CITY OF CUPERTINO

Non-Residential Jobs-Housing Nexus Analysis



Prepared by Keyser Marston Associates, Inc. April 2015





KEYSER MARSTON ASSOCIATES

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INTRODUCTION

The materials provided in this report pertain to the non-residential component of the City of Cupertino's Housing Mitigation Program, which requires that commercial and industrial development pay an affordable housing impact fee, or "housing fee." This report documents a Non-Residential Jobs-Housing Nexus Analysis, which provides legal support for establishing an affordable housing impact fee for non-residential development. The materials have been prepared by Keyser Marston Associates, Inc. (KMA) for the City of Cupertino pursuant to a contractual agreement.

The City of Cupertino adopted the Office and Industrial Mitigation fee program in 1993, establishing a housing impact fee levied on all new office and industrial construction. Fee revenues are deposited into the City's Below Market-Rate (BMR) Affordable Housing Fund (AHF) and used to increase the supply of affordable housing in Cupertino. The fee program was supported by a study prepared in 1992 entitled *A Study to Examine the Relationship of Land Use and the Creation of Additional Housing Needs* by Planning Resource and Associates. In 2004, KMA prepared a jobs-housing linkage analysis, or nexus study, in support of adjusting fees and expanding the fee program to include hotel and retail development. The fee is currently set at \$6.00 per square foot and applies to new office, industrial, hotel, retail and research and development (R&D) space.

In May, 2014, the City Council reviewed and authorized the City's 2014-2015 Work Program in which the Housing Mitigation Nexus Study was listed. The update to the Housing Mitigation fee is also a Housing Element strategy to address affordable housing needs in the community (Poicy HE-4 Housing Mitigation – Strategy 8 – Below Market-Rate (BMR) Affordable Housing Fund (AHF)). As a result, KMA was contracted to prepare a completely updated Non-Residential Jobs-Housing Nexus Analysis in support of updating fees. This report presents the methodology and findings of that analysis. Concurrently, KMA prepared a Residential Below Market Rate (BMR) Housing Nexus Analysis, which is presented in a separate report.

Purpose

The purpose of a Non-Residential Jobs-Housing Nexus Analysis is to quantify and document the impact of the construction of new workplace buildings (office, retail, hotel, R&D and industrial) and the employees that work in them, on the demand for affordable housing. Since jobs in all buildings cover a range in compensation levels, and the households of the workers range in size, there are needs at all affordability levels. This analysis quantifies the need for moderate and lower income housing created by each type of workplace building.

Analysis Scope and Organization

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

- Office, which includes High Tech, Industrial and Research & Development space
- Hotel, which includes motels, hotels, and extended stay hotels
- Retail / Restaurant, which includes all types of retail, restaurants and personal services

These building types are the same as those analyzed in the 2004 update analysis.

The household income categories addressed in the analysis are: Very Low income (households earning under 50% of Area Median Income (AMI)), Low Income (between 50% and 80% of AMI) and Moderate Income (80%-120% of AMI). In 2004, the analysis included a Workforce Income tier (120% - 150% of AMI). This income tier is not included in the current analysis as the City does not anticipate using fee revenues to assist this income group.

Data Sources and Qualifications

The analyses in this report have been prepared using the best and most recent data available. Local and current data was used whenever possible. Sources such as the American Community Survey of the U.S. Census, the 2010 Census, and California Employment Department (EDD) data were used extensively. Other sources and analyses when 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 and other sources.

SECTION I: THE NEXUS CONCEPT

Introduction

This section outlines the nexus concept and some of the key issues surrounding the effect of new non-residential development on the demand for affordable residential units in Cupertino. 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 the types of buildings in which there are workers 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 of the fee, the 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 AB 1600 or "nexus" studies. While commercial linkage fees for affordable housing are not clearly "fees" as defined by the Mitigation Fee Act, the methodology specified by the Act is appropriate for any nexus study.

Commercial linkage fees like Cupertino's 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 City of Sacramento and rejected the builders' petition.

The Nexus Methodology

An overview of the basic nexus concept and methodology is helpful to understand the discussion and concepts presented in this section. This overview consists of a quick "walk through" of the major steps of the analysis. The nexus analysis links new commercial buildings with new workers in the City; 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. The analysis begins by assuming a prototypical building size and then the following calculations are made:

- The total number of employees working in the building based on average employment density data is estimated.
- 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 (very low, low, and moderate) addressed in the analysis. Compensation data is from the California Employment Development Department (EDD) and is specific to Santa Clara County. Worker occupations by building type are derived from the 2013 Occupational Employment Survey by the U.S. Bureau of Labor Statistics and weighted to reflect the industry mix in Santa Clara 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 very low, low, and moderate-income households of various sizes.
- Then, the 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 Silicon Valley economy, like that of the U.S. as a whole, is constantly evolving. In Silicon Valley, over the past decade, employment in manufacturing sectors of the economy has continued to decline along with governmental employment at all levels (Federal, State, and local), farming, and construction employment. Jobs lost over the last decade in these declining sectors were replaced by job growth in other industry sectors.

The nexus analysis makes a downward adjustment to take these into account declines, changes and shifts within all sectors of the economy, recognizing that jobs added are not 100% net new in all cases. A 20% downward adjustment is utilized based on the long term shifts in employment that have occurred in some sectors of the Santa Clara County / Silicon Valley economy and the potential for continuing changes in the future. Long term declines in employment experienced in some sectors of the economy mean that some of the new jobs may be 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 jobs created by new development. This is a very conservative assumption given that the California Employment Development Department (EDD) is not projecting declines in any major industry sectors in Santa Clara County through 2020 and

to the extent there are displaced workers from declining industry sectors, workers may exit the workforce entirely rather than seek a job.

The 20% downward adjustment used for purposes of the analysis was derived from EDD historic monthly employment data by industry over the past 10 years. Data for June 2013 was compared to April 2004, selected based on having a 6.8% unemployment rate, approximately the same as the 6.9% unemployment rate in June 2013. Selecting two periods that have similar unemployment levels is to distinguish long-term declines from short-term effects of economic cycles which do not warrant an adjustment in the analysis. Over this period, approximately 18,700 jobs were lost in Santa Clara County in declining industry sectors. Over the same period, growing and stable industries, such as the tech sector, hospitality, health care and education, added a total of 95,400 jobs. These figures are used to establish a ratio between jobs lost in declining industries to jobs gained in growing and stable industries at 20%. The 20% factor is applied as an adjustment in the analysis, effectively assuming one in every five new jobs is filled by a worker down-sized from a declining industry who already lives locally.

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), non-duplication between a residential housing impact fee and a non-residential housing impact fee, changes in labor force participation, commuting, and economic cycles.

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¹ The 20% ratio is calculated as 18,700 jobs lost in declining sectors divided by 95,400 jobs gained in growing and stable sectors = 19.6% (rounded to 20%).

SECTION II: 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 three 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 Cupertino 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 three household income categories: Very Low, Low and Moderate Income. Household incomes for these affordability categories are published by the California Department of Housing and Community Development (HCD). For a four-person household, the maximum qualifying income levels for 2014 in Santa Clara County are shown in Exhibit 1:

Exhibit 1: Household Income Definitions (Santa Clara County, 2014)					
Income Range					
Income Category	Percent of Median	(Four Person Household)			
Very Low Income	0% to 50% of Median	\$0 to \$53,050			
Low Income	50% to 80% of Median	\$53,050 to \$84,900			
Moderate Income	80% to 120% of Median	\$84,900 to \$126,600			

Source: California Department of Housing and Community Development.

The above income categories and income limits are utilized for most housing programs. Income limits for other household sizes are presented in Appendix B Table 1.

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, including our previous analysis

conducted for the City. The model inputs are all local data to the extent possible, and are fully documented.

Tables II-1 through II-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 II-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 consistent with those assumed in the City's most recent General Plan.

- Office 300 square feet per employee. This represents an average of a range that includes corporate headquarters, industrial space, research & development space, hightech space, and medical offices.
- Hotel 2,000 square feet per employee. The General Plan estimate is 0.3 employees per room. Based on recent hotel projects, KMA assumes an average room size at 600 square feet per room, which at 0.3 employees per room results in an average of about 2,000 square feet per employee. The 2,000 square feet per employee average covers a range from higher service hotels to minimal service extended stay hotels.
- Retail / Restaurant 450 square feet per employee. This reflects a mix of retail and restaurant space. Restaurant space typically has a higher employment density, while retail space ranges widely depending on the type of retail.

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 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 20% downward adjustment is utilized to recognize the long-term shifts in employment occurring in Santa Clara County and the likelihood of continuing changes to the local economy.

Step 3 – Adjustment from Employees to Employee Households

This step (Table II-1) converts the number of employees to the number of employee household, 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. Since workers in the City of Cupertino live all over Santa Clara County and beyond, the County average is used in the analysis. According to the 2011-2013 ACS, the number of workers per worker household in Santa Clara County was 1.72, including full- and part-time workers. The total number of jobs created is divided by 1.72 to determine the number of new households. This is a conservative estimate because it excludes all non-worker households. 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 Santa Clara County using EDD data. Software publishers, computer systems and design, scientific R&D companies and information services are among the industries heavily weighted in Santa Clara County. Typical office uses are also represented realtors, insurance agents, employment services, legal and business services and others. Medical offices are also represented.
- For hotel buildings, the industry includes Hotels, Motels and other Accommodations.
- For retail space, the industries include a mix of Retail and Restaurant uses tailored to Santa Clara County based on current employment levels reported by EDD.

Once the industries are selected, the May 2013 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 have been estimated. The occupational compositions that reflect the expected mix of activities in the new buildings are presented in Appendix B Tables 2, 4, and 6.

 Occupations applicable to the Office industry mix in Santa Clara County include a range of management, business and financial, computer and mathematical, and sales occupations, among others.

- 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 77% of Hotel workers. Other Hotel occupations include personal care, management, sales, production and maintenance and repair.
- Retail / Restaurant employment consists of predominantly retail sales, food preparation and serving occupations (40%) and sales related occupations (34%), with office and administrative support occupations making up an additional 9.5%.

The results of Step #4 are shown on Table II-1; 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 Santa Clara County wage and salary information from EDD. The wage and salary information summarized in Appendix B Tables, 3, 5, and 7 provided the income inputs to the model. Exhibit 2 is a summary of the worker compensation levels for the three largest occupation groups by building type. The percentages refer to the share of employment within the building in the occupation group. Worker compensation used in the analysis assumes full time employment (40 hours per week) per EDD.

