. These factors are especially pronounced with the Retail category, yielding a very high nexus cost.

EDD data for 2016 indicates compensation for Retail workers in Sonoma County averages approximately $32,000 per year. This means many workers qualify as Very Low Income (four-person households earning $41,300 and below[2]); as shown in Table 3, 42% of Retail workers fall in the Extremely Low or Very Low Income categories. Virtually all Retail employee households earn less than 120% of the median income. Hotel workers have similar compensation levels (averaging $35,000 annually); however, since there are fewer employees per square feet of building area, the resulting mitigation costs are much lower on a per square foot basis.

Conservative Assumptions

In establishing the maximum impact fee, many conservative assumptions were employed in the analysis that result in a cost to mitigate affordable housing needs that may be considerably understated. These conservative assumptions include:

- Only direct employees are counted in the analysis. Many indirect employees are also associated with each new workspace. Indirect employees in an office building, for example, include security, delivery personnel, building cleaning and maintenance personnel, and a whole range of others. Hotels do have many of these workers on staff, but hotels also "contract out" a number of services that are not taken into account in the analysis. In addition, there are 'induced' employment effects when the direct employees spend their earnings in the local economy. It would certainly be appropriate to include the affordable housing demand generated by the indirect and induced jobs in this nexus

[2] Income criteria vary by household size.

analysis. For simplicity, however, and because the results using only direct employees are significantly higher than the fee levels that are typically considered for adoption, we limit it to direct employees only.

- A downward adjustment of 15% has been reflected in the analysis to account for declining industries and the potential that displaced workers from declining sectors of the economy will fill a portion of jobs in new workplace buildings. This is a conservative assumption because many displaced workers may exit the workforce entirely by retiring. In addition, development of new workspace buildings will typically occur only to the extent net new demand exists after space vacated by businesses in declining sectors of the economy has been re-occupied. The 15% adjustment is conservative in that it is mainly necessary to cover a special case scenario in which buildings vacated by declining industries cannot be readily occupied by other users due to their special purpose nature or due to obsolescence.

- Annual incomes for workers reflect full time employment based upon EDD's convention for reporting the compensation information. In fact, many workers work less than full time; therefore, annual compensations used in the analysis are probably overstated, especially for Retail and Hotel, which tend to have a high number of part time employees.

- Affordability gaps are based upon the assumption that 4% Low Income Housing Tax Credit financing will be available. This reduces the affordability gap that needs to be filled if affordable units are to be made available.

In summary, many less conservative assumptions could be made that would justify a much higher maximum linkage fee.

TABLE 5
AFFORDABILITY GAP CALCULATION FOR MODERATE INCOME
JOBS HOUSING 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 [2]	$81,785
	Maximum Affordable Sales Price	$288,000 [3]
IV.	**Affordability Gap**	Per Unit
	Affordable Sales Price	$288,000
	(Less) Development Costs	($475,000)
	Affordability Gap - Moderate Income	($187,000)

[1] Construction costs include prevailing wages.

[2] 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.

[3] See Table 6 for Moderate Income home price estimate.

TABLE 6
ESTIMATED AFFORDABLE HOME PRICES - MODERATE INCOME
JOBS HOUSING 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
Key Assumptions	
- Mortgage Interest Rate [1]	5.50%
- Down Payment [2]	5.0%
- Property Taxes (% of sales price) [3]	1.10%
- HOA (per month) [4]	$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
I. Affordable Prototype				
Tenure			Rental	
Average Unit Size			880 square feet	
Density			20 dua	
II. Development Costs [1]		Per Unit	Per Unit	Per Unit
Total Development Costs			$425,000	
III. Supported Financing		Per Unit	Per Unit	Per Unit
Affordable Rents				
Average Number of Bedrooms		2 Bedrooms	2 Bedrooms	2 Bedrooms
Maximum TCAC Rent [2]		$556	$927	$1,113
(Less) Utility Allowance [3]		($57)	($57)	($57)
Maximum Monthly Rent		$499	$870	$1,056
Net Operating Income (NOI)				
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 [4]		$0	$0	$0
Net Operating Income (NOI)		($716)	$3,513	$5,633
Permanent Financing				
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
IV. Affordability Gap		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)

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

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

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

[4] Assumes tax exemption for non-profit general partner.

