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SUMMARY, CONTEXT MATERIALS AND RECOMMENDATIONS
AFFORDABLE HOUSING NEXUS STUDY

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City of Fremont

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TABLE OF CONTENTS

I. INTRODUCTION 1

A. Background and Context 1

B. Organization of this Report 1

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS 3

III. SUMMARY OF NEXUS ANALYSES 10

IV. CONTEXT MATERIALS 13

A. Non-Residential Development Cost Context 13

B. Jobs Housing Linkage Fees in Other Jurisdictions 16

ATTACHMENT A – NON-RESIDENTIAL NEXUS ANALYSIS

I. INTRODUCTION

This Summary, Context Materials, and Recommendations report ("Summary Report") provides a concise version of the affordable housing nexus study prepared by Keyser Marston Associates, Inc. (KMA) and presents analyses designed to provide context for policy decisions.

The report has been prepared by KMA for the City of Fremont, pursuant to contracts both parties have with the Silicon Valley Community Foundation. The report was prepared as part of a coordinated work program for twelve jurisdictions in Alameda and Santa Clara Counties. Silicon Valley Community Foundation with Baird + Driskell Community Planners organized and facilitated this multi-jurisdiction effort. Silicon Valley Community Foundation, which engaged KMA to prepare the analyses, serves as the main contracting entity with each participating jurisdiction, and has provided funding support for coordination and administration of the effort.

A separate nexus technical report is attached to this Summary Report, Attachment A: Non-Residential Nexus Analysis. The attached technical report provides the nexus analysis and documentation to support adoption of affordable housing impact fees on non-residential development in the City of Fremont.

A. Background and Context

A major affordable housing program of the City of Fremont is its inclusionary housing policy. Fremont's first inclusionary program was established in 2002 and has been updated and amended on multiple occasions, mostly recently in 2015. This Policy requires residential projects of two or more units to provide some combination of on-site affordable units and/or pay a fee. Projects selecting the fee option (and not providing any on-site units) pay fee levels of $26 or $27 per square foot of habitable space for ownership units, and $17.50 for rental units (when the final phase of fee implementation occurs on July 2017). This Jobs Housing Nexus Analysis and other materials prepared in this work program will enable the City to expand resources for affordable housing in Fremont by adopting an affordable housing impact fee on non-residential projects as well.

B. Organization of this Report

This report is organized into the following sections:

- Section I provides an introduction;
- Section II presents a summary of KMA's findings and recommendations;
- Section III summarizes the nexus analysis;

- Section IV presents analyses and materials prepared to provide context for policy decisions, including:

  A. Non-Residential Development Costs – Analysis of development costs for various types of non-residential development as context for consideration of potential impact fee levels for non-residential development; and

  B. Jobs housing linkage fee programs (or affordable housing impact fees) in other jurisdictions – provides information regarding 34 adopted linkage fee programs in jurisdictions throughout the Bay Area and elsewhere in California.

- Attachment A is the full Non-Residential Nexus Analysis document.

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

In this section, KMA provides a summary of the analysis findings and recommendations for the City's consideration should the decision be made to move forward with adoption of an affordable housing impact fee applicable to non-residential development. Recommendations reflect consideration of the following factors:

1. The findings of the nexus analysis. The nexus study establishes the maximum fee that may be charged to mitigate the impacts of new development on the need for affordable housing.
2. The City's policy objectives specified in the General Plan and Housing Element.
3. The current requirements in neighboring jurisdictions.
4. Setting a fee high enough to support a meaningful contribution to affordable housing in Fremont.
5. Setting a fee low enough to not discourage development.

The analysis prepared by KMA will enable the City of Fremont to consider adoption of a new affordable housing fee applicable to non-residential development in the City. The following section provides KMA's recommendations regarding a fee range should the City choose to move forward with establishing a new jobs housing linkage fee, along with a summary of the factors considered by KMA.

1. Nexus Analysis Findings

The KMA non-residential nexus analysis found very high supportable fee levels. The high fee levels supported by the analysis are not unusual for high cost areas such as Fremont. The nexus analysis establishes only the maximums for impact fees and will bear little relationship to the fee levels the City may ultimately select. The table below indicates the nexus analysis results.

Maximum Fee Per Square Foot of Building Area

Building Type	Maximum Supported Fee Per Square Foot
Office	$184
Retail	$279
Hotel	$133
Light Industrial/R&D/Manufacturing	$132
Warehouse	$48

Note: Nexus findings are not recommended fee levels.
See Attachment A Non-Residential Nexus Analysis for detail.

Nexus results for Fremont are high for all building types, but especially for retail due to the combination of the high incidence of low paying jobs and high density of employees.

In Fremont, all nexus results are also affected by the high affordability gaps associated with delivering housing to households of low and moderate income levels.

In our opinion, fee levels for cities should be selected based on a combination of the strength of the local real estate for the building types that will pay the fee, and local policy objectives. We also believe it is appropriate to take into account the fee levels in neighboring jurisdictions and cities that are comparable to Fremont in real estate demand.

2. Fees in Other Jurisdictions

Affordable Housing Fees

The following chart summarizes fee levels for jurisdictions in Santa Clara and Alameda counties that have adopted non-residential fees. The jurisdictions with the highest fees tend to be in areas with very strong demand for non-residential space, such as San Francisco, Palo Alto, Mountain View, and other cities located on the Peninsula or in Silicon Valley. In the East Bay, fee levels are generally more moderate. The Alameda County cities between Fremont and Oakland have no adopted fees at this time but most are participating in the multi-jurisdictional effort and may adopt. Further north, Berkeley, Emeryville and Oakland all have moderate level fees. Neighboring Newark has fees of $3.59 per square foot applicable to Office, Retail, and Hotel uses and $0.69 per square foot for industrial uses. San Jose has determined that it will not pursue a fee on non-residential development at this time.

Non-Residential Housing Impact Fees – Santa Clara Co. & Alameda County

Non-Residential Linkage Fees	Office $/SF	Retail $/SF	Hotel $/SF	Industrial $/SF
Santa Clara Co.				
Mountain View	$25.00	$2.68	$2.68	$25.00
Cupertino	$20.00	$10.00	$10.00	$20.00
Palo Alto	$19.85	$19.85	$19.85	$19.85
Sunnyvale	$15.00	$7.50	$7.50	$15.00
Alameda Co.				
Newark	$3.59	$3.59	$3.59	$0.69
Emeryville	$4.10	$4.10	$4.10	$4.10
Pleasanton	$3.04	$3.04	$3.04	$3.04
Dublin	$1.27	$1.02	$0.43	$0.49
Oakland	$5.24	N/A	N/A	N/A
Berkeley	$4.50	$4.50	$4.50	$2.25

See Table 1, page 21, for more details including features such as exemptions and size thresholds.

Total Impact Fees, Connection Charges and Construction Taxes

The table below summarizes the findings of a fee comparison prepared by Wildan Financial Services in conjunction with an update to the City's impact fees adopted in 2015[1] covering impact fees of all types, utility connection charges, and construction taxes. The comparison does not include planning and building application fees or related cost recovery charges. For Fremont, fees that were in place prior to being reduced in 2015 are also shown along with illustrative fees with the potential addition of linkage fees at $2, $4, $6 and $8 per square foot.