Exhibit 2: Santa Clara County Worker Compensations by Building Type (2014)					
Building Type	Major Occupation Group	% of	Average Annual Worker		
		Employment	Compensation		
		in Building	(based on full time)		
Office	Computer and Mathematical	22%	\$112,500		
	Office and administrative support	22%	\$46,700		
	Business and Financial	11%	\$94,800		
Hotel	Building and grounds, cleaning and	33%	\$30,000		
	maintenance				
	Food preparation and serving	25%	\$24,200		
	Office and administrative support	20%	\$32,500		
Retail /	Food preparation and serving	40%	\$23,600		
Restaurant	Sales and related occupations	34%	\$31,000		
	Office and administrative support	9%	\$37,700		

Source: California Employment Development Department, 2013 Occupational Employment Statistics Survey, Wages 1st Quarter 2014.

The occupations with the lowest compensation levels are in Retail / Restaurant and Hotel buildings.

For each occupational category shown in Table II-1, the 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 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 most, 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 Santa Clara County in order to develop probability factors for each potential combination of household size and number of workers. Probability factors are specific to Santa Clara County and are derived from the 2011-2013 American Community Survey. Application of these probability 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 Santa Clara County working 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 probability of a worker household having a given household size/number of workers combination. The result is the percentage 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 II-2 shows the results after completing Steps 5, 6, and 7 for the Very Low Income Tier. The methodology is repeated for each of the lower income tiers, resulting in a total count of worker households per 100 units.

Summary by Income Level

Table II-3 indicates the results of the analysis for each of the three building types, 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.

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

Exhibit 3: New Worker Households by Income Level per 100 Market Rate Units					
			Retail /		
	Office	Hotel	Restaurant		
Up to 50% Median Income	15.0	14.4	67.6		
50% to 80% Median Income	25.7	5.6	24.0		
80% to 120% Median Income	31.0	2.0	6.8		
Subtotal to 120% AMI	71.7	22.0	98.4		
Above 120% of Median	83.6	1.2	5.2		
Total New Worker Households	155.3	23.3	103.5		

Table II-3 also presents the percentage of total new worker households that fall into each income category. As indicated, 95% of Retail / Restaurant and almost 95% of Hotel worker households are below the 120% of median income level. By contrast, in Office buildings, only about 46% of worker households fall below 120% of median.

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 II-4).

For example, for offices, household generation per square foot is as follows in Exhibit 4:

Exhibit 4: Office				
Up to 50% Median Income	0.00014967			
50% to 80% Median Income	0.00025726			
80% to 120% Median Income	0.00031040			
Total	0.00071733			

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 II-1
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION BY BUILDING TYPE
NON-RESIDENTIAL NEXUS ANALYSIS
CITY OF CUPERTINO, CA

Per 100,000 SF Building	OFFICE	HOTEL	RESTAURANT
Step 1 - Estimate of Number of Employees	-		
Employment Density (SF/Employee) ⁽¹⁾	300	2,000	450
Number of Employees (100,000 SF Building)	333	50	222
Step 2 - Number of Employees after Declining Industries Adjustment (20%)	267	40	178
Step 3 - Adjustment for Number of Households (1.72)	155.3	23.3	103.5
Step 4 - Occupation Distribution ⁽²⁾			
Management Occupations	8.8%	4.5%	2.3%
Business and Financial Operations	11.2%	1.5%	0.6%
Computer and Mathematical	21.8%	0.1%	0.2%
Architecture and Engineering	4.9%	0.0%	0.0%
Life, Physical, and Social Science	3.0%	0.0%	0.0%
Community and Social Services	0.2%	0.0%	0.0%
Legal	2.0%	0.0%	0.0%
Education, Training, and Library	0.8%	0.0%	0.0%
Arts, Design, Entertainment, Sports, and Media	2.5%	0.3%	0.4%
Healthcare Practitioners and Technical	4.4%	0.0%	2.1%
Healthcare Support	2.5%	0.4%	0.2%
Protective Service	0.4%	1.6%	0.3%
Food Preparation and Serving Related	0.3%	24.5%	40.4%
Building and Grounds Cleaning and Maint.	1.0%	32.5%	0.6%
Personal Care and Service	0.4%	4.0%	0.3%
Sales and Administrative Support	6.4%	2.1%	34.3%
Office and Administrative Support Farming, Fishing, and Forestry	21.6% 0.0%	19.9% 0.0%	9.5% 0.0%
Construction and Extraction	0.6%	0.0%	0.0%
Installation, Maintenance, and Repair	2.2%	5.0%	2.5%
Production	2.6%	2.1%	1.7%
Transportation and Material Moving	2.3%	1.1%	4.4%
Totals	100.0%	100.0%	100.0%
Management Occupations	13.6	1.1	2.4
Business and Financial Operations	17.3	0.3	0.6
Computer and Mathematical	33.8	0.0	0.2
Architecture and Engineering	7.6	0.0	0.0
Life, Physical, and Social Science	4.7	0.0	0.0
Community and Social Services	0.4	0.0	0.0
Legal	3.1	0.0	0.0
Education, Training, and Library	1.3	0.0	0.0
Arts, Design, Entertainment, Sports, and Media	3.9	0.1	0.4
Healthcare Practitioners and Technical	6.8	0.0	2.2
Healthcare Support	4.0	0.1	0.2
Protective Service	0.6	0.4	0.3
Food Preparation and Serving Related	0.4	5.7	41.9
Building and Grounds Cleaning and Maint.	1.5	7.6	0.6
Personal Care and Service	0.6	0.9	0.3
Sales and Related	9.9	0.5	35.5
	33.6	4.6	9.8
Office and Administrative Support	0.0	0.0	0.0
Office and Administrative Support		0.0	5.0
Farming, Fishing, and Forestry		\cap \cap	U 3
Farming, Fishing, and Forestry Construction and Extraction	1.0	0.0	0.2 2.6
Farming, Fishing, and Forestry Construction and Extraction Installation, Maintenance, and Repair	1.0 3.5	1.2	2.6
Farming, Fishing, and Forestry Construction and Extraction	1.0		

Notes

⁽¹⁾ From the Cupertino General Plan EIR. For hotels, an additional assumption of 600 square feet per room is made.

⁽²⁾ Appendix B Tables 2 through 7 contain more information on how the percentages were derived.

TABLE II-2
ESTIMATE OF QUALIFYING HOUSEHOLDS - VERY LOW INCOME
NON-RESIDENTIAL NEXUS ANALYSIS
CITY OF CUPERTINO, CA

Analysis for Households Earning up to 50% of Median

	OFFICE	HOTEL	RETAIL / RESTAURANT
Per 100,000 SF Building			
Step 5, 6, & 7 - Households Earning up to 50% of Median	n ⁽¹⁾		
Management	0.03	0.10	0.08
Business and Financial Operations	0.16	0.00	0.00
Computer and Mathematical	0.39	0.00	0.00
Architecture and Engineering	0.05	0.00	0.00
Life, Physical and Social Science	0.30	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	0.10	0.00	0.33
Healthcare Support	0.00	0.00	0.00
Protective Service	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	4.48	33.34
Building Grounds and Maintenance	0.00	4.89	0.00
Personal Care and Service	0.00	0.64	0.00
Sales and Related	1.75	0.00	22.90
Office and Admin	9.48	2.65	4.65
Farm, Fishing, and Forestry	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00
Installation Maintenance and Repair	0.00	0.26	0.62
Production	0.00	0.00	0.00
Transportation and Material Moving	0.00	0.00	2.65
HH earning up to 50% of Median - major occupations	12.28	13.02	64.57
HH earning up to 50% of Median - all other occupations	2.69	1.37	3.01
Total Households Earning up to 50% of Median	15.0	14.4	67.6

Notes:

⁽¹⁾ Appendix B Tables 2, 4 and 6 contain additional information on Major Occupation Categories.

TABLE II-3
WORKER HOUSEHOLDS BY AFFORDABILITY LEVEL
NON-RESIDENTIAL NEXUS ANALYSIS
CITY OF CUPERTINO, CA

Per 100,000 S.F. Building			
	OFFICE	HOTEL	RETAIL / RESTAURANT
NUMBER OF HOUSEHOLDS BY INCOME TIER (1)			
Up to 50% Median Income	15.0	14.4	67.6
50% to 80% Median Income	25.7	5.6	24.0
80% to 120% Median Income	31.0	2.0	6.8
Subtotal to 120% AMI	71.7	22.0	98.4
Above 120% of Median	83.6	1.2	5.2
Total New Worker Households	155.3	23.3	103.5
PERCENTAGE OF HOUSEHOLDS BY INCOME TIEF	₹		
Up to 50% Median Income	9.6%	61.8%	65.3%
50% to 80% Median Income	16.6%	24.1%	23.2%
80% to 120% Median Income	20.0%	8.8%	6.6%
Subtotal to 120% AMI	46.2%	94.7%	95.0%
Above 120% of Median	53.8%	5.3%	5.0%
= Total	100%	100%	100%

Notes:

⁽¹⁾ See Appendix B Tables 3, 5 and 7 for compensation levels.

TABLE II-4 HOUSING DEMAND NEXUS FACTORS PER SQ.FT. OF BUILDING AREA NON-RESIDENTIAL NEXUS ANALYSIS CITY OF CUPERTINO, CA

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

	OFFICE	HOTEL	RETAIL / RESTAURANT
Up to 50% Median Income	0.00014967	0.00014385	0.00067586
50% to 80% Median Income	0.00025726	0.00005615	0.00023980
80% to 120% Median Income	0.00031040	0.00002050	0.00006795
Total	0.00071733	0.00022049	0.00098361

<u>Notes</u>

⁽¹⁾Calculated by dividing number of household in Table II-3 by 100,000 square feet to convert to households per square foot of building.

SECTION III: TOTAL HOUSING NEXUS COSTS

This section takes the conclusions of the previous section demonstrating the number of households in the Very Low, Low, and Moderate income categories created by each building type and identifies the total cost of assistance required to make housing affordable. The cost of assistance is calculated for each income category and multiplied by the number of households in the income category to produce the maximum justified impact fee.