TABLE 8
TOTAL HOUSING NEXUS COST
JOBS HOUSING NEXUS ANALYSIS
CITY OF SONOMA, CA ***DRAFT***

INCOME CATEGORY	Affordability Gap Per Unit	Nexus Cost Per Sq.Ft. of Building Area[3]		
		Office	Retail	Hotel
Extremely Low (0% - 30% AMI)	$284,000 [1]	$4.70	$45.90	$10.30
Very Low Income (30% - 50% AMI)	$227,000 [1]	$35.70	$100.20	$34.50
Low Income (50% to 80% AMI)	$199,000 [1]	$71.50	$93.50	$31.70
Moderate Income (80% to 120% AMI)	$187,000 [2]	$72.10	$42.50	$18.30
Total		**$184.00**	**$282.10**	**$94.80**

Notes:

(1) Assumes rental units. Affordability Gap reflected is the remaining gap after financing available through 4% tax credits.

(2) Assumes ownership unit.

(3) Calculated by multiplying housing demand factors from Table 4 by the affordability gap.

APPENDIX A: DISCUSSION OF VARIOUS FACTORS IN RELATION TO NEXUS CONCEPT

This appendix provides a discussion of various specific factors and assumptions in relation to the nexus concept to supplement the overview provided in Section II.

1. Addressing the Housing Needs of a New Population vs. the Existing Population

This nexus study does not address the housing needs of the existing population. Rather, the study focuses exclusively on documenting and quantifying the housing needs created by development of new workplace buildings.

Local analyses of housing conditions have found that new housing affordable to lower income households is not being added to the supply in sufficient quantity to meet the needs of new employee households. If this were not the case and significant numbers of units were being added to the supply to accommodate the Low to Moderate income groups, or if residential units were experiencing significant long term vacancy levels, particularly in affordable units, then the need for new units would be questionable.

2. No Excess Supply of Affordable Housing

An assumption of this 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 workplace buildings. Based on a review of the current Census information for the City of 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.

3. Substitution Factor

Any given new building may be occupied partly, or even perhaps totally, by employees relocating from elsewhere in the region. Buildings are often leased entirely to firms relocating from other buildings in the same jurisdiction. However, when a firm relocates to a new building from elsewhere in the region, there is a space in an existing building that is vacated and occupied by another firm. That building in turn may be filled by some combination of newcomers to the area and existing workers. Somewhere in the chain there are jobs new to the region. The net effect is that new buildings accommodate new employees, although not necessarily inside the new buildings themselves.

4. Indirect Employment and Multiplier Effects

The multiplier effect refers to the concept that the income generated by a new job recycles through the economy and results in additional jobs. The total number of jobs generated is broken down into three categories – direct, indirect and induced. In the case of the nexus

analysis, the direct jobs are those located in the new workspace buildings that would be subject to the linkage fee. Multiplier effects encompass indirect and induced employment. Indirect jobs are generated by suppliers to the businesses located in the new workspace buildings. Induced jobs are generated by local spending on goods and services by employees.

Multiplier effects vary by industry. Industries that draw heavily on a network of local suppliers tend to generate larger multiplier effects. Industries that are labor intensive also tend to have larger multiplier effects as a result of the induced effects of employee spending.

Theoretically, a jobs-housing nexus analysis could consider multiplier effects although the potential for double-counting exists to the extent indirect and induced jobs are added in other new buildings in jurisdictions that have jobs housing linkage fees. KMA chose to omit the multiplier effects (the indirect and induced employment impacts) to avoid potential double-counting and make the analysis more conservative.

In addition, the nexus analysis addresses direct “inside” employment only. In the case of an office building, for example, direct employment covers the various managerial, professional and clerical people that work in the building; it does not include the security guards, the delivery services, the landscape maintenance workers, and many others that are associated with the normal functioning of an office building. In other words, any analysis that ties lower income housing to the number of workers inside buildings will continue to understate the demand. Thus, confining the analysis to the direct employees does not address all the lower income workers associated with each type of building and understates the impacts.

5. Economic Cycles

An impact analysis of this nature is intended to support a one-time impact requirement to address impacts generated over the life of a project (generally 40 years or more). Short-term conditions, such as a recession or a vigorous boom period, are not an appropriate basis for estimating impacts over the life of the building. These cycles can produce impacts that are higher or lower on a temporary basis.

Development of new workspace buildings tends to be minimal during a recession and generally remains minimal until conditions improve or there is confidence that improved conditions are imminent. When this occurs, the improved economic condition will absorb existing vacant space and underutilized capacity of existing workers, employed and unemployed. By the time new buildings become occupied, conditions will have likely improved.