Total Impact Fees, Connection Charges and Construction Taxes
For Municipal Facilities, Schools, Utilities, Affordable Housing
(not including permit application, processing fees and other cost recovery charges)

	Office	R&D	Retail
	$/Sq.Ft.	$/Sq.Ft.	$/Sq.Ft.
Hayward	$6.41	$4.69	$7.50
Union City [Decoto Industrial Park Study Area] (1)	$7.17	$5.12	$5.51
Milpitas [Transit Area Specific Plan] (1)	$40.05	$40.06	$26.32
San Jose [North San Jose Area] (1)	$18.12	$16.87	$3.55
Mountain View (2)	$25.48	$26.22	$5.06
Sunnyvale (3)	$32.01	$29.22	$17.43
Average - All Comparisons	$21.54	$20.36	$10.89
Average - All Except Milpitas	$17.84	$16.43	$7.81
Fremont			
Existing Fees (as reduced in 2015)	$9.67	$7.87	$11.41
Fees Prior to 2015 Fee Reduction	*$15.93*	*$8.47*	*$13.61*
If Add $2/SF Linkage Fee	$11.67	$9.87	$13.41
If Add $4/SF Linkage Fee	$13.67	$11.87	$15.41
If Add $6/SF Linkage Fee	$15.67	$13.87	$17.41
If Add $8/SF Linkage Fee	$17.67	$15.87	$19.41

Source: Wildan Financial Services 2015. Converted to Square Foot Basis by KMA. Summary is based on use of a 100,000 square foot prototypical office and R&D buildings and 15,000 square foot retail buildings.

(1) Wildan used the fee schedules applicable to specific areas within Milpitas, Union City, and San Jose as representative of fees that apply to locations where development is anticipated to occur.

(2) Mountain View linkage fee adjusted by KMA to reflect 2014 update.

(3) Sunnyvale linkage fee adjusted by KMA to reflect 2015 update.

For supporting details by category of fee, see Table 2 on page 26.

[1] Wildan Financial Services, Development Impact Fee Comparison dated April 20, 2015.

It should be noted that three of the comparisons represent subareas of the applicable jurisdiction selected by Wildan as representative of locations where development is anticipated to occur.

Office and R&D - Fremont's office and R&D fees are well below that of the four Santa Clara County jurisdictions but somewhat higher than the two East Bay comparison jurisdictions.

Retail - Fremont's fees for retail are above those in the two East Bay jurisdictions, San Jose and Mountain View. Sunnyvale and Milpitas have higher fees than Fremont.

3. Total Development Costs

KMA estimated the total development cost associated with each building type and examined fee levels in the context of total costs. Total costs include construction, all permits and fees, land, financing and other. This facilitates an evaluation of whether the amount is likely to affect development decisions in Alameda County participating jurisdictions. Four non-residential prototype projects were selected for review of total development costs. The prototypes include office, hotel, retail, and light industrial. The cost estimates were prepared based on local information and our firm's extensive work with real estate projects throughout the Bay Area. More detail on the analysis can be found in Section IV. The results are summarized below:

Total Development Costs – Non-Residential	
Building Type	*Cost*
Office	$325 - $425 per sq.ft.
Hotel	$300 - $400 per sq.ft.
Retail / Restaurant / Service	$300 - $400 per sq.ft.
Light Industrial	$200 - $250 per sq.ft.

Warehouse development projects were not separately analyzed, but are known to be at the lowest end of the development cost range for industrial uses, or even a little below the range quoted above.

The above estimates of total development costs cover the range in the six participating jurisdictions in Alameda County. In Fremont total development costs, which includes land, probably represents the higher end of the Alameda County range.

One useful way to evaluate alternative fee levels is to examine them as a percent of total development costs. For example, at 1% to 3% of costs, using a midpoint in the range of costs, we would see the following fee levels:

Fees as a Percent of Development Costs			
Building Type	*1%*	*2%*	*3%*
Office	$4 psf	$7 psf	$11 psf
Hotel	$3 psf	$7 psf	$10 psf
Retail / Restaurant	$3 psf	$7 psf	$10 psf
Light Industrial	$2 psf	$4 psf	$7 psf

4. Market Context

Market conditions in Fremont for all non-residential development are strong when viewed from the regional perspective and the high development costs supported.

When the market for non-residential development is viewed in comparison to Silicon Valley, of which it is an extension, current market conditions become more mixed or varied. Fremont is a highly sought after location for the industrial sector, which includes flex space, manufacturing and related. Fremont is far less successful in attracting pure office activity or office/tech that is so dominant across the Bay to the west.

Retail and hotel uses serve both the local population and the visitor base generated by the office and industrial sectors.

5. Recommended Fee Levels

Given the maximums established by the nexus analysis, the market strength of Fremont and the fees in neighboring jurisdictions, should the City decide to proceed with a non-residential affordable housing fee, KMA recommends consideration of fees within the $4 to $8 per square foot range for office, R&D, hotel, and manufacturing and $2 to $4 for light industrial, warehouse and retail space.

The table below presents the recommended range:

KMA Recommended Fee Range, City of Fremont	
Land Use	*Recommended Fee*
Office, R&D, Hotel, Manufacturing	$4 to $8 psf
Retail, Light Industrial, Warehouse	$2 to $4 psf

With the addition of fees within the recommended range, the total fee burden applicable to development of office and R&D space would remain below that of the other comparison jurisdictions in Santa Clara County. Fees would exceed rates for Union City and Hayward to a greater degree than currently; however, both jurisdictions are participating in this multi-jurisdiction nexus study and may consider adoption of a new affordable housing linkage fee in the near future.

For retail, light industrial and warehouse uses, it is recommended that fees be set within a more moderate range of $2 to $4. More moderate fees are recommended for retail given other existing fees applicable to retail are above averages for nearby jurisdictions. For light industrial and warehouse uses, the more moderate fees recommended are in recognition of the lower cost nature of these buildings and the greater burden each $1 in fees represents as a percentage of development costs.

For manufacturing, a fee in the $4 - $8 range is recommended consistent with office, R&D and hotel uses. Fremont has had success in attracting advanced manufacturers. These manufacturing facilities tend to have higher development costs than light industrial space due to their specialized fixtures and equipment; therefore, each $1 in fees represents a lower percentage burden relative to the overall project costs. Fremont already has separate impact fee rates for manufacturing and light industrial and, while these uses are combined for purposes of the nexus analysis, the City has the flexibility to apply separate rates as long as fees are within the maximums established by the nexus. Fremont's other existing impact fees for manufacturing (traffic, capital facilities, etc.) are approximately $0.80 per square foot less than for light industrial space, which partially offsets the higher affordable housing linkage fees being recommended for manufacturing compared with light industrial. While we believe a higher fee for manufacturing to be supportable, should the City wish to provide an incentive for

manufacturers or simply prefer one fee category for both light industrial and manufacturing, the lower range suggested for light industrial could be applied to manufacturing as well.

In our opinion, fees adopted within any low to moderate range will have little bearing on development decisions in Fremont. While higher fees could potentially be sustained without significantly limiting development activity, we believe the recommended range represents a good starting point for a new adoption in Fremont.

III. SUMMARY OF NEXUS ANALYSES

This section provides a concise summary of the non-residential nexus analysis prepared for the City of Fremont. The analysis provides the documentation necessary for adoption of new affordable housing impact fees applicable to non-residential development. The analysis establishes maximum supportable impact fee levels based on the impact new non-residential development has on the need for affordable housing. Findings represent the results of an impact analysis only and are not recommended fee levels.

Full documentation of the nexus analysis is contained in the report entitled Non-Residential Nexus Analysis.