A key component of the analysis is the size of the gap between what households can afford and the cost of producing additional housing in Cupertino, known as the "affordability gap." The cost of new housing is based on development costs for affordable projects recently built, or in the planning stages, in Cupertino and neighboring cities.

The analysis assumes that the City will provide subsidies for rental units for Very Low and Low Income households, and for ownership units for Moderate Income households. For the Very Low Income households, the affordability gaps are calculated based upon rents affordable to households earning 50% of AMI. For Low Income households, the gaps are calculated based upon rents affordable to households earning 60% of AMI. Both of these standards are consistent with Health & Safety Code provisions regarding affordable rent. In this update, KMA and the City assume the availability of federal and state tax credit financing for new affordable rental developments. The assumed rent levels are therefore also consistent with the tax credit program. This is a more conservative methodology for estimating the affordability gaps than the methodology used in the 2004 analysis, when no tax credits were assumed, and likely understates the actual need, since applications for federal tax credits greatly exceed their availability.

For the Moderate Income tier, the affordable sales price is calculated for a household earning 110% of Median Income, also consistent with Health & Safety Code provisions. In 2004, sales prices were calculated at 100% of Median; again, the adjustment makes the current analysis more conservative.

Development costs are estimated based on a review of recent affordable rental tax credit projects, and an estimate of total development costs for a modest condominium unit. Additional information regarding the derivation of the affordability gaps may be found in Appendix C of this report. Note that the affordability gaps, shown in Exhibit 5 below, are consistent with those assumed in the residential nexus analysis.

Exhibit 5: Affordability Gaps				
Very Low (0% - 50% AMI) (\$241,000)				
Low Income (51% - 80% AMI)	(\$213,000)			
Moderate Income (81% - 120% AMI)	(\$123,000)			

Source: KMA; see Appendix C. AMI = Area Median Income

Maximum Fees to Mitigate Impacts

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

Table III-1 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 II-4 in the previous section. The "Maximum Fee per Square Foot" shows the results of the following calculation: the Affordability Gap times the number of affordable units generated per square foot of building area.

The maximum impact fees for the three building types are as follows in Exhibit 6:

Exhibit 6: Maximum Fee Per Square Foot of Building Area			
Office / R&D / Industrial \$129.05			
Hotel	\$49.15 psf		
Retail / Restaurant	\$222.32 psf		

Note: Nexus findings are not recommended fee levels.

See Table III-1 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 <u>not</u> recommended fee levels; they represent only the maximums established by this analysis.

The maximum mitigation costs are high due to the low compensation levels of many jobs, coupled with the high cost of developing residential units. These factors are especially pronounced within the Retail / Restaurant category. Combined with a high density of employment, Retail / Restaurant yields a very high nexus cost.

EDD data for 2014 indicates compensation for Retail / Restaurant workers in Santa Clara County averages approximately \$33,000 per year. This means many workers qualify as Very Low Income (four-person households earning \$46,700 and below²); as shown in Table II-3, 65% of Retail / Restaurant workers fall in the Very Low Income category. Virtually all Retail / Restaurant employee households earn less than 120% of median. Hotel workers have similar compensation levels (averaging \$34,000 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.

For Office space, workers average approximately \$94,000 annually. This is almost three times the average compensation for Retail / Restaurant and Hotel workers. The higher compensation levels result in a lower maximum linkage fee for Office space as compared to Retail / Restaurant. The higher density of employees in an office building compared to a hotel, however, drives the higher maximum fees for the Office buildings despite the higher average incomes.

² Income criteria vary by household size.

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 analysis. For simplicity, however, and because the results using only direct employees are significantly higher than the fee levels under consideration by the City, we limit it to direct employees only.
- 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 / Restaurant and hotel, which tend to have a high number of part time employees.
- Affordability gaps are based upon the assumption that federal and state tax credit financing will be available, when in fact federal tax credits are greatly oversubscribed. In addition, a conservative estimate of total development costs for ownership units is used. Both assumptions reduce 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 III-1 TOTAL HOUSING NEXUS COST NON-RESIDENTIAL NEXUS ANALYSIS CITY OF CUPERTINO, CA

Nexus Cost Per Sq.Ft. of Building Area³

INCOME CATEGORY	Affordability Gap Per Unit	OFFICE	HOTEL	RETAIL / RESTAURANT
Up to 50% Median Income	\$241,000 ¹	\$36.07	\$34.67	\$162.88
50% to 80% Median Income	\$213,000 ¹	\$54.80	\$11.96	\$51.08
80% to 120% Median Income	\$123,000 ²	\$38.18	\$2.52	\$8.36
Total		\$129.05	\$49.15	\$222.32

Notes:

¹ Assumes tax credit rental units.

² Assumes ownership units priced at 110% AMI.

³ Calculated by multiplying housing demand factors from Table II-4 by the affordability gap.

SECTION IV: MATERIALS TO ASSIST IN ADJUSTING FEE LEVELS

The purpose of this section of the report is to provide information to assist City policy makers in updating the housing impact fee program, or setting new fee levels and possibly modifying the existing program in other ways. As indicated at the end of the previous section, this nexus analysis establishes maximum fee levels supported by the analysis. Recognizing a variety of policy objectives, City decision makers may set the fees or other obligations at any level below the maximum and may design program features to meet local goals and objectives.

The materials in this section have nothing to do with establishing the maximum justified fees. Instead, this section provides an assembly of materials that help answer questions frequently asked when designing a fee program: How can a fee be selected? How do we evaluate when a fee will slow development activity? What do other jurisdictions do in their programs?

Essentially, a city or county may design a fee program any way it sees fit, as long as the amounts are under the established maximums and as long as there is a rational policy basis. Three building types have been analyzed. Fees may be the same for all building types, fees may be calculated systematically from a formula, or fees may be individually tailored to each building type. In addition, a range of considerations may be brought to bear in designing the program to adapt to local conditions and objectives.

Existing Fee Levels

The existing fee program was adopted in 1993 following a nexus analysis prepared in 1992. The analysis was updated in 2004 by KMA and the fees were subsequently adjusted to their current levels and expanded to include hotel and retail. The Housing Mitigation Fee for non-residential development projects is currently \$6.00 per square foot.

This updated nexus analysis has been prepared as a basis for updating these fee levels.

Thresholds, Exemptions and Geographic Area Variations

Before proceeding to the approaches and considerations for adjusting fee levels, it can be helpful to recall that many programs employ thresholds, exemptions and other measures to adapt programs to specific situations and policy objectives. The existing Cupertino program establishes a flat fee for all non-residential construction of all sizes, with the exception of the reduction in fees for planned industrial park zones.

Variations used by other communities are:

Minimum Size Thresholds. Some jurisdictions establish a building size over which the
fee applies. Sometimes the fee applies to the whole building over the threshold, and
sometimes the fee applies only to the square foot area over the threshold.

Thresholds are often employed to minimize costs for infill small projects in older commercial areas, when such infill is a policy objective. There is also some savings in administrative costs. The disadvantage is lost revenue. Sunnyvale and Menlo Park employ minimum size thresholds; many other cities do not.

- Thresholds for Fee Amount Adjustments. Some jurisdictions apply reduced fees on small projects and higher fees on larger projects. Mountain View, for example, applies a reduced fee to small projects.
- Exemptions for Specific Building Types. Some programs exempt all buildings owned by non-profit organizations such as churches, hospitals, and schools. A common exemption is child care centers of any kind. Palo Alto and Menlo Park both exempt several building types.
- Geographic Area Variation. Some cities exempt areas specifically targeted for growth and new investment. A geographic area variation can also be used to adjust the fee in jurisdictions where there is a broad difference in economic health from one subarea to the next.

For more information on the programs in Palo Alto, Mountain View, Sunnyvale and Menlo Park, including details on thresholds and exemptions, see Table IV-2 at the end of this Section.

Fees as a Percent of Total Development Cost

This approach examines the total development cost associated with each building type and examines fee levels in the context of total costs. With this approach, we can consider the impact of a fee level on the total costs of developing each building type. This approach facilitates an evaluation of whether the amount is likely to affect development decisions.

For Cupertino, six non-residential prototype projects were selected for review of total development costs. The prototypes include two Retail / Restaurant projects, two Office projects and two Hotels. The two projects for each land use were selected to cover the lower end of the cost range and the middle to upper range. In all prototypes, costs could be considerably higher.

For each prototype, total site area, building area, number of parking spaces and other key development program components are identified, and cost estimates are provided for the major cost items — land, direct costs (construction, sitework, tenant improvements), and indirect costs inclusive of all permits and fees. The cost estimates were prepared based on local information and our firm's extensive work with real estate projects throughout Silicon Valley and the Bay Area.

Table V-1 at the end of this section is a two-page chart that presents the cost analysis information. Only the total development cost is of concern to the analysis for the purpose of examining fee amounts in context. The conclusions are as follows, with some minor rounding:

Office/ High-Tech/R&D \$400-\$550 per sq.ft.
Retail / Restaurant. \$400-\$650 per sq.ft.
Hotel \$400-\$500 per sq.ft.

One useful way to evaluate alternative fee levels is to examine them as a percent of total development costs. For example, at 3% or 5% of costs, we would see the following fee range for office development:

3% (\$400) 5% (\$550)Office/ High-Tech/R&D \$12.00 per sq.ft. \$27.50 per sq.ft.

Impact of Fees on Development Decisions

Fees are sometimes accused of pushing up development costs and driving projects to other jurisdictions where costs are lower. It has been our experience as an observer and practitioner of housing impact fees for over twenty years, that fees at a modest level relative to local market strength have virtually no bearing on development decisions. Other factors weigh so much more heavily that fees, if moderate, are of relatively little importance in location selection.

Market Context

An important consideration in the selection of fee levels is the relative strength of the various land uses examined in the nexus analysis. Real estate in Cupertino benefits from having a very strong employment base coupled with a residential population with a high median income.

The demand for office space is dominated by Apple Inc., but there is also strong demand from other high-tech companies, companies that locate in Cupertino to be near Apple, and professional services firms. A General Plan Amendment Market Study that BAE conducted for the City of Cupertino noted that Cupertino and the rest of the West Valley submarket generate strong demand for office space partially due to the proximity to 'executive-level residential areas.' Current vacancy rates are very low. Colliers International estimates office vacancy in Cupertino in the third quarter of 2014 at 1.9%, while the vacancy rate for Silicon Valley as a whole was 10.1%. With the construction of the Main Street Cupertino project and other speculative projects in Silicon Valley, vacancies are expected to rise in 2015, although Colliers notes that there are many companies actively looking for space and anticipates the new space leasing quickly.