To the limited extent that new workspace buildings are built during a recession, housing impacts from these new buildings may not be fully experienced immediately, but the impacts will be experienced at some point. New buildings delivered during a recession can sometimes sit vacant for a period after completion. Even if new buildings are immediately occupied, overall absorption of space can still be zero or negative if other buildings are vacated in the process.

Jobs added may also be filled in part by unemployed or underemployed workers who are already housed locally. As the economy recovers, firms will begin to expand and hire again filling unoccupied space as unemployment is reduced. New space delivered during the recession still adds to the total supply of employment space in the region. Though the jobs are not realized immediately, as the economy recovers and vacant space is filled, this new employment space absorbs or accommodates job growth. Although there may be a delay in experiencing the impacts, the fundamental relationship between new buildings, added jobs, and housing needs remains over the long term.

In contrast, during a vigorous economic boom period, conditions exist in which elevated impacts are experienced on a temporary basis. As an example, compression of employment densities can occur as firms add employees while making do with existing space. Compressed employment densities mean more jobs added for a given amount of building area. Boom periods also tend to go hand-in-hand with rising development costs and increasing home prices. These factors can bring market rate housing out of reach of a larger percentage of the workforce and increase the cost of delivering affordable units.

While the economic cycles can produce impacts that are temporarily higher or lower than normal, an impact fee is designed to be collected once, during the development of the project. Over the lifetime of the project, the impacts of the development on the demand for affordable housing will be realized, despite short-term booms and recessions.

APPENDIX B: SUPPORTING NEXUS TABLES

APPENDIX B TABLE 1
2015 NATIONAL OFFICE WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING NEXUS MODEL ***DRAFT***
CITY OF SONOMA, CA

Major Occupations (3% or more)	2015 National Office Industry Occupation Distribution	
Management Occupations	2,063,215	*7.3%*
Business and Financial Operations Occupations	3,190,576	*11.3%*
Computer and Mathematical Occupations	1,981,502	*7.0%*
Architecture and Engineering Occupations	1,328,838	*4.7%*
Healthcare Practitioners and Technical Occupations	2,666,757	*9.5%*
Healthcare Support Occupations	1,514,502	*5.4%*
Sales and Related Occupations	1,871,451	*6.6%*
Office and Administrative Support Occupations	7,986,729	*28.3%*
Installation, Maintenance, and Repair Occupations	974,064	*3.5%*
Production Occupations	911,399	*3.2%*
Transportation and Material Moving Occupations	925,657	*3.3%*
All Other Office Occupations	2,804,784	*9.9%*
INDUSTRY TOTAL	28,219,473	100.0%

Industries weighted to reflect Sonoma County industry mix.

Source: Bureau of Labor Statistics;
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Office Major Occupations Matrix; 2/15/2017; dd

APPENDIX B TABLE 2
AVERAGE ANNUAL COMPENSATION, 2016
OFFICE WORKER OCCUPATIONS
JOBS HOUSING NEXUS MODEL ***DRAFT***
CITY OF SONOMA, CA

Occupation [1]	2016 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers
Page 1 of 3			
Management Occupations			
General and Operations Managers	$119,900	26.5%	1.9%
Marketing Managers	$151,600	4.8%	0.3%
Sales Managers	$119,000	4.7%	0.3%
Computer and Information Systems Managers	$139,100	7.9%	0.6%
Financial Managers	$128,900	13.3%	1.0%
Architectural and Engineering Managers	$146,600	4.5%	0.3%
Property, Real Estate, and Community Association Managers	$65,600	10.9%	0.8%
Managers, All Other	$135,200	5.4%	0.4%
All Other Management Occupations (Avg. All Categories)	$115,500	21.9%	1.6%
Weighted Mean Annual Wage	***$119,200***	**100.0%**	**7.3%**
Business and Financial Operations Occupations			
Claims Adjusters, Examiners, and Investigators	$65,400	4.6%	0.5%
Human Resources Specialists	$72,700	6.9%	0.8%
Management Analysts	$90,000	11.6%	1.3%
Market Research Analysts and Marketing Specialists	$87,700	8.9%	1.0%
Business Operations Specialists, All Other	$71,900	9.5%	1.1%
Accountants and Auditors	$78,100	22.4%	2.5%
Financial Analysts	$76,200	4.1%	0.5%
Loan Officers	$75,000	7.5%	0.8%
All Other Business and Financial Operations (Avg. All Categories)	$74,600	24.6%	2.8%
Weighted Mean Annual Wage	***$77,600***	**100.0%**	**11.3%**
Computer and Mathematical Occupations			
Computer Systems Analysts	$83,900	14.4%	1.0%
Computer Programmers	$80,500	7.5%	0.5%
Software Developers, Applications	$114,400	19.5%	1.4%
Software Developers, Systems Software	$131,000	10.0%	0.7%
Network and Computer Systems Administrators	$88,900 [4]	9.2%	0.6%
Computer Network Architects	$113,600	4.4%	0.3%
Computer User Support Specialists	$60,700	13.2%	0.9%
Computer Network Support Specialists	$57,600	4.8%	0.3%
All Other Computer and Mathematical Occupations (Avg. All Categories)	$95,500	17.0%	1.2%
Weighted Mean Annual Wage	***$93,700***	**100.0%**	**7.0%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Office Compensation; 2/15/2017; dd