The workplace buildings that are the subject of this analysis represent a cross section of typical commercial and industrial buildings developed in Fremont in recent years and expected to be built in the near term future. For purposes of the analysis, the following five building types were identified:

- Office
- Hotel
- Retail
- Light Industrial / R&D / Manufacturing
- Warehouse

The nexus analysis links new non-residential buildings with new workers; these workers demand additional housing, a portion of which needs to be affordable to the workers in lower income households. The analysis begins by assuming a 100,000 square foot building for each of the five building types and then makes the following calculations:

- The total number of employees working in the building is estimated based on average employment density data.

- Occupation and income information for typical job types in the building are used to calculate how many of those jobs pay compensation at the levels addressed in the analysis. Compensation data is from California EDD and is specific to Alameda County. Worker occupations by building type are derived from the 2014 Occupational Employment Survey by the U.S. Bureau of Labor Statistics.

- New jobs are adjusted to new households, using Alameda County demographics on the number of workers per household. We know from the Census that many workers are members of households where more than one person is employed and there is also a range of household sizes; we use factors derived from the Census to translate the number of workers into households of various size. Household income is calculated depending on the number of workers per household.

- The number of Extremely Low-, Very Low-, Low-, and Moderate-Income households generated by the new development is calculated and divided by the 100,000 square foot building size to arrive at coefficients of housing units per square foot of building area. The household income categories addressed in the analysis are Extremely Low Income, Very Low Income, Low Income and Moderate Income.

- The number of lower income households per square foot is multiplied by the affordability gap, or the cost of delivering housing units affordable to these income groups. This is the Maximum Supported Impact Fee for the non-residential land uses.

The Maximum Supported Impact Fees for the five building types are as follows:

Building Type	Maximum Supported Fee Per Square Foot
Office	$184
Retail	$279
Hotel	$133
Light Industrial/R&D/Manufacturing	$132
Warehouse	$48

Note: Nexus findings are not recommended fee levels.
See Non-Residential Nexus Analysis for detail.

The results of the analysis are heavily driven by the density of employees within buildings in combination with the occupational make-up of the workers in the buildings. Retail has both high employment density and a high proportion of low paying jobs.

These figures express the maximum supported impact fee per square foot for the five building types. They are not recommended levels for fees; they represent only the maximums established by this analysis, below which impact fees may be set.

Overlap Analysis

There is a potential for some degree of overlap between jobs counted in the Non-Residential Nexus Analysis and jobs counted in the separate Residential Nexus Analysis prepared by KMA for the City in 2014 in support of the City's impact fees applicable to residential development. The potential for overlap exists in jobs generated by the expenditures of City residents, such as expenditures for food, personal services, restaurant meals and entertainment. Retail is the building type that has the greatest potential for overlap to occur because it is often oriented to serving local residents. On the other hand, the potential for overlap is far less with office, industrial, warehouse and hotel buildings that often house businesses that serve a much broader, sometimes national or international, market and that are not focused on services to local residents. Appendix C to the Non-Residential Nexus Analysis provides additional discussion and an analysis demonstrating that, even in the improbable and theoretical case of complete overlap between jobs counted in the two nexus analyses, impact fees at the recommended levels would remain below the maximums supported by the nexus.

IV. CONTEXT MATERIALS

The purpose of this section is to provide information that may be useful to policy makers in considering potential adoption of a new affordable housing impact fee applicable to non-residential development. The following analyses and summary materials are included:

- **Non-Residential Development Cost Context** – Section A. an evaluation of total development costs associated with four prototypical building types to facilitate an evaluation of whether fee amounts are likely to affect development decisions; and

- **Jobs Housing Linkage Fee Programs in Other Jurisdictions** – Section B. provides information regarding adopted linkage fee programs in jurisdictions throughout the Bay Area and elsewhere in California.

A. Non-Residential Development Cost Context

The non-residential development cost context analysis considers the impacts a new affordable housing fee could have on the cost of development for new office, retail, hotel, and light industrial projects in Alameda County. The analysis enables an understanding of the relative cost burdens new fees have on various types of commercial and industrial development projects and can be useful in scaling fees by type of project.

The analysis considers the potential fee as a percentage of total development costs. One of the primary reasons a full feasibility analysis is not performed is because there is typically greater variation in the cost and rent structures for commercial projects. Development costs and rents can vary widely for office and retail projects due to the specialized nature of tenant improvements and lease terms from one tenant to another. Costs and revenues also vary widely for hotel projects due to the fact that hotel products range from lower cost limited service and budget hotels to highly amenitized full service and boutique hotels. Finally, affordable housing requirements applicable to non-residential development typically represents a smaller percentage of overall project cost compared to residential requirements. For these reasons, the utility of a full feasibility analysis for commercial projects is generally more limited than for housing projects. Instead, an understanding of the total development cost context has generally proved sufficient to guide the selection of fee levels on non-residential projects.

1. Commercial Market Context

Commercial projects in Alameda County have experienced strengthening conditions in recent years. Some new industrial, office, retail, and hotel projects have been built or are

in the planning stages in parts of the county, however office and hotel development in particular have not kept pace with the magnitude of activity in other parts of the Bay Area, notably San Francisco, Santa Clara, and San Mateo counties. It would be expected that interest in new development of office and hotel projects will eventually lead to more development activity in Alameda County as the regional economy continues to improve.

2. Development Cost Analysis

For the development cost analysis, KMA utilized the following four commercial prototypes.

- Office development with surface parking at 0.45 floor area ratio (FAR)
- Hotel development with surface parking at 0.50 FAR
- Retail development with surface parking at 0.30 FAR
- Light industrial development with surface parking at 0.35 FAR

In preparing these prototypes it is acknowledged that there could be some differences in overall density from one jurisdiction to another as these prototypes are intended to reflect averages for the participating jurisdictions in Alameda County. However, for purposes of the development cost assessment it is not necessary to analyze every variation of project density or building prototype being built or proposed to be built in Alameda County. The utility of the analysis lies with an understanding of the general range of development costs for new commercial projects and the impact that a new fee can have relative to those costs.

The estimates of total development costs for the commercial prototypes are shown in the following table. The costs include estimates for land acquisition, direct construction costs, and indirect and financing costs of development. In assembling the development cost estimates, KMA utilized a variety of data sources, including the following:

- Land appraisals, CoStar land comps;
- Third party construction cost data sources such as RS Means and Engineering News Record (ENR);
- Pro forma data for current non-residential projects in the Bay Area.

Non-Residential Development Costs
Alameda County Jurisdictions

	Office		Hotel		Retail		Light Industrial	
Building Square Feet	100,000		75,000		75,000		100,000	
Hotel Rooms			125 rooms					
Parking	Surface		Surface		Surface		Surface	
Floor Area Ratio (FAR)	0.45 FAR		0.50 FAR		0.30 FAR		0.35 FAR	
Land Area	5.10 acres		3.44 acres		5.74 acres		6.56 acres	
	$/SF	Total	$/SF	Total	$/SF	Total	$/SF	Total
Land Acquisition	$44	$4,440,000	$40	$3,000,000	$67	$5,000,000	$43	$4,290,000
	$20	/land sf	$20	/land sf	$20	/land sf	$15	/land sf
Directs	$217	$21,670,000	$195	$14,630,000	$175	$13,130,000	$144	$14,430,000
Indirects								
A&E	$13	$1,300,000	$12	$880,000	$11	$790,000	$9	$870,000
FF&E/Tenant Improvements	$59	$5,850,000	$58	$4,380,000	$36	$2,700,000	$19	$1,900,000
Fees & Permits (excl. Afford)	$9	$910,000	$11	$790,000	$15	$1,110,000	$6	$610,000
Other Indirects & Financing	$21	$2,050,000	$19	$1,420,000	$18	$1,360,000	$13	$1,330,000
Total Indirects & Financing	$101	$10,110,000	$100	$7,470,000	$79	$5,960,000	$47	$4,710,000
Total Costs	$362	$36,220,000	$335	$25,100,000	$321	$24,090,000	$234	$23,430,000
Total Cost Range	$325 - $425/sf		$300 - $400/sf		$300 - $400/sf		$200 - $250/sf	

As shown, total development costs for the non-residential prototypes range from a low of approximately $200-$250/square foot for the light industrial prototype to a high of approximately $325-$425 for the office prototype. Since the prototypes analyzed assume surface parking, the total costs would be higher for higher density projects that have a structured parking garage (standalone garage, podium, or underground parking). These types of projects could have developments close to or even in excess of $500/square foot.