Demand for R&D space is also very high; Colliers estimates that there was no vacancy in Cupertino in the third quarter of 2014. In the General Plan Amendment Market Study, BAE

discussed the decreasing distinction between R&D space and office space. Technological changes, shifting economics and high rental rates have resulted in less demand for and availability of industrial/production space and more demand for what was traditionally office space, where R&D is now conducted.

Retail demand in Cupertino is also strong, with the Sunnyvale/Cupertino submarket experiencing a vacancy rate of 4.4% in the third quarter of 2014, according to Terranomics. Asking rents for the submarket are high, at almost \$34.00 per square foot (triple net). Only Santa Clara has higher asking rents in Silicon Valley. Terranomics anticipates retail vacancies remaining low despite significant amounts of new retail space under construction because most new space is leased before hitting the market. Retail demand in Cupertino is driven by local-serving retail, both for workers and residents. The Vallco Shopping Center, Cupertino's regional mall, which has suffered from high vacancy rates and sub-par sales volumes in past years, was recently assembled and acquired by Sand Hill Property Company for redevelopment.

Hotel demand in Cupertino is driven by business travelers, with occupancy rates between 90 and 100% during the week and 60%-70% on weekends, according to the BAE report. There are several indicators that the hotel market in Cupertino is strong, including rising occupancy and average daily rates, a large refinancing of the Hilton Garden Inn, and several new projects in the pipeline. Main Street Cupertino will include a Marriott Residence Inn, and plans for a Hyatt House extended stay hotel were approved in October 2014.

In summary, the demand for non-residential space in Cupertino remains strong, predominantly driven by Cupertino's position as a center of employment for the high-tech industry, obviously dominated by Apple Inc. Very low vacancy rates and high asking rents suggest a tight market. High land costs and significant activity in the development pipeline also indicate a healthy market. A housing impact fee at any moderate level will not alter these conditions, in our opinion.

Other Jurisdictions' Housing Linkage Fee Programs

It is always of interest to policy makers to know whether other jurisdictions have similar programs in place. As a generality, these programs are still relatively few in number (compared to inclusionary and/or fees on residential development), although many cities are now considering them as a source of revenue for affordable housing, particularly with the end of redevelopment as a source of funds for affordable housing.

Table IV-2 is a chart summarizing the programs in several neighboring jurisdictions selected by the City, including San Jose, Fremont, Mountain View, Sunnyvale, Palo Alto, and Menlo Park. The fee levels in Cupertino are significantly lower than the fees in these other jurisdictions. KMA notes that most of the cities are in the process of examining and updating their fees. Mountain View's City Council voted in December to increase its fees to \$25 per square foot for office and industrial

space, while keeping the fee for retail and hotel unchanged at \$2.60. In Sunnyvale, the City Council directed staff to draft an ordinance requiring \$15.00 per square foot for office/industrial and \$7.50 on retail and lodging. Palo Alto's current fee is \$19.31 per square foot, although an update is in process. Menlo Park's current fees are \$14.92 for Office/R&D and \$8.10 for all other commercial development; its fees are also in the process of being updated. The jurisdictions with the highest fees tend to be in areas with very strong demand for non-residential space, such as Palo Alto and Mountain View. San Jose and Fremont have no affordable housing fee program for non-residential development.

Summary

This section of the report has provided materials to assist in deliberating a range of options for updating the fee levels on the three building types. All fee levels likely to be considered are well below the maximums established by the analysis.

The experience of other jurisdictions is often a powerful influence in approaching fee programs. The chart on other jurisdictions points out that Cupertino's fees are significantly lower than its neighbors and comparable jurisdictions. This is not consistent with Cupertino's relative market strength.

In our judgment, fee levels should be sensitive to market strength. The stronger the market, the higher the fees can be without altering decisions about where to build. Strong market conditions are reflected in land values.

	Prototype 1		Prototype 2 RETAIL: Shopping Center, Predominantly Restaurant		Prototype 3		
	RETAIL: Small Strip Retail				OFFICE: Two-Story w/ Structured Parking		
Project Description ¹ Site Size (Acres) Floor Area Ratio (FAR) Gross Building Area (GBA) Number of Stories Number of Rooms Parking Spaces Parking Ratio Type		1.84 0.25 20,000 1 N/A 80 4.0 /1,000 sf Surface	2,270 seats	2.87 0.40 50,000 1 N/A 568 1 /4 seats 1/2 Structured 1/2 Surface		4.59 0.50 100,000 1 N/A 350 3.5 /1,000 sf 1/2 Structured 1/2 Surface	
Development Costs							
Land Costs	\$2,500,000 per acre \$57.00 /Land SF	\$4,600,000	\$2,500,000 per acre \$57.00 /Land SF	\$7,175,000	\$3,000,000 per acre \$69.00 /Land SF	\$13,770,000	
Direct Costs (Sitework, Shell, Tenant Imp., FF&E) Parking - Surface Parking - Structured Parking - Subterranean	\$150 /SF GBA \$2,100 /Space	\$3,000,000 \$168,000	\$160 /SF GBA \$2,100 /Space \$26,000 /Space	\$8,000,000 \$596,000 \$7,378,000	\$170 /SF GBA \$2,100 /Space \$26,000 /Space	\$17,000,000 \$368,000 \$4,550,000	
Subtotal, Direct Costs	\$158 /SF GBA	\$3,168,000	\$319 /SF GBA	\$15,974,000	\$219 /SF GBA	\$21,918,000	
Indirects/Govt. Fees/Financing Total Development Costs	35% of Directs \$444 /SF GBA	\$1,109,000 \$8,877,000	35% of Directs \$575 /SF GBA	\$5,591,000 \$28,740,000	30% of Directs \$423 /SF GBA	\$6,575,000 \$42,263,000	
Sample Projects	Cupertino Crossroad		Main St. Cuper	tino (UC)	One Results Way	(Approved)	
UC= Under Construction	Cupertino Village Saich Way Station						

UC= Under Construction

	Prototype 4		Prototype 5		Prototype 6	
	OFFICE: Four-Story w/ Subterranean Parking		HOTEL: Limited Service Four-Story 20% Surface Parking		HOTEL: Select Service Five-Story Subterranean Parking	
Project Description ¹ Site Size (Acres) Floor Area Ratio (FAR) Gross Building Area (GBA) Number of Stories Number of Rooms Parking Spaces Parking Ratio Type		1.15 2.00 100,000 4 N/A 350 3.5 /1,000 sf Subterranean	600 sf/room	1.10 1.50 72,000 4 120 1/room 80% Subterranean 20% Surface	700 sf/room	1.29 2.25 126,000 5 180 1/room Subterranean
Development Costs						
Land Costs	\$4,000,000 per acre \$92.00 /Land SF	\$4,600,000	\$4,000,000 per acre \$37,000 /Room	\$4,440,000	\$5,000,000 per acre \$36,000 /Room	\$6,480,000
Direct Costs (Sitework, Shell, Tenant Imp., FF&E) Parking - Surface	\$200 /SF GBA	\$20,000,000	\$140,000 /Room \$2,100 /Space	\$16,800,000 \$50,000	\$175,000 /Room	\$31,500,000
Parking - Structured Parking - Subterranean Subtotal, Direct Costs	\$35,000 /Space \$323 /SF GBA	\$12,250,000 \$32,250,000	\$35,000 /Space \$280.69 /SF GBA	\$3,360,000 \$20,210,000	\$35,000 /Space \$300 /SF GBA	\$6,300,000 \$37,800,000
Indirects/Govt. Fees/Financing Total Development Costs	30% of Directs \$465 /SF GBA	\$9,675,000 \$46,525,000	30% of Directs \$427 /SF GBA	\$6,063,000 \$30,713,000	30% of Directs \$441 /SF GBA	\$11,340,000 \$55,620,000
Sample Projects	Main St. Cupertino (UC) The Oaks (Approved)		Aloft (2013) The Oaks (Approved)		Main St. Cupertino (UC) Hyatt House (Approved)	

Aloft (2013)

TABLE IV-2 COMPARISON OF NON RESIDENTIAL HOUSING FEE PROGRAMS CITY OF CUPERTINO, CA

	Yr. Adopted		Thresholds &	Build Option/	Market	
Jurisdiction	/Updated	Current Fee Levels per SF	Exemptions	Other	Strength	Comments
City of Cupertino	1993; update in process.	Office/Industrial/Hotel/Retail/ R&D: \$6.00 Planned Industrial Park Zones: \$3.00	No minimum threshold.	N/A	Very Substantial	Fee is adjusted annually based on CPI.
City of Palo Alto	1984 Updated in March 2002 Update in process.	Nonresidential Development \$19.31	Churches; colleges and universities; commercial recreation; hospitals, convalescent facilities; private clubs, lodges, fraternal organizations, private educational facilities, day care and nursery school, public facilities are exempt	Yes	Very Substantial	Fee is adjusted annually based on CPI.
City of Menlo Park	1998 Update in process.	 Office & R&D \$14.92 All other commercial and industrial \$8.10. 	10,000 gross SF threshold Churches, private clubs, lodges, fraternal orgs, public facilities and projects with few or no employees are exempt.	Yes, preferred. May provide housing on- or off-site.	Very Substantial	Fee is adjusted annually based on CPI.
City of Sunnyvale	1984 Updated in 2003. Late 2014 Update.	 Industrial & Office \$9.74 On December 9, Council directed staff to draft ordinance w/ \$15.00 psf for office/ind and \$7.50 retail/hotel. No further action as of 2/28/15. 	Applies only to the portion of the project that is in excess of allowable FAR (typically 0.35:1).	N/A	Very Substantial	Fee is adjusted annually based on CPI.
City of Mountain View	2002; Late 2014 Update.	 Office/High Tech/Industrial \$25.00 Hotel/Retail/Entertainment \$2.60 	Fee is 50% on building area under thresholds: Office <10,000 SF Hotel <25,000 SF Retail <25,000 SF	Yes	Very Substantial	Fee is adjusted annually based on CPI.
City of Fremont	None	None	None	None	NA	None
City of San Jose	None	None	None	None	NA	None

Note: This chart has been assembled to present an overview, and as a result, terms are simplified. For use other than general comparison, please consult the code and staff of the jurisdiction.