Occupation [1]	2016 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers

Page 2 of 3

Architecture and Engineering Occupations			
Architects, Except Landscape and Naval	$89,200	8.8%	0.4%
Civil Engineers	$103,400	16.4%	0.8%
Electrical Engineers	$111,000	6.6%	0.3%
Electronics Engineers, Except Computer	$113,000	5.2%	0.2%
Industrial Engineers	$94,500	4.0%	0.2%
Mechanical Engineers	$97,700	9.6%	0.5%
Architectural and Civil Drafters	$61,100	7.9%	0.4%
All Other Architecture and Engineering Occupations (Avg. All Categories)	$89,700	41.4%	2.0%
Weighted Mean Annual Wage	***$93,200***	**100.0%**	**4.7%**
Healthcare Practitioners and Technical Occupations			
Dentists, General	$161,200	7.0%	0.7%
Physicians and Surgeons, All Other	$155,200	6.9%	0.7%
Registered Nurses	$101,600	12.4%	1.2%
Dental Hygienists	$90,400	14.7%	1.4%
Veterinary Technologists and Technicians	$45,600	5.8%	0.5%
Licensed Practical and Licensed Vocational Nurses	$54,500	5.5%	0.5%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	$88,300	47.7%	4.5%
Weighted Mean Annual Wage	***$95,700***	**100.0%**	**9.5%**
Healthcare Support Occupations			
Nursing Assistants	$31,400	4.2%	0.2%
Dental Assistants	$44,900	40.3%	2.2%
Medical Assistants	$41,300	33.1%	1.8%
Veterinary Assistants and Laboratory Animal Caretakers	$28,000	7.7%	0.4%
All Other Healthcare Support Occupations (Avg. All Categories)	$39,300	14.6%	0.8%
Weighted Mean Annual Wage	***$41,000***	**100.0%**	**5.4%**
Sales and Related Occupations			
Counter and Rental Clerks	$31,000	9.2%	0.6%
Insurance Sales Agents	$72,900	20.1%	1.3%
Securities, Commodities, and Financial Services Sales Agents	$94,100	8.3%	0.5%
Sales Representatives, Services, All Other	$64,300	19.3%	1.3%
Real Estate Sales Agents	$65,000	10.9%	0.7%
Telemarketers	$27,200	5.0%	0.3%
All Other Sales and Related Occupations (Avg. All Categories)	$39,600	27.2%	1.8%
Weighted Mean Annual Wage	***$56,900***	**100.0%**	**6.6%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Office Compensation; 2/15/2017; dd

Occupation [1]	2016 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers
Page 3 of 3			
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$60,700	7.4%	2.1%
Bookkeeping, Accounting, and Auditing Clerks	$47,700	7.3%	2.1%
Tellers	$33,700	6.1%	1.7%
Customer Service Representatives	$42,300	13.6%	3.9%
Receptionists and Information Clerks	$34,600	8.6%	2.4%
Medical Secretaries	$44,200	5.6%	1.6%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	$42,100	10.0%	2.8%
Office Clerks, General	$38,200	12.7%	3.6%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$41,800	28.6%	8.1%
Weighted Mean Annual Wage	***$42,300***	**100.0%**	**28.3%**
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$83,000	7.1%	0.2%
Telecommunications Equipment Installers and Repairers, Except Line Installers	$54,200	19.8%	0.7%
Telecommunications Line Installers and Repairers	$73,300 [4]	7.5%	0.3%
Maintenance and Repair Workers, General	$47,700	52.8%	1.8%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	$52,800	12.8%	0.4%
Weighted Mean Annual Wage	***$54,100***	**100.0%**	**3.5%**
Production Occupations			
Team Assemblers	$36,800	18.1%	0.6%
Assemblers and Fabricators, All Other	$30,800	8.1%	0.3%
Inspectors, Testers, Sorters, Samplers, and Weighers	$47,000	11.9%	0.4%
Packaging and Filling Machine Operators and Tenders	$33,100	7.7%	0.2%
Helpers--Production Workers	$27,300	14.1%	0.5%
Production Workers, All Other	$30,600	10.1%	0.3%
All Other Production Occupations (Avg. All Categories)	$38,500	30.1%	1.0%
Weighted Mean Annual Wage	***$35,800***	**100.0%**	**3.2%**
Transportation and Material Moving Occupations			
Heavy and Tractor-Trailer Truck Drivers	$47,800	4.5%	0.1%
Industrial Truck and Tractor Operators	$36,200	7.7%	0.3%
Laborers and Freight, Stock, and Material Movers, Hand	$30,200	58.9%	1.9%
Packers and Packagers, Hand	$24,700	16.5%	0.5%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	$35,800	12.4%	0.4%
Weighted Mean Annual Wage	***$31,200***	**100.0%**	**3.3%**
Weighted Average Annual Wage - All Occupations	***$66,000***		90.1%