3. Affordable Housing Fees Supported

In general, affordable housing fees on non-residential projects fall within a range of 1% to 5% of total development costs, with the upper portion of the range generally reserved for cities that have very strong market conditions driving non-residential development projects. As noted in Section B, current affordable housing fees on non-residential projects are generally below $5/square foot for East Bay jurisdictions that have such fees.

The table below summarizes the range of potential fees on non-residential projects expressed as a percentage of total development cost. As an example, at 1% of total development cost a new housing fee would range from approximately $2.25/square foot for light industrial uses to $3.75/square foot for office uses. As is common in jobs housing linkage fee programs, light industrial projects tend to have lower fees than higher intensity/higher value projects such as office projects because it is generally more difficult for lower cost projects to absorb new fees.

Relative Fee Burdens*

	Office	Hotel	Retail	Light Industrial
Total Cost Range	$325 - $425/sf	$300 - $400/sf	$300 - $400/sf	$200 - $250/sf
Fee at 1% of Total Cost	$3.75	$3.50	$3.50	$2.25
Fee at 2% of Total Cost	$7.50	$7.00	$7.00	$4.50
Fee at 3% of Total Cost	$11.25	$10.50	$10.50	$6.75
Fee at 4% of Total Cost	$15.00	$14.00	$14.00	$9.00
Fee at 5% of Total Cost	$18.75	$17.50	$17.50	$11.25

*Fees calculated at 1-5% of mid-point of cost range.

The following table summarizes how newly adopted fees can be absorbed by relatively minor improvements in development economics over time. For example, a newly added fee of $5/square foot for the office prototype could be absorbed by a roughly 1% increase in rental income ($5/square foot x 0.2%), a roughly 2.5% decrease in direct construction costs ($5/square foot x 0.5%), or a roughly 11.5% decrease in land values ($5/square foot x 2.3%). It is noted however that construction costs and rents tend to move in the same direction. Therefore, increases in rents would need to exceed increases in costs in order to produce a net gain in a project's economics.

Potential Market Adjustments to Absorb Every $1/SF Fee

	Office	Hotel	Retail	Light Industrial
Increase in Rents/Income	0.2%	0.3%	0.3%	0.4%
Decrease in Direct Costs	0.5%	0.5%	0.6%	0.7%
Decrease in Land Values	2.3%	2.5%	1.5%	2.7%

Adjustments are not additive. Each would independently be sufficient to absorb new fees. Depending on the market cycle and other factors, a combination of the above market adjustments would be expected to contribute in absorbing a new fee.

B. Jobs Housing Linkage Fees in Other Jurisdictions

Information on other jobs housing linkage fee programs in nearby or comparable cities is often helpful context in considering new or updated fees. The following section provides information assembled regarding other programs in the Bay Area and elsewhere in California including information on customized features such as size thresholds, exemptions, and build options.

More than 30 cities and counties in California have commercial linkage fees, with the majority of these programs within the Bay Area and greater Sacramento. In Southern California, a few cities have linkage fee programs, of which San Diego is the largest example. Several communities in Massachusetts have linkage fees, including Boston and Cambridge. Seattle recently expanded its linkage fee program city-wide. Boulder,

Colorado adopted a new city-wide program last year. Portland and Denver are each in the process of exploring new linkage fee adoptions.

Silicon Valley and the Peninsula, which has some of the strongest real estate market conditions in the Bay Area, is where many of the jurisdictions with the highest fee levels are found. For office, fee levels range from $15 (Sunnyvale) to $25 per square foot (Mountain View). Several cities have recently updated fee levels (Cupertino, Mountain View, Sunnyvale), or newly adopted fees (Redwood City). For retail and hotel, fee ranges are much broader as some jurisdictions have adopted similar fee levels across all building types while others have lower fee levels for retail and hotel.

Within the East Bay, fees have been adopted at a more moderate range. For office, fee levels for communities in the inner East Bay (west of the hills) range from $3.59 (Newark) to $5.24 (Oakland). Retail fees range from $2.30 (Alameda) to $4.50 (Berkeley). Oakland's program covers only office and warehouse and exempts other uses such as retail.

The table on the following page provides an overview of fee levels for selected examples in Santa Clara County, the Peninsula, and the East Bay. A more complete overview of these programs, and many others, is presented on Table 1 at the end of this section.

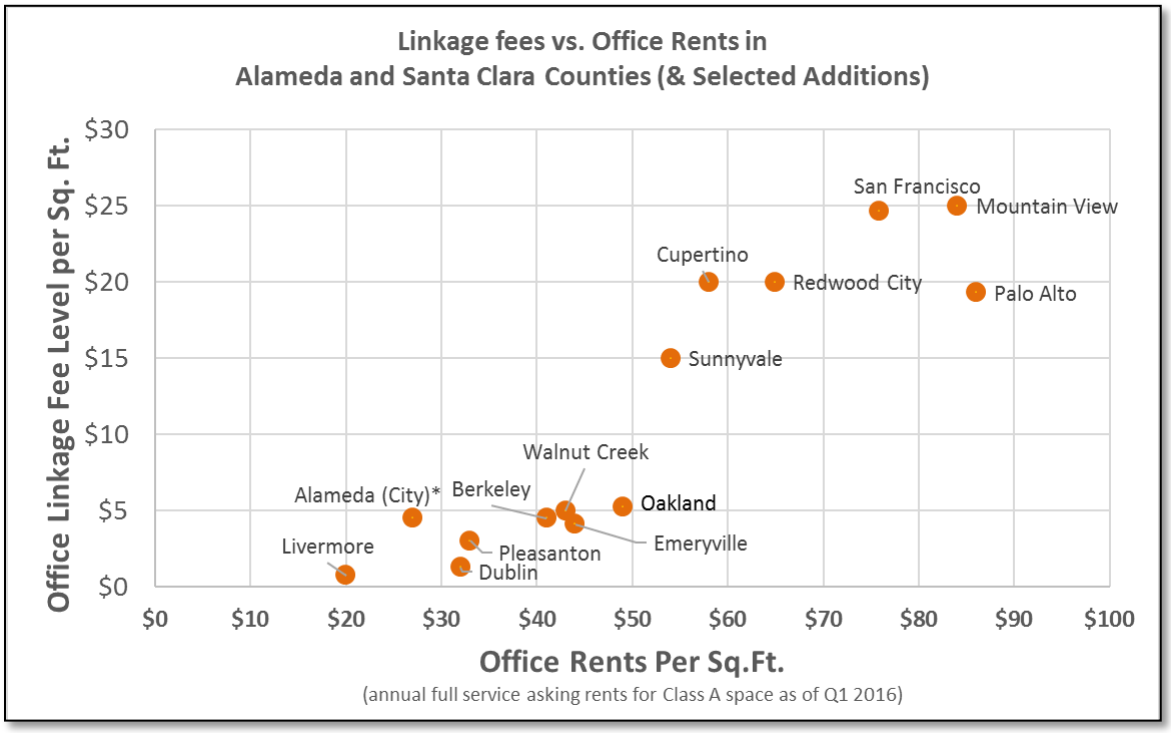
Affordable Housing Fee Levels in Selected Communities