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

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

This nexus analysis assumes 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. The Draft 2014-22 General Plan Housing Element documents that conditions in Cupertino are consistent with this underlying assumption. Housing vacancy is minimal. The City consistently maintains a waitlist of households seeking assisted affordable housing in Cupertino.

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 a new workplace building.

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 in the County were experiencing significant long term vacancy levels, particularly in affordable units, then the need for new units would be questionable.

Substitution Factor

Any given new building in Cupertino may be occupied partly, or even perhaps totally, by employees relocating from elsewhere in the County. 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.

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.

Changes in Labor Force Participation

In the 1960s through the 1980s, there were significant increases in labor force participation, primarily among women. As a result, some of the new workers were reentering the labor force and already had local housing, thus reducing demand for housing associated with job growth. In earlier nexus analyses, KMA would adjust the analysis to account for this. However, increases in participation rates by women have stabilized and even declined slightly and labor force participation rates for men have been on a downward trajectory since 1970. As such, an adjustment for increase in labor force participation is no longer warranted in a nexus analysis.

Commuting

Workers in Cupertino commute from throughout the Bay Area. Nexus analyses sometimes use a downward adjustment based on commuting; in 2004, the KMA nexus analysis was adjusted to reflect the fact that only 10% of the jobs in Cupertino were held by residents of Cupertino. A commute adjustment reduces the maximum fee based on an assumption that a portion of housing needs will be satisfied by other jurisdictions. Such an adjustment is not required for nexus purposes, however and KMA does not include commute adjustments in our current analyses; all housing demand generated by a project is included in the nexus.

Non-Duplication: Residential and Non-Residential Fees

Cupertino has adopted an Affordable Housing Impact fee for residential development and is considering modifying the fee, using a nexus analysis with a similar analytical framework as this

jobs-housing nexus analysis. Under certain circumstances the two analyses could count some of the same jobs. KMA has conducted an analysis of potential double-counting of jobs; this analysis is contained in Appendix D and it concludes that no double-counting would occur, even if the non-residential fees increase to \$25.00 per square foot for office development and \$10.00 per square foot for retail and hotel development.

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, current 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 from 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 TABLE 1 INCOME LIMITS NON-RESIDENTIAL NEXUS ANALYSIS CITY OF CUPERTINO, CA

Household Size

	1-person	2-person	3-person	4-person	5-person	6 + person
Household Income Limit						
Very Low (50% AMI)	\$37,150	\$42,450	\$47,750	\$53,050	\$57,300	\$61,550
Low (80% of AMI)	\$59,400	\$67,900	\$76,400	\$84,900	\$91,650	\$98,450
Median (100% of AMI)	\$73,850	\$84,400	\$94,950	\$105,500	\$113,950	\$122,400
Moderate (120% of AMI)	\$88,600	\$101,300	\$113,950	\$126,600	\$136,750	\$146,850

AMI = Area Median Income

Source: California Department of Housing and Community Development FY 2014 Income Limits for Santa Clara County.

APPENDIX B, TABLE 2 2013 NATIONAL OFFICE WORKER DISTRIBUTION BY OCCUPATION NON-RESIDENTIAL NEXUS ANALYSIS CITY OF CUPERTINO, CA

Major Occupations (3% or more)	2013 National Office Industry Occupation Distribution		
Management Occupations	2,342,589	8.8%	
Business and Financial Operations Occupations	2,985,985	11.2%	
Computer and Mathematical Occupations	5,828,632	21.8%	
Architecture and Engineering Occupations	1,312,549	4.9%	
Life, Physical, and Social Science Occupations	808,341	3.0%	
Healthcare Practitioners and Technical Occupations	1,175,909	4.4%	
Sales and Related Occupations	1,699,069	6.4%	
Office and Administrative Support Occupations	5,787,920	21.6%	
All Other Office Occupations	4,811,012	<u>18.0%</u>	
INDUSTRY TOTAL	26,752,006	100.0%	

Industries weighted to reflect Santa Cruz County industry mix.

Filename: \\Sf-fs2\wp\11\11413\012\Office; 2/3/2015; hgr

APPENDIX B, TABLE 3
AVERAGE ANNUAL COMPENSATION, 2014
OFFICE WORKER OCCUPATIONS
NON-RESIDENTIAL NEXUS ANALYSIS
CITY OF CUPERTINO, CA

ATT OF COTENTINO, OA		% of Total	% of Total
Occupation ¹	2014 Avg. Compensation ²	Occupation Group ³	Office <u>Workers</u>
Page 1 of 3			
Management Occupations			
General and Operations Managers	\$150,100	25.5%	2.2%
Marketing Managers	\$185,200	6.4%	0.6%
Sales Managers	\$173,400	6.1%	0.5%
Computer and Information Systems Managers	\$185,300	18.9%	1.7%
Financial Managers	\$162,300	9.3%	0.8%
Architectural and Engineering Managers	\$186,600	4.4%	0.4%
Property, Real Estate, and Community Association Managers	\$75,700	4.7%	0.4%
Managers, All Other	\$164,700	5.5%	0.5%
All Other Management Occupations (Avg. All Categories)	<u>\$157,100</u>	<u>19.3%</u>	1.7%
Weighted Mean Annual Wage	\$161,800	100.0%	8.8%
Pusings and Financial Operations Occupations			
Business and Financial Operations Occupations Human Resources Specialists	\$84,400	7.0%	0.8%
Management Analysts	\$104,600	13.5%	1.5%
Market Research Analysts and Marketing Specialists	\$104,000	11.3%	1.3%
Business Operations Specialists, All Other	\$95,400	13.1%	1.5%
Accountants and Auditors	\$87,800	22.6%	2.5%
Financial Analysts	\$112,200	5.0%	0.6%
All Other Business and Financial Operations (Avg. All Categories)	\$91,200	<u>27.6%</u>	3.1%
Weighted Mean Annual Wage	\$94,800	100.0%	11.2%
Computer and Mathematical Occupations			
Computer Systems Analysts	\$105,300	12.8%	2.8%
Computer Programmers	\$95,000	11.1%	2.4%
Software Developers, Applications	\$132,800	25.9%	5.6%
Software Developers, Systems Software	\$133,600	12.0%	2.6%
Network and Computer Systems Administrators	\$94,300	6.7%	1.5%
Computer User Support Specialists	\$71,000	11.3%	2.5%
All Other Computer and Mathematical Occupations (Avg. All Categories)	<u>\$117,200</u>	20.3%	4.4%
Weighted Mean Annual Wage	\$112,500	100.0%	21.8%

Occupation ¹	2014 Avg. Compensation ²	% of Total Occupation <u>Group ³</u>	% of Total Office <u>Workers</u>
Page 2 of 3			
Architecture and Engineering Occupations			
Architects, Except Landscape and Naval	\$87,600	5.6%	0.3%
Civil Engineers	\$101,700	11.0%	0.5%
Computer Hardware Engineers	\$136,000	7.9%	0.4%
Electrical Engineers	\$122,800	7.0%	0.3%
Electronics Engineers, Except Computer	\$127,400	6.7%	0.3%
Industrial Engineers	\$110,900	5.3%	0.3%
Mechanical Engineers	\$110,800	9.9%	0.5%
Engineers, All Other	\$114,900	4.9%	0.2%
Architectural and Civil Drafters	\$60,200	5.2%	0.3%
Electrical and Electronics Engineering Technicians	\$66,000	4.8%	0.2%
All Other Architecture and Engineering Occupations (Avg. All Categories)	<u>\$109,300</u>	<u>31.6%</u>	<u>1.5%</u>
Weighted Mean Annual Wage	\$107,400	100.0%	4.9%
Life, Physical, and Social Science Occupations			
Biochemists and Biophysicists	\$110,000	7.0%	0.2%
Medical Scientists, Except Epidemiologists	\$124,700	17.6%	0.5%
Chemists	\$78,300	9.3%	0.3%
Environmental Scientists and Specialists, Including Health	\$92,900	5.4%	0.2%
Biological Technicians	\$51,600	9.2%	0.3%
Chemical Technicians	\$46,300	5.6%	0.2%
Social Science Research Assistants	\$50,200	4.6%	0.1%
Life, Physical, and Social Science Technicians, All Other	\$56,000	4.9%	0.1%
All Other Life, Physical, and Social Science Occupations (Avg. All Categories)	<u>\$93,300</u>	<u>36.5%</u>	<u>1.1%</u>
Weighted Mean Annual Wage	\$88,300	100.0%	3.0%

Occupation ¹	2014 Avg. Compensation ²	% of Total Occupation <u>Group</u> ³	% of Total Office <u>Workers</u>
Page 3 of 3			
Healthcare Practitioners and Technical Occupations			
Dentists, General	\$148,300	7.6%	0.3%
Physicians and Surgeons, All Other	\$147,700	6.1%	0.3%
Registered Nurses	\$124,600	13.5%	0.6%
Dental Hygienists	\$96,800	16.1%	0.7%
Licensed Practical and Licensed Vocational Nurses	\$58,800	5.9%	0.3%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	\$108,400	<u>50.7%</u>	2.2%
Weighted Mean Annual Wage	\$111,200	100.0%	4.4%
Sales and Related Occupations			
First-Line Supervisors of Non-Retail Sales Workers	\$111,000	4.6%	0.3%
Counter and Rental Clerks	\$34,400	4.8%	0.3%
Advertising Sales Agents	\$63,000	5.9%	0.4%
Insurance Sales Agents	\$73,400	5.7%	0.4%
Securities, Commodities, and Financial Services Sales Agents	\$94,600	5.2%	0.3%
Sales Representatives, Services, All Other	\$90,900	29.3%	1.9%
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Proc	\$122,300	12.0%	0.8%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scienti	\$68,900	6.1%	0.4%
Real Estate Sales Agents	\$70,400	6.6%	0.4%
Telemarketers	\$29,600	4.4%	0.3%
All Other Sales and Related Occupations (Avg. All Categories)	<u>\$54,200</u>	<u>15.4%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$79,400	100.0%	6.4%
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	\$67,300	6.7%	1.4%
Bookkeeping, Accounting, and Auditing Clerks	\$49,300	8.5%	1.8%
Customer Service Representatives	\$46,500	14.6%	3.2%
Receptionists and Information Clerks	\$34,600	6.2%	1.3%
Executive Secretaries and Executive Administrative Assistants	\$65,400	5.1%	1.1%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$43,300	10.7%	2.3%
Office Clerks, General	\$39,500	13.6%	2.9%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$45,400</u>	<u>34.6%</u>	<u>7.5%</u>
Weighted Mean Annual Wage	\$46,700	100.0%	21.6%
		_	
Weighted Average Annual Wage - All Occupations	\$94,000	-	82.0%

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 2013 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2013 Occupational Employment Survey data applicable to Santa Clara County updated by the California Employment Development Department to 2014 wage levels.