[1] Including occupations representing 4% or more of the major occupation group.

[2] 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.

[3] 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.

[4] Sonoma County wage data not available for this occupation; wages estimated based on Marin County wage data.

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Office Compensation; 2/15/2017; dd

APPENDIX B TABLE 3
2015 NATIONAL RETAIL WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING NEXUS MODEL ***DRAFT***
CITY OF SONOMA, CA

Major Occupations (2% or more)	2015 National Retail Industry Occupation Distribution	
Management Occupations	641,905	*2.3%*
Food Preparation and Serving Related Occupations	10,433,279	*37.2%*
Personal Care and Service Occupations	705,435	*2.5%*
Sales and Related Occupations	9,273,230	*33.0%*
Office and Administrative Support Occupations	2,964,137	*10.6%*
Installation, Maintenance, and Repair Occupations	724,581	*2.6%*
Production Occupations	700,166	*2.5%*
Transportation and Material Moving Occupations	1,464,853	*5.2%*
All Other Retail Occupations	1,165,280	*4.2%*
INDUSTRY TOTAL	28,072,867	100.0%

Industries weighted to reflect Sonoma County industry mix.

Source: Bureau of Labor Statistics;
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Retail Major Occupations Matrix; 2/15/2017; dd

APPENDIX B TABLE 4
AVERAGE ANNUAL COMPENSATION, 2016
RETAIL WORKER OCCUPATIONS
JOBS HOUSING NEXUS MODEL ***DRAFT***
CITY OF SONOMA, CA

Occupation [1]	2016 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Retail Workers
Page 1 of 2			
Management Occupations			
General and Operations Managers	$119,900	56.8%	1.3%
Sales Managers	$119,000	11.6%	0.3%
Food Service Managers	$56,000	24.7%	0.6%
All Other Management Occupations (Avg. All Categories)	$115,500	6.9%	0.2%
Weighted Mean Annual Wage	***$103,700***	**100.0%**	**2.3%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	$36,200	7.1%	2.6%
Cooks, Fast Food	$22,100	5.0%	1.8%
Cooks, Restaurant	$29,300	9.9%	3.7%
Food Preparation Workers	$24,800	7.2%	2.7%
Combined Food Preparation and Serving Workers, Including Fast Food	$21,900	28.4%	10.5%
Waiters and Waitresses	$31,200	21.0%	7.8%
All Other Business and Financial Operations (Avg. All Categories)	$27,400	21.4%	8.0%
Weighted Mean Annual Wage	***$27,000***	**100.0%**	**37.2%**
Personal Care and Service Occupations			
First-Line Supervisors of Personal Service Workers	$44,500	4.9%	0.1%
Nonfarm Animal Caretakers	$30,400	18.7%	0.5%
Hairdressers, Hairstylists, and Cosmetologists	$27,100	48.0%	1.2%
Manicurists and Pedicurists	$23,600	11.6%	0.3%
Skincare Specialists	$36,700	4.2%	0.1%
All Other Personal Care and Service Occupations (Avg. All Categories)	$31,400	12.6%	0.3%
Weighted Mean Annual Wage	***$29,100***	**100.0%**	**2.5%**
Sales and Related Occupations			
First-Line Supervisors of Retail Sales Workers	$44,700	11.8%	3.9%
Cashiers	$25,400	36.0%	11.9%
Retail Salespersons	$28,700	45.4%	15.0%
All Other Sales and Related Occupations (Avg. All Categories)	$39,600	6.8%	2.3%
Weighted Mean Annual Wage	***$30,100***	**100.0%**	**33.0%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Retail Compensation; 2/15/2017; dd