Non-Residential Linkage Fees	Office $/SF	Retail $/SF	Hotel $/SF	Industrial $/SF
Santa Clara Co. & Peninsula				
Mountain View	$25.00	$2.68	$2.68	$25.00
Cupertino	$20.00	$10.00	$10.00	$20.00
Palo Alto	$19.85	$19.85	$19.85	$19.85
Sunnyvale	$15.00	$7.50	$7.50	$15.00
San Francisco	$24.61	$22.96	$18.42	$19.34
Redwood City	$20.00	$5.00	$5.00	N/A
East Bay: West of Hills				
Oakland	$5.24	N/A	N/A	N/A
Berkeley	$4.50	$4.50	$4.50	$2.25
Alameda (City)	$4.52	$2.30	$1.85	$0.78
Emeryville	$4.10	$4.10	$4.10	$4.10
Newark	$3.59	$3.59	$3.59	$0.69
East Bay: East of Hills				
Walnut Creek	$5.00	$5.00	$5.00	N/A
Pleasanton	$3.04	$3.04	$3.04	$3.04
Dublin	$1.27	$1.02	$0.43	$0.49
Livermore	$0.76	$1.19	$1.00	$0.24

N/A = No fee or no applicable category

As a way to provide context in terms of the market conditions in each of the communities, the chart on the following page shows office linkage fees (the building type that usually has the highest fees) in relation to office rents by city. Office rents are an indicator of market strength and major driver of real estate values.

Office Linkage Fees vs. Average Office Rents in Selected Communities



*Rents for City of Alameda apply to Class B/C space (Class A rents not aviailable)
Sources: Office rents from market research reports prepared by Colliers International.

Fremont has not historically been a significant office location (it has far more R&D, industrial and warehouse space). The brokerage firm, Colliers International, combines Milpitas and Fremont in its reporting and identifies less than 1 million square feet of Class A office space between the two cities with an average asking rent of around $27 per square foot.

Ordinance or Program Features

Linkage fee programs often includes features to address a jurisdiction's policy objectives or specific concerns. The most common are:

- *Minimum Threshold Size* – A minimum threshold sets a building size over which fees are in effect. Programs with low fees often have no thresholds and all construction is subject to the fee. Thresholds, which reduce fees for smaller projects, are more common for programs with more significant fees. Some jurisdictions establish a building size over which the fee applies. Sometimes the fee applies to the whole building, and sometimes the fee applies only to the square foot area over the threshold. Thresholds are often employed to minimize costs for small infill 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. Oakland and Berkeley are examples of communities employing

thresholds while Alameda, Newark, and others do not. Mountain View has a reduced charge for the first 10,000 square feet of office space and the first 25,000 square feet of retail or hotel development.

- *Geographic Area Variations and Exemptions* – Some cities with linkage fee programs exclude specific areas such as redevelopment areas or have fees that vary based on geography. 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. This is generally more common among large cities with a diverse range of conditions.

- *Specific Use Exemptions* – Some cities charge all building types while others choose to exempt specific uses. A common exemption is for buildings owned by non-profits which typically encompasses religious, educational/institutional, and hospital building types. Some programs identify specific uses as exempt such as schools and child care centers.

A more complete listing of the programs surveyed along with information about ordinance features such as exemptions and thresholds is contained in Table 1 at the end of this section.

TABLE 1
SUMMARY OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA

Jurisdiction	Yr. Adopted/ Updated	Fee Level (per Sq.Ft. unless otherwise noted)		Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
SAN FRANCISCO, PENINSULA, SANTA CLARA COUNTY							
San Francisco Population: 829,000	1981 Updated 2002, 2007	Retail / Entertainment Hotel Integrated Production /Dist/Repair Office Research and Development Small Enterprise Workspace	$22.96 $18.42 $19.34 $24.61 $16.39 $19.34	25,000 gsf threshold Exempt: freestanding pharmacy < 50,000 SF; grocery < 75,000	Yes, may contribute land for housing.	Very Substantial	Fee is adjusted annually based on the construction cost increases.
City of Palo Alto Population: 66,000	1984 Updated 2002	Nonresidential Dvlpmt	$19.85	Churches; universities; recreation; hospitals, 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 Population: 33,000	1998	Office & R&D Other com./industrial	$15.57 $8.45	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 Population: 146,000	1984 Updated 2003 and 2015.	Industrial, Office, R&D: Retail, Hotel	$15.00 $7.50	Office fee is 50% on the first 25,000 SF of building area. Exemptions for Child care, education, hospital, non-profits, public uses.	N/A	Very Substantial	Fee is adjusted annually based on CPI.
Redwood City Population: 80,000	2015	Office Hotel Retail & Restaurant	$20.00 $5.00 $5.00	5,000 SF threshold 25% fee reduction for projections paying prevailing wage. Schools, child care centers, public uses exempt.	Yes. Program specifies number of units per 100,000 SF.	Very Substantial	Fee is adjusted annually based on ENR.
City of Mountain View Population: 77,000	Updated 2002 / 2012 /2014	Office/High Tech/Indust. Hotel/Retail/Entertainment.	$25.00 $2.68	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 Cupertino Population: 60,000	1993, 2015	Office/Industrial/R&D Hotel/Commercial/Retail	$20.00 $10.00	No minimum threshold.	N/A	Very Substantial	Fee is adjusted annually based on CPI.

Note: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

TABLE 1
SUMMARY OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA

Jurisdiction	Yr. Adopted/ Updated	Fee Level (per Sq.Ft. unless otherwise noted)		Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
EAST BAY							
City of Walnut Creek Population: 66,000	2005	Office, retail, hotel and medical	$5.00	First 1,000 SF no fee applied.	Yes	Very Substantial	Reviewed every five years.
City of Oakland Population: 402,000	2002	Office/ Warehouse	$5.24	25,000 SF exemption	Yes - Can build units equal to total eligible SF times .00004	Substantial	Fee due in 3 installments. Fee adjusted with an annual escalator tied to residential construction cost increases.
City of Berkeley Population: 116,000	1993 2014	Office Retail/Restaurant Industrial/Manufacturing Hotel/Lodging Warehouse/Storage Self-Storage R&D	$4.50 $4.50 $2.25 $4.50 $2.25 $4.37 $4.50	7,500 SF threshold.	Yes	Substantial	Annual CPI increase. May negotiate fee downward based on hardship or reduced impact.
City of Emeryville	2014	All Commercial	$4.10	Schools, daycare centers.	Yes	Substantial	Fee adjusted annually.
City of Alameda Population: 76,000	1989	Retail Office Warehouse Manufacturing Hotel/Motel	$2.30 $4.52 $0.78 $0.78 $1,108	No minimum threshold	Yes. Program specifies # of units per 100,000 SF	Moderate	Fee may be adjusted by CPI.
City of Pleasanton Population: 73,000	1990	Commercial, Office & Industrial	$3.04	No minimum threshold	Yes	Moderate	Fee adjusted annually.
City of Dublin Population: 50,000	2005	Industrial Office R&D Retail Services & Accommodation	$0.49 $1.27 $0.83 $1.02 $0.43	20,000 SF threshold	N/A	Moderate	
City of Newark Population: 44,000		Commercial Industrial	$3.59 $0.69	No min threshold Schools, recreational facilities, religious institutions exempt.	Yes	Moderate	Revised annually
City of Livermore Population: 84,000	1999	Retail Service Retail Office Hotel Manufacturing Warehouse Business Park Heavy Industrial Light Industrial	$1.19 $0.90 $0.76 $583/ rm $0.37 $0.11 $0.76 $0.38 $0.24	No minimum threshold Church, private or public schools exempt.	Yes; negotiated on a case-by-case basis.	Moderate	