APPENDIX B TABLE 4 2013 NATIONAL HOTEL WORKER DISTRIBUTION BY OCCUPATION NON-RESIDENTIAL NEXUS ANALYSIS CITY OF CUPERTINO, CA

Major Occupations (3% or more)	2013 Na Ho Occupation D	tel
Management Occupations	68,720	4.5%
Food Preparation and Serving Related Occupations	373,210	24.5%
Building and Grounds Cleaning and Maintenance Occupations	495,740	32.5%
Personal Care and Service Occupations	60,630	4.0%
Office and Administrative Support Occupations	303,540	19.9%
Installation, Maintenance, and Repair Occupations	76,680	5.0%
All Other Hotel Related Occupations	<u>144,670</u>	<u>9.5%</u>
INDUSTRY TOTAL	1,523,190	100.0%

Notes

(1) Excludes casino hotels

Source: Bureau of Labor Statistics

Prepared by: Keyser Marston Associates, Inc.

Filename: \\Sf-fs2\wp\11\11413\012\Hotel; 2/3/2015; hgr

Occupation ¹	2014 Avg. Compensation ²	% of Total Occupation <u>Group</u> ³	% of Total Hotel <u>Workers</u>
Page 1 of 2			
Management Occupations			
General and Operations Managers	\$150,100	22.5%	1.0%
Sales Managers	\$173,400	9.3%	0.4%
Administrative Services Managers	\$116,000	3.9%	0.2%
Financial Managers	\$162,300	4.3%	0.2%
Food Service Managers	\$55,900	11.2%	0.5%
Lodging Managers	\$55,600	39.7%	1.8%
All Other Management Occupations (Avg. All Categories)	<u>\$157,100</u>	9.1%	0.4%
Weighted Mean Annual Wage	\$104,100	100.0%	4.5%
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	\$35,400	5.2%	1.3%
Cooks, Restaurant	\$25,900	13.4%	3.3%
Food Preparation Workers	\$23,000	3.4%	0.8%
Bartenders	\$25,200	7.8%	1.9%
Combined Food Preparation and Serving Workers, Including Fast Food	\$22,200	3.6%	0.9%
Waiters and Waitresses	\$23,000	29.7%	7.3%
Food Servers, Nonrestaurant	\$29,500	8.4%	2.1%
Dining Room and Cafeteria Attendants and Bartender Helpers	\$19,900	10.0%	2.5%
Dishwashers	\$20,500	6.7%	1.6%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$20,200	3.6%	0.9%
All Other Food Preparation and Serving Occupations (Avg. All Categories)	<u>\$23,900</u>	<u>8.3%</u>	<u>2.0%</u>
Weighted Mean Annual Wage	\$24,200	100.0%	24.5%
Building and Grounds Cleaning and Maintenance Occupations			
First-Line Supervisors of Housekeeping and Janitorial Workers	\$50,400	5.8%	1.9%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$27,500	8.8%	2.9%
Maids and Housekeeping Cleaners	\$28,800	82.6%	26.9%
All Other Building and Grounds Occupations (Avg. All Categories)	<u>\$30,000</u>	<u>2.9%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$30,000	100.0%	32.5%
Personal Care and Service Occupations			
First-Line Supervisors of Personal Service Workers	\$45,500	4.1%	0.2%
Amusement and Recreation Attendants	\$24,600	14.3%	0.6%
Locker Room, Coatroom, and Dressing Room Attendants	\$25,700	3.5%	0.1%
Baggage Porters and Bellhops	\$22,900	35.1%	1.4%
Concierges	\$32,000	18.9%	0.8%
Recreation Workers	\$28,100	9.9%	0.4%
Personal Care and Service Workers, All Other	\$21,100	3.4%	0.1%
All Other Personal Care and Service Occupations (Avg. All Categories)	<u>\$29,000</u>	<u>10.9%</u>	0.4%
Weighted Mean Annual Wage	\$27,000	100.0%	4.0%

Occupation ¹	2014 Avg. Compensation ²	% of Total Occupation <u>Group</u> ³	% of Total Hotel <u>Workers</u>
Page 2 of 2			
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	\$67,300	7.5%	1.5%
Bookkeeping, Accounting, and Auditing Clerks	\$49,300	5.3%	1.1%
Hotel, Motel, and Resort Desk Clerks	\$24,800	71.7%	14.3%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$45,400</u>	<u>15.5%</u>	<u>3.1%</u>
Weighted Mean Annual Wage	\$32,500	100.0%	19.9%
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	\$77,700	8.0%	0.4%
Maintenance and Repair Workers, General	\$49,000	89.7%	4.5%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	<u>\$54,700</u>	<u>2.3%</u>	<u>0.1%</u>
Weighted Mean Annual Wage	\$51,400	100.0%	5.0%
		_	
Weighted Average Annual Wage - All Occupations	\$34,000	_	90.5%

¹ Including occupations representing 3% 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 2013 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2013 Occupational Employment Survey data applicable to Santa Clara County updated by the California Employment Development Department to 2014 wage levels.

APPENDIX B, TABLE 6 2013 NATIONAL RETAIL WORKER DISTRIBUTION BY OCCUPATION NON-RESIDENTIAL NEXUS ANALYSIS CITY OF CUPERTINO, CA

Major Occupations (2% or more)	2013 National Retail Industry Occupation Distribution	
Management Occupations	592,821	2.3%
Healthcare Practitioners and Technical Occupations	535,045	2.1%
Food Preparation and Serving Related Occupations	10,281,737	40.4%
Sales and Related Occupations	8,727,414	34.3%
Office and Administrative Support Occupations	2,409,428	9.5%
Installation, Maintenance, and Repair Occupations	630,015	2.5%
Transportation and Material Moving Occupations	1,123,264	4.4%
All Other Retail Occupations	<u>1,133,814</u>	<u>4.5%</u>
INDUSTRY TOTAL	25,433,540	100.0%

Industries weighted to reflect Santa Clara County industry mix.

Filename: \\Sf-fs2\wp\11\11413\012\Retail; 2/3/2015; hgr

APPENDIX B, TABLE 7 AVERAGE ANNUAL COMPENSATION, 2014 RETAIL WORKER OCCUPATIONS NON-RESIDENTIAL NEXUS ANALYSIS CITY OF CUPERTINO, CA

Occupation ¹	2014 Avg. Compensation ²	% of Total Occupation <u>Group</u> ³	% of Total Retail <u>Workers</u>
Page 1 of 2			
Management Occupations			
General and Operations Managers	\$150,100	50.6%	1.2%
Sales Managers	\$173,400	12.7%	0.3%
Food Service Managers	\$55,900	27.0%	0.6%
All Other Management Occupations (Avg. All Categories)	<u>\$157,100</u>	<u>9.7%</u>	0.2%
Weighted Mean Annual Wage	\$128,300	100.0%	2.3%
Healthcare Practitioners and Technical Occupations			
Pharmacists	\$135,400	35.9%	0.8%
Pharmacy Technicians	\$46,300	52.3%	1.1%
Opticians, Dispensing	\$45,500	6.3%	0.1%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	<u>\$108,400</u>	<u>5.5%</u>	0.1%
Weighted Mean Annual Wage	\$81,700	100.0%	2.1%
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	\$35,400	7.1%	2.9%
Cooks, Fast Food	\$20,500	5.1%	2.1%
Cooks, Restaurant	\$25,900	9.7%	3.9%
Food Preparation Workers	\$23,000	6.4%	2.6%
Bartenders	\$25,200	3.7%	1.5%
Combined Food Preparation and Serving Workers, Including Fast Food	\$22,200	28.3%	11.4%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$21,000	3.4%	1.4%
Waiters and Waitresses	\$23,000	21.6%	8.7%
Dining Room and Cafeteria Attendants and Bartender Helpers	\$19,900	3.1%	1.2%
Dishwashers	\$20,500	4.3%	1.7%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$20,200	3.4%	1.4%
All Other Food Preparation and Serving Related Occupations (Avg. All Categories)	<u>\$23,900</u>	<u>4.0%</u>	<u>1.6%</u>
Weighted Mean Annual Wage	\$23,600	100.0%	40.4%
Sales and Related Occupations			
First-Line Supervisors of Retail Sales Workers	\$48,400	12.4%	4.3%
Cashiers	\$25,800	30.1%	10.3%
Retail Salespersons	\$27,100	51.5%	17.7%
All Other Sales and Related Occupations (Avg. All Categories)	<u>\$54,200</u>	<u>6.0%</u>	<u>2.1%</u>
Weighted Mean Annual Wage	\$31,000	100.0%	34.3%
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	\$67,300	6.1%	0.6%
Bookkeeping, Accounting, and Auditing Clerks	\$49,300	7.3%	0.7%
Customer Service Representatives	\$46,500	11.4%	1.1%
Shipping, Receiving, and Traffic Clerks	\$35,200	5.7%	0.5%
Stock Clerks and Order Fillers	\$28,300	48.7%	4.6%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$43,300	3.0%	0.3%
Office Clerks, General	\$39,500	8.3%	0.8%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$45,400</u>	9.5%	0.9%

Sources: Bureau of Labor Statistics; California Employment Development Department Compensation Data.