Occupation [1]	2016 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Retail Workers
Page 2 of 2			
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$60,700	6.2%	0.7%
Bookkeeping, Accounting, and Auditing Clerks	$47,700	6.6%	0.7%
Customer Service Representatives	$42,300	11.8%	1.2%
Shipping, Receiving, and Traffic Clerks	$34,500	4.3%	0.5%
Stock Clerks and Order Fillers	$28,700	50.2%	5.3%
Office Clerks, General	$38,200	7.6%	0.8%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$41,800	13.2%	1.4%
Weighted Mean Annual Wage	***$36,300***	**100.0%**	**10.6%**
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$83,000	7.8%	0.2%
Automotive Service Technicians and Mechanics	$49,600	37.4%	1.0%
Tire Repairers and Changers	$28,400	10.5%	0.3%
Maintenance and Repair Workers, General	$47,700	8.4%	0.2%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	$52,800	35.8%	0.9%
Weighted Mean Annual Wage	***$51,000***	**100.0%**	**2.6%**
Production Occupations			
First-Line Supervisors of Production and Operating Workers	$61,900	6.8%	0.2%
Bakers	$30,500	18.1%	0.5%
Butchers and Meat Cutters	$28,900	25.3%	0.6%
Meat, Poultry, and Fish Cutters and Trimmers	$29,000	5.2%	0.1%
Laundry and Dry-Cleaning Workers	$24,500	14.4%	0.4%
Pressers, Textile, Garment, and Related Materials	$24,700	5.6%	0.1%
All Other Production Occupations (Avg. All Categories)	$38,500	24.5%	0.6%
Weighted Mean Annual Wage	***$32,900***	**100.0%**	**2.5%**
Transportation and Material Moving Occupations			
Driver/Sales Workers	$35,100	15.3%	0.8%
Light Truck or Delivery Services Drivers	$37,800	16.8%	0.9%
Parking Lot Attendants	$24,700	7.9%	0.4%
Cleaners of Vehicles and Equipment	$25,100	6.2%	0.3%
Laborers and Freight, Stock, and Material Movers, Hand	$30,200	23.0%	1.2%
Packers and Packagers, Hand	$24,700	16.7%	0.9%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	$35,800	14.2%	0.7%
Weighted Mean Annual Wage	***$31,400***	**100.0%**	**5.2%**
Weighted Average Annual Wage - All Occupations	***$32,000***		95.8%

[1] Including occupations representing 4% or more of the major occupation group.

[2] 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.

[3] 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.

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Retail Compensation; 2/15/2017; dd

APPENDIX B TABLE 5
2015 NATIONAL HOTEL WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING NEXUS MODEL ***DRAFT***
CITY OF SONOMA, CA

Major Occupations (2% or more)	2015 National Hotel Industry Occupation Distribution	
Management Occupations	73,020	*4.7%*
Food Preparation and Serving Related Occupations	388,440	*24.8%*
Building and Grounds Cleaning and Maintenance Occupations	493,380	*31.6%*
Personal Care and Service Occupations	61,630	*3.9%*
Sales and Related Occupations	36,840	*2.4%*
Office and Administrative Support Occupations	313,160	*20.0%*
Installation, Maintenance, and Repair Occupations	80,400	*5.1%*
Production Occupations	34,890	*2.2%*
All Other Hotel Occupations	81,690	*5.2%*
INDUSTRY TOTAL	1,563,450	100.0%

Excludes casino hotels.

Source: Bureau of Labor Statistics;
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Hotel Major Occupations Matrix; 2/15/2017; dd

APPENDIX B TABLE 6
AVERAGE ANNUAL COMPENSATION, 2016
HOTEL WORKER OCCUPATIONS
JOBS HOUSING NEXUS MODEL ***DRAFT***
CITY OF SONOMA, CA