Note: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

TABLE 1
SUMMARY OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA

Jurisdiction	Yr. Adopted/ Updated	Fee Level (per Sq.Ft. unless otherwise noted)		Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
MARIN, NAPA, SONOMA, SANTA CRUZ							
County of Santa Cruz Population: 267,000	2015	All Non-Residential	$2.00	No minimum threshold	N/A	Substantial	
County of Marin Population: 257,000	2003	Office/R&D Retail/Rest. Warehouse Hotel/Motel Manufacturing	$7.19 $5.40 $1.94 $1,745/rm $3.74	No minimum threshold	Yes, preferred.	Substantial	
San Rafael Population: 59,000	2005	Office/R&D Retail/Rest./Pers. Services Manufacturing/LI Warehouse Hotel/Motel	$7.64 $5.73 $4.14 $2.23 $1.91	5,000 SF threshold. Mixed use projects that provide affordable housing are exempt.	Yes. Program specifies number of units per 1,000 SF.	Substantial	
Town of Corte Madera Population: 9,000	2001	Office R&D lab Light Industrial Warehouse Retail Com Services Restaurant Hotel Health Club/Rec Training facility/School	$4.79 $3.20 $2.79 $0.40 $8.38 $1.20 $4.39 $1.20 $2.00 $2.39	No minimum threshold	N/A	Substantial	
City of St. Helena Population: 6,000	2004	Office Comm./Retail Hotel Winery/Industrial	$4.11 $5.21 $3.80 $1.26	Small childcare facilities, churches, non-profits, vineyards, and public facilities are exempt.	Yes, subject to City Council approval.	Substantial	
City of Petaluma Population: 59,000	2003	Commercial Industrial Retail	$2.19 $2.26 $3.78	N/A	Yes, subject to City Council approval.	Moderate/ Substantial	Fee adjusted annually by ENR construction cost index.
County of Sonoma Population: 492,000	2005	Office Hotel Retail Industrial R&D Ag Processing	$2.64 $2.64 $4.56 $2.72 $2.72	First 2,000 SF exempt Non-profits, redevelopment areas exempt	Yes. Program specifies number of units per 1,000 SF.	Moderate	Fee adjusted annually by ENR construction cost index.
City of Cotati Population: 7,000	2006	Commercial Industrial Retail	$2.08 $2.15 $3.59	First 2,000 SF exempt Non-profits exempt.	Yes. Specifies No. of units per 1,000 SF	Moderate	Fee adjusted annually by ENR construction cost index.
County of Napa Population: 139,000	Updated 2014	Office Hotel Retail Industrial Warehouse	$5.25 $9.00 $7.50 $4.50 $3.60	No minimum threshold Non-profits are exempt	Units or land dedication; on a case by case basis.	Moderate / Substantial	
City of Napa Population: 79,000	1999	Office Hotel Retail Industrial, Wine Pdn Warehouse (30-100K) Warehouse (100K+)	$1.00 $1.40 $0.80 $0.50 $0.30 $0.20	No minimum threshold Non-profits are exempt	Units or land dedication; on a case by case basis.	Moderate/ Substantial	Fee has not changed since 1999. Increases under consideration.

Note: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

Filename: Non-residential fees chart 10-11-16, Fee Chart, 10/13/2016, dd

TABLE 1
SUMMARY OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA

Jurisdiction	Yr. Adopted/ Updated	Fee Level (per Sq.Ft. unless otherwise noted)	Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
SACRAMENTO AREA						
City of Sacramento Population: 476,000	1989 Most recent update, 2005	Office $2.25 Hotel $2.14 R&D $1.91 Commercial $1.80 Manufacturing $1.41 Warehouse/Office $0.82	No minimum threshold Mortuary, parking lots, garages, RC storage, Christmas tree lots, B&Bs, mini-storage, alcoholic beverage sales, reverse vending machines, mobile recycling, and small recyclable collection facilities	Pay 20% fee plus build at reduced nexus (not meaningful given amount of fee)	Moderate	North Natomas area has separate fee structure
City of Folsom Population: 73,000	2002	Office, Retail, Lt Industrial, and Manufacturing $1.54 Up to 200,000 SF, 100% of fee; 200,000-250,000 SF, 75% of fee; 250,000-300,000 SF, 50% of fee; 300,000 and up, 25% of fee.	No minimum threshold Select nonprofits, small child care centers, churches, mini storage, parking garages, private garages, private schools exempt.	Yes Provide new or rehab housing affordable to very low income households. Also, land dedication.	Moderate/ Substantial	Fee is adjusted annually based on construction cost index
County of Sacramento Population: 1,450,000	1989	Office $0.97 Hotel $0.92 R&D $0.82 Commercial $0.77 Manufacturing $0.61 Indoor Recreational Centers $0.50 Warehouse $0.26	No minimum threshold Service uses operated by non-profits are exempt	N/A	Moderate	
City of Elk Grove Population: 158,000	1989 (inherited from County when incorporated)	Office none Hotel $1.87 Commercial $0.64 Manufacturing $0.72 Warehouse $0.77	No minimum threshold Membership organizations (churches, non-profits, etc.), mini storage, car storage, marinas, car washes, private parking garages and agricultural uses exempt	N/A	Moderate	Office fee currently waived due to market conditions.
Citrus Heights Population: 85,000	1989 (inherited from County when incorporated)	Office $0.97 Hotel $0.92 R&D $0.82 Commercial $0.77 Manufacturing $0.61 Indoor Recreational Centers $0.50 Warehouse $0.26	No minimum threshold Membership organizations (churches, non-profits, etc.), mini storage, car storage, marinas, car washes, private parking garages and agricultural uses exempt	N/A	Moderate	
Rancho Cordova Population: 67,000	1989 (inherited from County when incorporated)	Office $0.97 Hotel $0.92 R&D $0.82 Commercial $0.77 Manufacturing $0.61 Indoor Recreational Centers $0.50 Warehouse $0.26	No minimum threshold Membership organizations (churches, non-profits, etc.), mini storage, car storage, marinas, car washes, private parking garages and agricultural uses exempt	N/A	Moderate	

Note: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

TABLE 1
SUMMARY OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA

Jurisdiction	Yr. Adopted/ Updated	Fee Level (per Sq.Ft. unless otherwise noted)		Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
SOUTHERN CALIFORNIA							
City of Santa Monica Population: 92,000	1984 Updated 2002, 2015	Retail Office Hotel/Lodging Hospital Industrial Institutional Creative Office Medical Office	$9.75 $11.21 $3.07 $6.15 $7.53 $10.23 $9.59 $6.89	1,000 SF threshold Private schools, city projects, places of worship, commercial components of affordable housing developments exempt.	N/A	Very Substantial	Fees adjusted annually based on construction cost index.
City of West Hollywood Population: 35,000	1986	Non-Residential (per staff increase from $4 to $8 anticipated for FY16-17)	$8.00	N/A	N/A	Substantial	Fees adjusted by CPI annually
City of San Diego Population: 1,342,000	1990 Updated 2014	Office Hotel R&D Retail	$1.76 $1.06 $0.80 $1.06	No minimum threshold Industrial/ warehouse, non-profit hospitals exempt.	Can dedicate land or air rights in lieu of fee	Substantial	