Prepared by: Keyser Marston Associates, Inc. Filename: Retail; Compensation; 2/3/2015; hgr

Occupation ¹	2014 Avg. Compensation ²	% of Total Occupation <u>Group ³</u>	% of Total Retail <u>Workers</u>
Page 2 of 2			
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	\$77,700	7.8%	0.2%
Computer, Automated Teller, and Office Machine Repairers	\$46,700	7.8%	0.2%
Electronic Home Entertainment Equipment Installers and Repairers	\$41,700	2.6%	0.1%
Automotive Body and Related Repairers	\$47,800	4.0%	0.1%
Automotive Service Technicians and Mechanics	\$51,600	35.9%	0.9%
Bus and Truck Mechanics and Diesel Engine Specialists	\$55,700	2.7%	0.1%
Tire Repairers and Changers	\$30,300	8.4%	0.2%
Home Appliance Repairers	\$42,000	3.7%	0.1%
Maintenance and Repair Workers, General	\$49,000	6.8%	0.2%
HelpersInstallation, Maintenance, and Repair Workers	\$34,300	2.6%	0.1%
Installation, Maintenance, and Repair Workers, All Other	\$49,100	2.7%	0.1%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	<u>\$54,700</u>	<u>15.0%</u>	<u>0.4%</u>
Weighted Mean Annual Wage	\$50,500	100.0%	2.5%
Transportation and Material Moving Occupations			
Driver/Sales Workers	\$35,200	16.4%	0.7%
Heavy and Tractor-Trailer Truck Drivers	\$46,600	2.9%	0.1%
Light Truck or Delivery Services Drivers	\$36,500	17.1%	0.8%
Automotive and Watercraft Service Attendants	\$27,000	3.2%	0.1%
Industrial Truck and Tractor Operators	\$37,500	3.3%	0.1%
Cleaners of Vehicles and Equipment	\$25,800	7.3%	0.3%
Laborers and Freight, Stock, and Material Movers, Hand	\$31,200	27.3%	1.2%
Packers and Packagers, Hand	\$23,600	14.9%	0.7%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	<u>\$35,600</u>	<u>7.6%</u>	0.3%
Weighted Mean Annual Wage	\$32,100	100.0%	4.4%
Weighted Average Annual Wage - All Occupations	\$33,000	=	95.5%

¹ Including occupations representing 2% 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 2013 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2013 Occupational Employment Survey data applicable to Santa Clara County updated by the California Employment Development Department to 2014 wage levels.



A key component of the nexus analysis is the size of the gap between what households can afford and the cost of producing new housing in Cupertino, known as the "affordability gap." In this section, we document the calculation of the affordability gaps used in the nexus analysis.

I. City-Assisted 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. Typically, rental units are produced for households in the Very Low (less than 50% of median income) and Low (50 - 80% of median income) income categories, and ownership units are produced for households in the Moderate (80% - 120% of median income) income category.

To estimate the cost of developing new affordable units in Cupertino, KMA reviewed a development pro forma prepared by MidPen Housing for a proposed affordable rental housing housing development at 19160 Stevens Creek Boulevard in Cupertino. In addition, KMA reviewed tax credit application information for several other recent projects in the local area. including projects in Mountain View and Palo Alto. KMA also gathered input from affordable housing developers and funders active in the area. KMA estimates that, on average, the new affordable rental units have 2.0 bedrooms. The affordable ownership units are assumed to be condominium units with a mix of unit sizes averaging 2.5 bedrooms per unit.

The analysis assumes that tax credit financing is available for the rental income units. The level of tax credit equity per unit represents a blend of 4% and 9% tax credit projects, based on the sample pro formas and tax credit applications reviewed.

II. Affordable Rent Levels

Affordable rent levels are a function of the income level for which the unit is aimed to be affordable. KMA utilized the maximum rents published by the California Tax Credit Allocation Committee (CTCAC). The published rents include utilities, so KMA subtracted out a utility allowance calculated using the 2015 schedule published by the Santa Clara County Housing Authority. The two-bedroom Very Low Income unit is assumed to rent for \$1,086 per month and the Low Income unit for \$1,316, after utilities. See Appendix C Table 1 for more detail on the calculation of these rent levels.

III. Affordable Sales Price

For the ownership unit affordable to Moderate Income households, City of Cupertino staff calculated affordable sales prices for a 3-bedroom unit and a 2-bedroom unit earning 110% of median. The City calculation assumes a household spends 35% of its income on housing, HOA dues are \$300 per month, and the household acquires a mortgage with 5% down and a 5% interest rate. The maximum affordable sales price for a 2-bedroom unit at 110% of Area Median

Income is \$360,000 and for a 3-bedroom unit, \$410,000. The calculations are shown on Appendix C Table 2.

KMA averages the sales prices for the two unit sizes to represent the average unit size of 2.5 bedrooms. The average is \$385,000 for a moderate income household of 3.5 persons.

IV. Affordability Gaps

For the ownership units, the affordability gap is the amount of subsidy dollars required to bridge the difference between total development costs and the value of the affordable unit. The unit value of an affordable ownership unit is the affordable sales price.

For the rental units, the affordability gap is calculated slightly differently because we assume that these units will receive tax credit financing. For these units, KMA estimates the total sources of funds (including permanent debt, tax credits and a deferred developer fee) and compares that to the total development costs; the difference is the affordability gap, or the amount of additional subsidy dollars necessary to make the project feasible.

a) Development Costs

For the purposes of the nexus analysis, KMA prepared an estimate of total development cost for typical affordable rental units. Total development costs include land, direct construction, all fees and permits, financing and other indirect costs, including profit. KMA drew this estimate from the total costs in the development pro forma for the recent and proposed tax credit projects in Cupertino and neighboring jurisdictions, which ranged from about \$465,000 per unit to over \$650,000 per unit. In addition, KMA received input from staff at Housing Trust Silicon Valley, a funder of affordable housing projects. The high cost of development is driven significantly by high land costs in Cupertino. For the proposed MidPen project, land acquisition is almost \$190,000 per unit. KMA estimated that a new affordable rental unit has total development costs of \$500,000 per unit.

The City has not recently assisted with the development of affordable ownership units (with the exception of a Cleo Avenue Habitat project, completed in 2013) although it has reviewed a recent proposal for a small ownership development. For the purposes of this analysis, therefore, KMA developed an estimate based on current land costs, the recent proposal reviewed by the City, and our experience with construction costs in other jurisdictions. Total development costs are intended to be conservative but reflective of the expensive land costs in Cupertino. KMA estimates that a new affordable condominium unit in Cupertino would cost \$508,000 per unit to develop, for a 1,100 square foot unit. The proposed project in Cupertino, which consisted of small single family units (just under 1,200 square feet per unit) estimated total development costs at \$752,000. KMA's estimate assumes a land value at \$5 million per acre, or \$143,000 per unit.

For many new developments, particularly City-assisted developments, total development costs are likely to be higher than those estimated here. The conservative estimate of development costs results in a lower supportable nexus amount.

b) Unit Values

To calculate the value of the restricted rental units, KMA first estimated the Net Operating Income generated by the units. The first step is to convert monthly gross rent to an annual gross rent by multiplying by twelve; annual gross rent is then adjusted for vacancy rates during turnover, and then operating costs are netted out. Lost income due to vacancy is estimated at 5% of gross rents. Operating costs cover management, property taxes, and certain other expenses. Based on the proposed MidPen affordable housing project, operating expenses are estimated at \$6,600 per unit per year including replacement reserves but excluding property taxes. The rental units are assumed to be owned by a non-profit general partner and therefore exempt from property taxes. Net Operating Income is calculated by netting out vacancy, operating costs and property taxes from the gross income generated by the unit.

The Net Operating Income is used to estimate the amount of permanent debt the project can support, given the underwriting assumptions assumed by MidPen Housing in their proposal (5.5% interest for 30 years with a 1.4 debt coverage ratio). Additional sources of funds include the market value of the tax credits (estimated at \$190,000 per unit based on a blend of 4% and 9% projects) and a deferred developer fee of \$5,000 per unit. Altogether, these Sources of Funds total \$259,000 per Very Low income unit and \$287,000 per Low Income unit.

For the Moderate Income units, the unit value is the affordable sales price, or \$385,000.

The results are summarized below in Exhibit 7 and shown in Appendix C Tables 1 and 3.

Exhibit 7: Supported Unit Values			
Net Operating Income Unit Value			
Very Low Income	\$6,115 per year	\$259,000 [*]	
Low Income	\$8,737 per year	\$287,000*	
Moderate Income	n/a	\$385,000	

^{*}Total Sources of Funds, which includes permanent debt, tax credits and deferred developer fee.

As shown in the tables above and below, the affordable units do not generate enough value to cover the total development costs of the unit. The resulting gap between unit value and development costs is referred to as the Affordability Gap.

c) Affordability Gaps

The affordability gap conclusions are presented in Appendix C Tables 1 and 3, and summarized below in Exhibit 8.

Exhibit 8: Affordability Gaps					
Income Level Unit Value Development Cost Affordability Gap					
Very Low Income	\$259,000	\$500,000	\$241,000		
Low Income	w Income \$287,000 \$500,000 \$213,		\$213,000		
Moderate Income	\$385,000	\$508,000	\$123,000		

These affordability gaps represent the required subsidy per affordable unit, by income level. They are entered into the nexus analysis to calculate the maximum supported impact fees.

APPENDIX C, TABLE 1 Nexus Affordability Gaps for Very Low and Low Income Households Housing Mitigation Program Revision City of Cupertino

I. Affordable Rent	_	50% AMI	60% AMI
Average Number of Bedrooms ⁽¹⁾		2 Bedrooms	2 Bedrooms
Maximum Rent per CTCAC		\$1,147	\$1,377
(Less) Utility Allowance ⁽²⁾		(\$61)	(\$61)
Maximum Monthly Rent per CTCAC		\$1,086	\$1,316
II. Net Operating Income (NOI)	_	Per Unit	Per Unit
Gross Scheduled Income (GSI) Monthly		\$1,086	\$1,316
Annual		\$13,032	\$1,310 \$15,792
Other Income	\$3/month	\$36	\$36
(Less) Vacancy	5%	(\$653)	(\$791)
Effective Gross Income (EGI)	_	\$12,415	\$15,037
(Less) Operating Expenses ⁽³⁾		(\$6,300)	(\$6,300)
(Less) Property Taxes		exempt (4)	exempt (4)
Net Operating Income (NOI)	_	\$6,115	\$8,737
III. Capitalized Value and Affordability Gap			
A. Net Operating Income (NOI)		\$6,115	\$8,737
B. Sources of Funds			
Supportable Debt ⁽⁵⁾		\$64,000	\$92,000
Average Value of Tax Credits ⁽⁶⁾		\$190,000	\$190,000
Deferred Developer Fee	_	\$5,000	\$5,000
C. Total Sources of Funds		\$259,000	\$287,000
D. (Less) Total Development Costs ⁽⁷⁾		(\$500,000)	(\$500,000)
E. Affordability Gap Per Unit	_	(\$241,000)	(\$213,000)

⁽¹⁾ Average unit size based on a proposed project by MidPen Housing at 19160 Stevens Creek Blvd.