Occupation [1]	2016 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Hotel Workers
Page 1 of 2			
Management Occupations			
General and Operations Managers	$119,900	22.4%	1.0%
Sales Managers	$119,000	8.3%	0.4%
Financial Managers	$128,900	4.2%	0.2%
Food Service Managers	$56,000	10.5%	0.5%
Lodging Managers	$59,300	42.6%	2.0%
All Other Management Occupations (Avg. All Categories)	$115,500	12.0%	0.6%
Weighted Mean Annual Wage	***$87,100***	**100.0%**	**4.7%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	$36,200	5.6%	1.4%
Cooks, Restaurant	$29,300	14.2%	3.5%
Bartenders	$31,200	7.8%	1.9%
Waiters and Waitresses	$31,200	29.7%	7.4%
Food Servers, Nonrestaurant	$29,000	7.9%	2.0%
Dining Room and Cafeteria Attendants and Bartender Helpers	$27,600	10.6%	2.6%
Dishwashers	$22,700	6.5%	1.6%
All Other Business and Financial Operations (Avg. All Categories)	$27,400	17.7%	4.4%
Weighted Mean Annual Wage	***$29,400***	**100.0%**	**24.8%**
Building and Grounds Cleaning and Maintenance Occupations			
First-Line Supervisors of Housekeeping and Janitorial Workers	$45,500	6.1%	1.9%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	$29,800	6.0%	1.9%
Maids and Housekeeping Cleaners	$27,700	84.9%	26.8%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. All C	$31,800	3.1%	1.0%
Weighted Mean Annual Wage	***$29,000***	**100.0%**	**31.6%**
Personal Care and Service Occupations			
First-Line Supervisors of Personal Service Workers	$44,500	4.5%	0.2%
Amusement and Recreation Attendants	$23,800	13.0%	0.5%
Locker Room, Coatroom, and Dressing Room Attendants	$28,100	4.3%	0.2%
Baggage Porters and Bellhops	$24,700	34.9%	1.4%
Concierges	$29,700	18.1%	0.7%
Recreation Workers	$27,800	9.2%	0.4%
All Other Personal Care and Service Occupations (Avg. All Categories)	$31,400	16.0%	0.6%
Weighted Mean Annual Wage	***$27,900***	**100.0%**	**3.9%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Hotel Compensation; 2/15/2017; dd

Occupation [1]	2016 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Hotel Workers
Page 2 of 2			
Sales and Related Occupations			
Cashiers	$25,400	20.0%	0.5%
Retail Salespersons	$28,700	12.4%	0.3%
Sales Representatives, Services, All Other	$64,300	52.3%	1.2%
All Other Sales and Related Occupations (Avg. All Categories)	$39,600	15.3%	0.4%
Weighted Mean Annual Wage	***$48,300***	**100.0%**	**2.4%**
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$60,700	7.6%	1.5%
Bookkeeping, Accounting, and Auditing Clerks	$47,700	5.4%	1.1%
Hotel, Motel, and Resort Desk Clerks	$30,800	71.5%	14.3%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$41,800	15.5%	3.1%
Weighted Mean Annual Wage	***$35,700***	**100.0%**	**20.0%**
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$83,000	7.9%	0.4%
Maintenance and Repair Workers, General	$47,700	90.0%	4.6%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	$52,800	2.0%	0.1%
Weighted Mean Annual Wage	***$50,600***	**100.0%**	**5.1%**
Production Occupations			
Bakers	$30,500	7.2%	0.2%
Laundry and Dry-Cleaning Workers	$24,500	84.5%	1.9%
All Other Production Occupations (Avg. All Categories)	$38,500	8.3%	0.2%
Weighted Mean Annual Wage	***$26,100***	**100.0%**	**2.2%**
Weighted Average Annual Wage - All Occupations	***$35,000***		94.8%

[1] Including occupations representing 4% or more of the major occupation group.

[2] 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.

[3] 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.

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\SF-FS2\wp\19\19331\002\LandUses; Hotel Compensation; 2/15/2017; dd

APPENDIX C: NON-DUPLICATION BETWEEN POTENTIAL RESIDENTIAL AND NON-RESIDENTIAL IMPACT FEE PROGRAMS

The City of Sonoma is considering establishing a fee on non-residential and certain residential construction to help mitigate the impacts of the new buildings on the demand for affordable housing in the City. KMA conducted both a Non-Residential Nexus Analysis and a Residential Nexus to enable the potential adoption of affordable housing impact fees; in this appendix, KMA conducts an 'overlap analysis' to determine whether any double-counting of impacts is possible.

To briefly summarize the Non-Residential Nexus Analysis (which is a jobs-housing nexus analysis), the logic begins with jobs located in new workplace buildings including office buildings, retail spaces and hotels. The nexus analysis then identifies the compensation structure of the new jobs depending on the building type, the income of the new worker households, and the housing affordability level of the new worker households, concluding with the number of new worker households in the lower income affordability levels.