Note: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

Table 2
Summary of 2015 Fee Comparison
Jobs Housing Nexus Analysis
City of Fremont

	Fremont: Existing Fees Following 2015 Reduction			**Fremont:** Prior to 2015 Fee Reduction		
	Office	R&D	Retail	Office	R&D	Retail
Project Size Assumption	100,000	100,000	15,000	100,000	100,000	15,000
Fees Totals for Assumed Project Size						
Facilities Impact Fees & Construction Taxes	$622,000	$453,400	$113,550	$1,247,700	$513,700	$146,535
School Impact Fees	$54,000	$54,000	$8,100	$54,000	$54,000	$8,100
Utility Fees & Connection Charges	$290,841	$279,606	$49,466	$290,841	$279,606	$49,466
Housing Linkage Fees	$0	$0	$0	$0	$0	$0
Total Facilities, School, Utility Fees & Taxes	$966,841	$787,006	$171,116	$1,592,541	$847,306	$204,101
Does not include permit fees / processing charges						
Fees Per Square Foot of Building Area						
Facilities Impact Fees and Construction Taxes	$6.22	$4.53	$7.57	$12.48	$5.14	$9.77
School Impact Fees	$0.54	$0.54	$0.54	$0.54	$0.54	$0.54
Utility Impact Fees and Connection Charges	$2.91	$2.80	$3.30	$2.91	$2.80	$3.30
Housing Linkage Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total City, School, Utility Impact Fees	$9.67	$7.87	$11.41	$15.93	$8.47	$13.61
Does not include permit fees / processing charges						

Source: Wildan Financial Services, Development Impact Fee Comparison dated April 20, 2015.

Table 2
Summary of 2015 Fee Comparison
Jobs Housing Nexus Analysis
City of Fremont

	Hayward			Union City [Decoto Industrial Park]		
	Office	R&D	Retail	Office	R&D	Retail
Project Size Assumption	100,000	100,000	15,000	100,000	100,000	15,000
Fees Totals for Assumed Project Size						
Facilities Impact Fees & Construction Taxes	$300,000	$144,000	$59,400	$379,202	$185,786	$26,083
School Impact Fees	$47,000	$47,000	$7,050	$47,000	$47,000	$7,050
Utility Fees & Connection Charges	$294,415	$278,205	$46,084	$290,841	$279,606	$49,466
Housing Linkage Fees	$0	$0	$0	$0	$0	$0
Total Facilities, School, Utility Fees & Taxes	$641,415	$469,205	$112,534	$717,043	$512,392	$82,599
Does not include permit fees / processing charges						
Fees Per Square Foot of Building Area						
Facilities Impact Fees and Construction Taxes	$3.00	$1.44	$3.96	$3.79	$1.86	$1.74
School Impact Fees	$0.47	$0.47	$0.47	$0.47	$0.47	$0.47
Utility Impact Fees and Connection Charges	$2.94	$2.78	$3.07	$2.91	$2.80	$3.30
Housing Linkage Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total City, School, Utility Impact Fees	$6.41	$4.69	$7.50	$7.17	$5.12	$5.51
Does not include permit fees / processing charges						

Table 2
Summary of 2015 Fee Comparison
Jobs Housing Nexus Analysis
City of Fremont

	Milpitas [Transit Area Specific Plan]			Mountain View[1]		
	Office	R&D	Retail	Office	R&D	Retail
Project Size Assumption	100,000	100,000	15,000	100,000	100,000	15,000
Fees Totals for Assumed Project Size						
Facilities Impact Fees & Construction Taxes	$3,660,000	$3,660,000	$342,000	$0	$0	$0
School Impact Fees	$54,000	$54,000	$8,100	$54,000	$54,000	$8,100
Utility Fees & Connection Charges	$291,469	$292,289	$44,745	$119,335	$193,028	$47,734
Housing Linkage Fees	$0	$0	$0	$2,375,000	$2,375,000	$20,100
Total Facilities, School, Utility Fees & Taxes	$4,005,469	$4,006,289	$394,845	$2,548,335	$2,622,028	$75,934
Does not include permit fees / processing charges						
Fees Per Square Foot of Building Area						
Facilities Impact Fees and Construction Taxes	$36.60	$36.60	$22.80	$0.00	$0.00	$0.00
School Impact Fees	$0.54	$0.54	$0.54	$0.54	$0.54	$0.54
Utility Impact Fees and Connection Charges	$2.91	$2.92	$2.98	$1.19	$1.93	$3.18
Housing Linkage Fees	$0.00	$0.00	$0.00	$23.75	$23.75	$1.34
Total City, School, Utility Impact Fees	$40.05	$40.06	$26.32	$25.48	$26.22	$5.06
Does not include permit fees / processing charges						

(1) Mountain View linkage fee adjusted by KMA to reflect 2014 update to fees.

Source: Wildan Financial Services, Development Impact Fee Comparison dated April 20, 2015.

Table 2
Summary of 2015 Fee Comparison
Jobs Housing Nexus Analysis
City of Fremont

	San Jose [North San Jose Area]			Sunnyvale (2)		
	Office	R&D	Retail	Office	R&D	Retail
Project Size Assumption	100,000	100,000	15,000	100,000	100,000	15,000
Fees Totals for Assumed Project Size						
Facilities Impact Fees & Construction Taxes	$1,657,250	$1,528,683	$31,954	$792,010	$475,859	$69,016
School Impact Fees	$54,000	$54,000	$8,100	$66,000	$66,000	$9,900
Utility Fees & Connection Charges	$100,414	$104,371	$13,142	$1,030,678	$1,067,508	$70,013
Housing Linkage Fees	$0	$0	$0	$1,312,500	$1,312,500	$112,500
Total Facilities, School, Utility Fees & Taxes	$1,811,664	$1,687,054	$53,196	$3,201,188	$2,921,867	$261,429
Does not include permit fees / processing charges						
Fees Per Square Foot of Building Area						
Facilities Impact Fees and Construction Taxes	$16.57	$15.29	$2.13	$7.92	$4.76	$4.60
School Impact Fees	$0.54	$0.54	$0.54	$0.66	$0.66	$0.66
Utility Impact Fees and Connection Charges	$1.00	$1.04	$0.88	$10.31	$10.68	$4.67
Housing Linkage Fees	$0.00	$0.00	$0.00	$13.13	$13.13	$7.50
Total City, School, Utility Impact Fees	$18.12	$16.87	$3.55	$32.01	$29.22	$17.43
Does not include permit fees / processing charges						

(2) Sunnyvale linkage fee adjusted by KMA to reflect 2015 update.

Source: Wildan Financial Services, Development Impact Fee Comparison dated April 20, 2015.

KEYSER MARSTON ASSOCIATES

ATTACHMENT A

NON-RESIDENTIAL NEXUS ANALYSIS

Prepared for
City of Fremont

Prepared by:
Keyser Marston Associates, Inc.