⁽²⁾ Utility allowances from Santa Clara County Housing Authority; assumes gas heat and cooking, and basic electricity.

⁽³⁾ Includes replacement reserves. Based on MidPen's proposed 19160 Stevens Creek Blvd project pro forma.

⁽⁴⁾ Assumes non-profit general partner.

⁽⁵⁾ Based on underwriting assumptions in the MidPen proposed 19160 Stevens Creek Blvd project pro forma.

⁽⁶⁾ Average tax credit equity based on a mix of 4% and 9% tax credits. From four pro formas for projects in Cupertino, Mountain View and Palo Alto.

⁽⁷⁾New construction of units only. Development costs based on the average of four tax-credit project pro formas, in Cupertino, Mountain View and Palo Alto.

Sources: City of Cupertino/MidPen Housing, California Tax Credit Allocation Committee staff reports.

APPENDIX C, TABLE 2 Affordable Sales Price Estimates Housing Mitigation Program Revision City of Cupertino

MODERATE INCOME

City of Cupertino methodology, assumptions and estimates.

Income Available for Housing Expenses	_	2 Bedroom	3 Bedroom
Household Size		3 person HH	4 person HH
Santa Clara County Median Income		\$94,950	\$105,500
Affordability Target		110%	110%
Income for Price Calculation		\$104,445	\$116,050
Percent of Income Available for Housing	_	35%	35%
Available Income		\$36,556	\$40,618
Available Income per month		\$3,046	\$3,385
Monthly Housing Expenses			
Principal and Interest Payment	5% interest	\$1,868	\$2,128
HOA Dues		\$300	\$300
Property Tax	1.25%	\$375	\$427
Homeowner's Insurance		\$40	\$40
Mortgage Insurance	1.35% mortgage	\$391	\$446
Total Expenses per Month		\$2,975	\$3,340
Sales Price			
Total Loan Amount		\$347,985	\$396,316
(Less) Upfront Mortgage Insurance	<u>-</u>	\$5,985	\$6,816
Mortgage Amount		\$342,000	\$389,500
Downpayment	5%	\$18,000	\$20,500
Affordable Sales Price		\$360,000	\$410,000

Source: Memo to Keyser Marston Associates from City of Cupertino, "City of Cupertino Below Market Rate 2014 Sales Price Analysis."

APPENDIX C, TABLE 3 Nexus Affordability Gap Calculation for Moderate Income Housing Mitigation Program Revision City of Cupertino

I. City-Assisted Affordable For-Sale Prototype

Building Type	Multi-family Condominiums
Density (units/acre)	35
Average Number of Bedrooms	2.5
Average Unit Size	1,100 SF

Estimated Development Costs

	Per Unit	Per SF
Land ⁽¹⁾	\$143,000	\$130
Hard Costs	\$220,000	\$200
Fees & Permits ⁽²⁾	\$70,000	\$64
Soft Costs (@ 25% of Hard Costs)	\$55,000	\$50
Financing	<u>\$20,000</u>	<u>\$18</u>
Total	\$508,000	\$462

II. Affordable Sales Price Per Unit

Household Size	3.5 person HH
Maximum Affordable Sales Price ⁽³⁾ (Moderate Income)	\$385,000

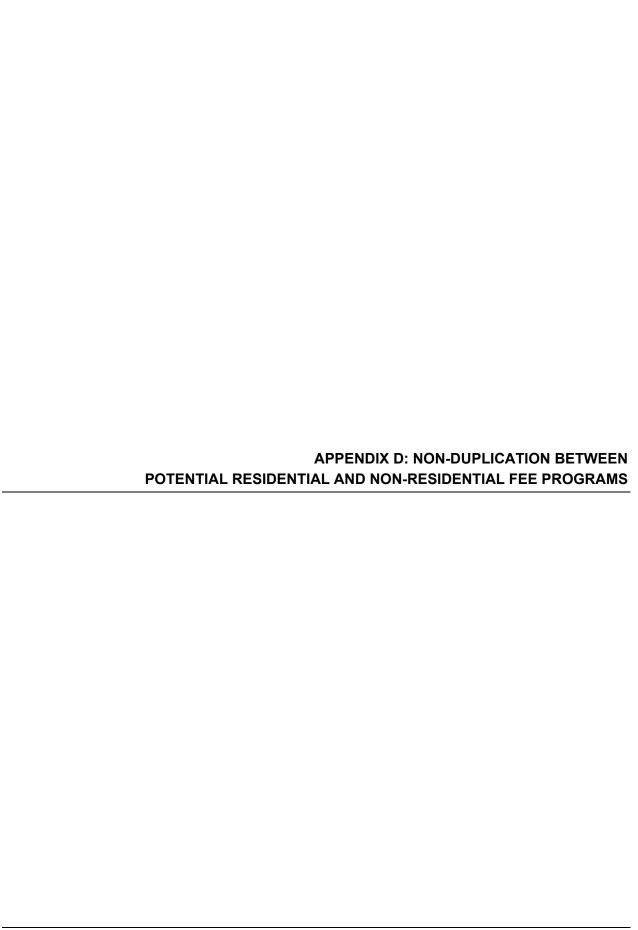
III. Moderate Income Affordability Gap

	<u>Per Unit</u>
Estimated Total Development Costs	\$508,000
(Less) Affordable Price	(\$385,000)
Affordability Gap per unit	\$123,000

- 1. Assumes residential land value of \$5 million per acre. Current market rate land values are in the \$5 \$6 million per acre range.
- 2. Fees & permits estimated based on pro forma for Habitat for Humanity's proposed Cleo Avenue project. Includes city fees and utility connection fees.
- 3. An average of the 2 Bedroom and 3 Bedroom BMR sales prices, shown on Appendix C Table 2.

Prepared by: Keyser Marston Associates

Filename: \\Sf-fs2\wp\11\11413\012\Affordability Gaps; 2/2/2015;hgr



The City of Cupertino charges an impact fee on non-residential and residential construction to help mitigate the impacts of the new buildings on the demand for affordable housing the City. KMA conducted both a Non-Residential Jobs-Housing Nexus Analysis and a Residential Below Market Rate (BMR) Housing Nexus Analysis to assist the City in updating its Housing Mitigation programs; in this appendix, KMA conducts an 'overlap analysis' to determine whether any double-counting of impacts is possible.

To briefly summarize the Non-Residential 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 Below Market Rate (BMR) Housing 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 Jobs-Housing Nexus Analysis are also counted in the Residential Below Market Rate (BMR) Housing Nexus Analysis. The overlap potential exists in jobs generated by the expenditures of City residents, such as expenditures for food, personal services, restaurant meals and entertainment. Many jobs counted in the residential nexus are not addressed in the jobs housing analysis at all. For example, school and government employees are counted in the residential nexus analysis but are not counted in the jobs housing analysis which is limited to private sector office and industrial buildings, hotels, and retail/restaurant space.

Theoretically, there is a set of conditions in which 100% of the jobs counted for purposes of the Non-Residential Jobs-Housing Nexus Analysis are also counted for purposes of the Residential Below Market Rate (BMR) Housing Nexus Analysis. For example, a small retail store or restaurant might be located on the ground floor of a new apartment building and entirely dependent upon customers from the apartments in the floors above. The commercial space on the ground floor 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 Jobs-Housing Nexus Analysis and jobs counted in the Residential Below Market Rate (BMR) Housing Nexus Analysis could

occur only in a very narrow set of circumstances. The following analysis demonstrates that the combined mitigation requirements do not exceed the nexus even if every job counted in the Residential Below Market Rate (BMR) Housing Nexus Analysis is also counted in the Non-Residential Jobs-Housing Nexus Analysis.

Non-Residential Requirement under Consideration as a Percent of Maximum Fee

The Non-Residential Jobs-Housing Nexus Analysis calculates the maximum mitigation amount supported by the analysis. City staff has indicated that they are considering recommending a fee in the range of \$20.00 per square foot for office, R&D and industrial space, and \$10.00 per square foot for retail and hotel development. The overlap analysis is conducted on these fee levels; if the City ultimately selects a higher fee level, the overlap analysis should be rerun at the higher fee level. Exhibit 9 below indicates the proposed fee as a percentage maximum fee amount.

Exhibit 9: Non Residential Proposed Requirement as a Percent of Maximum Fee						
	Maximum Fee Amount Proposed Fee Percent of Maximum					
Office/R&D/Industrial	\$129.05 psf	\$20.00	15%			
Hotel	\$49.15 psf	\$10.00	20%			
Retail / Restaurant	\$222.32 psf	\$10.00	4%			

Source: KMA, City of Cupertino

The conclusion is that the fee level under consideration represents 4% to 20% of the nexus cost. So, the Non-Residential fee mitigates approximately 4% to 20% of the demand for affordable units generated by the new non-residential space.

Residential Requirement under Consideration as a Percent of Maximum Fee

City Staff is considering recommending an increase in the affordable housing impact fee for new residential development in the City. The fees currently under consideration by Staff range from \$15.00 to \$25.00 per square foot. Exhibit 10 below compares the maximum supported fee amounts for residential buildings with Staff's recommended fee levels.

Exhibit 10: Proposed Fee as Percent of Maximum Fee Amount, Residential Units						
	Larger	Smaller	Small		Lower	Higher
	Single	Single	Lot SF /	Condo-	Density	Density
	Family	Family	Townhome	minium	Apartment	Apartment
Maximum Impact Amount	\$30.60	\$30.10	\$35.60	\$35.10	\$33.80	\$42.50
Proposed Fee (psf)	\$15.00	\$15.00	\$16.50	\$20.00	\$20.00	\$25.00
Fee as Percent of Maximum	49%	50%	46%	57%	59%	59%

Source: KMA, City of Cupertino

The conclusion is that the affordable housing impact fee levels under consideration by City Staff are equal to 46% - 59% of the maximums supported by the Residential Nexus analysis.