In the Residential Nexus Analysis, the logic begins with the households purchasing or renting new market rate units. The purchasing power of those households generates new jobs in the local economy. The nexus analysis quantifies the jobs created by the spending of the new households and then identifies the compensation structure of the new jobs, the income of the new worker households, and the housing affordability level of the new worker households, concluding with the number of new worker households in the lower income affordability levels.

Some of the jobs that are counted in the Non-Residential Nexus Analysis are also counted in the Residential Nexus Analysis. The overlap potential exists in jobs generated by the expenditures of County residents, such as expenditures for food, personal services, restaurant meals and entertainment. However, many jobs counted in the jobs housing nexus are not addressed in the residential nexus analysis at all. Firms in office and hotel buildings often serve a much broader, sometimes international, market and are generally not focused on providing services to local residents. These non-local serving jobs are not counted in the residential nexus analysis. Retail, some of which is primarily local-serving, is the building type that has the greatest potential for overlap between the jobs counted in the residential and non-residential nexus analyses.

Theoretically, there is a set of conditions in which 100% of the jobs counted for purposes of the Non-Residential Nexus are also counted for purposes of the Residential Nexus Analysis. For example, a small retail store or restaurant might be located within a mixed use project and entirely dependent upon customers from the apartment units in the project. The commercial space pays the non-residential fee and the apartments would pay a residential impact fee. In this special case, the two programs mitigate the affordable housing demand of the very same workers. The combined requirements of the two programs to fund construction of affordable units must not exceed 100% of the demand for affordable units generated by employees in the new commercial space.

Complete overlap between jobs counted in the Non-Residential Nexus Analysis and jobs counted in the Residential Nexus Analysis could occur only in a very narrow set of theoretical circumstances. The following analysis demonstrates that the combined mitigation requirements do not exceed the nexus even if every job counted in the Residential Nexus Analysis is also counted in the Non-Residential Nexus Analysis. As discussed, the theoretical possibility of 100% overlap exists mainly with retail jobs that serve residents of new housing in the City of Sonoma; therefore, the overlap analysis is focused on the retail land use.

Recommended Non-Residential Fee as a Percent of Maximum Fee

The Non-Residential Nexus Analysis calculates the maximum mitigation amount supported by the analysis. KMA recommended adoption of non-residential fees within the range of 4 - $7 per square foot for retail development. The overlap analysis is conducted on the high end of this range; if the City ultimately selects a higher fee level, the overlap analysis should be revised to the higher fee level.

Building Type	Maximum Nexus Amount	Maximum Recommended Fee Level	Percent of Maximum
Retail	$282.10	$7	2.5%

Source: Keyser Marston Associates Summary, Context Materials and Recommendations Report.

The conclusion is that the maximum recommended fee level for the City of Sonoma represents 2.5% of the nexus cost. So, at most, the Non-Residential fee would mitigate approximately 2.5% of the demand for affordable units generated by new non-residential space.

Recommended Residential Impact Fee as a Percent of Maximum Fee

KMA has recommended that the City consider a residential fee in the range of $8 to $12 per square foot level for for-sale projects and $3 to $9 per square foot for rental projects. The table below compares the maximum supported fee amounts to the maximum recommended fee levels. Again, if the City ultimately selects a higher fee level, this overlap analysis should be revised.

Maximum Recommended Fees as Percent of Maximum Fee				
	Larger Lot Single Family Detached	*Smaller Lot Single Family Detached*	*Townhome / Condominium*	*Rental Apartments*
Maximum Nexus Amount	$23	$23	$27	$22
Max. Recommended Fee	$12	$12	$12	$9
Max. Rec. Fee as % of Nexus	52%	52%	44%	41%

Source: Keyser Marston Associates Summary, Context Materials and Recommendations Report.

The conclusion is that the maximum recommended affordable housing impact fee level represents 41% to 52% of the maximum supported by the Residential Nexus analysis.

Combined Requirements within Nexus Maximums

The highest non-residential fee level recommended mitigates 2.5% of the maximum supported impact fee amount. The maximum recommended impact fee level for residential development represents up to 52% of the maximum supported impact fee amount. Therefore, the combined affordable housing mitigations would not exceed the nexus even if there were 100% overlap in the jobs counted in the two nexus analyses.

Maximum Percent of Housing Demand Mitigated	
Max Residential Fee as Percent of Residential Nexus	52%
Max Non-Res. Fee as Percent of Non-Residential Nexus for Retail	2.5%
Maximum Percent of Demand Mitigated	54.5%