October 2016

TABLE OF CONTENTS

I. INTRODUCTION 1

Purpose 1

Analysis Scope 2

Report Organization 3

Data Sources and Qualifications 3

II. THE NEXUS CONCEPT 4

Background 4

The Nexus Methodology 4

Discount for Changing Industries 5

Other Factors and Assumptions 6

III. JOBS HOUSING NEXUS ANALYSIS 7

Analysis Approach and Framework 7

Household Income Limits 7

Analysis Steps 7

Summary by Income Level 12

Summary by Square Foot Building Area 13

IV. TOTAL HOUSING NEXUS COSTS 21

City Assisted Affordable Unit Prototypes 21

Development Costs 21

Unit Values 22

Affordability Gap 23

Maximum Fees to Mitigate Impacts 24

Conservative Assumptions 25

Appendix A: Discussion of Various Factors in Relation to Nexus Concept 30

Appendix B: Supporting Nexus Tables 34

Appendix C: Non-Duplication Between Residential and Non-Residential Impact Fee Programs 52

I. INTRODUCTION

The following report is a Jobs Housing Nexus Analysis, an analysis of the linkages between non-residential development and the need for additional affordable housing in the City of Fremont. This Jobs Housing Nexus Analysis has been prepared in support of affordable housing impact fees that may be levied on non-residential development. The report has been prepared by Keyser Marston Associates, Inc. (KMA) for the City of Fremont, pursuant to contracts both parties have with the Silicon Valley Community Foundation.

The analysis was prepared as part of a coordinated work program for twelve jurisdictions in Alameda and Santa Clara Counties. Silicon Valley Community Foundation with Baird + Driskell Community Planners organized and facilitated this multi-jurisdiction effort. Silicon Valley Community Foundation, which engaged KMA to prepare the analyses, serves as the main contracting entity with each participating jurisdiction, and has provided funding support for coordination and administration of the effort.

A major affordable housing program of the City of Fremont is an inclusionary housing policy. Fremont's first inclusionary program was established in 2002 and has been updated and amended on multiple occasions, most recently in 2015. This Policy requires residential projects of two or more units to provide some combination of on-site affordable units and/or pay a fee. Projects selecting the fee option (and not providing any on-site units) pay fee levels per square foot in the range of $26 or $27 for ownership units, and $17.50 for rental units (when the final phase of fee implementation occurs on July 2017). This Jobs Housing Nexus Analysis will enable the City to expand resources for affordable housing in Fremont by adopting an affordable housing impact fee on non-residential projects as well.

Purpose

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

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

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

Analysis Scope

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

- Office, which includes traditional office users such as law firms, accountants, real estate and insurance agencies, as well as high tech and medical office space.
- Hotel, which covers the range from full service hotels to minimum service extended stay lodging.
- Retail, which includes all types of retail, restaurants, and personal services.
- Light Industrial / R&D / Manufacturing, which includes a range of light industrial, maintenance and repair industries, research & development and manufacturing uses.
- Warehouse, or large structures primarily devoted to storage, typically with a small amount of office space.

The household income categories addressed in the analysis are:

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

Report Organization

The report is organized into four sections and three appendices, as follows:

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

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

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

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

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

- Appendix B contains support information on worker occupations and incomes and an identification of the industry categories represented within each building type.

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

Data Sources and Qualifications

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

II. THE NEXUS CONCEPT

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

Background

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

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

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

The Nexus Methodology

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

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

- The total number of employees working in the building is estimated based on average employment density data.
- Occupation and income information for typical job types in the building is used to calculate how many of those jobs pay compensation at the various income levels (Extremely Low, Very Low, Low, and Moderate) addressed in the analysis. Compensation data is from the California Employment Development Department (EDD) and is specific to Alameda County. Worker occupations by building type are derived from the 2014 Occupational Employment Survey by the U.S. Bureau of Labor Statistics and weighted to reflect the industry mix in Alameda County.
- Census data indicate that many workers are members of households where more than one person is employed and that there is a range of household sizes; factors derived from the Census are used to translate the workers in the building into Extremely Low, Very Low, Low, and Moderate-income households of various sizes.
- Then, the Extremely Low, Very Low-, Low- and Moderate-Income households are divided by the building size to arrive at the number of housing units per square foot of building area, for each income category.
- In the last step, the number of households per square foot in each income category is multiplied by the costs of delivering housing units affordable to these income groups.

Discount for Changing Industries

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

With regard to manufacturing jobs, Fremont has been an exception to regional trends. Advanced manufacturers such as Tesla have located in Fremont and are expanding their operations in the City. However, for purposes of the analysis, it is appropriate to consider trends on a more regional scale due to the regional nature of the employment and labor markets.

The analysis makes an adjustment to take long-term declines, changes and shifts within all sectors of the economy into account, recognizing that jobs added are not 100% net new in all cases. A 20% adjustment is utilized based on the long term shifts in employment that have occurred in some sectors of the local economy and the likelihood of continuing changes in the future. Long term declines in employment experienced in some sectors of the economy mean that some of the new jobs are being filled by workers that have been displaced from another industry and who are presumed to already have housing locally. The analysis makes the assumption that existing workers downsized from declining industries are available to fill a portion of jobs in new workplace buildings built in Fremont.

The 20% downward adjustment used for purposes of the analysis was derived from California Employment Development Department data on employment by industry in the San Jose-Sunnyvale-Santa Clara and Oakland-Hayward-Berkeley Metropolitan Districts, where the jurisdictions included in the multi-jurisdiction nexus effort are located. Over the ten-year period from 2005 to 2015, approximately 55,000 jobs were lost in declining industry sectors. Over the same period, growing and stable industries added a total of 268,000 jobs. The figures are used to establish a ratio between jobs lost in declining industries to jobs gained in growing and stable industries at 20%[1]. 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 and who already lives locally.

The discount for changing industries represents a conservative assumption because many displaced workers may exit the workforce entirely by retiring. In addition, development of new workspace buildings will typically occur only to the extent there is positive net demand after re-occupancy of buildings vacated by businesses in declining sectors of the economy. To the extent existing buildings are re-occupied, the discount for changing industries is unnecessary because new buildings would represent net new growth in employment. The 20% adjustment is conservative in that it is mainly necessary to cover a special case in which buildings vacated by declining industries cannot be readily occupied by other users due to their special purpose nature or because of obsolescence.

While the analysis is designed to take long-term declines and economic shifts into account, short-term economic cycles such as a recession or a boom are not an appropriate basis for an adjustment. Economic cycles can produce impacts that are temporarily higher or lower than average; however, impact fees are collected once, during the development of the project and are intended to mitigate impacts over the life of the building. See Appendix A, page 32 for additional discussion of economic cycles.

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), changes in labor force participation, commuting, and economic cycles.

[1] The 20% ratio is calculated as 55,000 jobs lost in declining sectors excluding defense divided by 268,000 jobs gained in growing and stable sectors = 20.5% (rounded to 20%).

III. JOBS HOUSING NEXUS ANALYSIS

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

Analysis Approach and Framework

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

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

Household Income Limits

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

2016 Income Limits for Alameda County

	Household Size (Persons)					
	1	2	3	4	5	6 +
Extr. Low (Under 30% AMI)	$20,500	$23,400	$26,350	$29,250	$31,600	$33,950
Very Low (30%-50% AMI)	$34,150	$39,000	$43,900	$48,750	$52,650	$56,550
Low (50%-80% AMI)	$52,650	$60,150	$67,650	$75,150	$81,200	$87,200
Moderate (80%-120% AMI)	$78,600	$89,850	$101,050	$112,300	$121,300	$130,250
Median (100% of Median)	$65,500	$74,900	$84,250	$93,600	$101,100	$108,600

Source: California Department of Housing and Community Development.

Analysis Steps

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

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

Step 1 – Estimate of Total New Employees

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

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

- *Office* – 300 square feet per employee. This represents an average of a range that includes traditional office uses, high tech activities, and medical offices. There is some variation within this range, with high tech at the high end and medical office at the lower end.
- *Retail* – 400 square feet per employee. This reflects a mix of retail and restaurant space and also a whole range of personal services. Restaurant space typically has a higher employment density, while retail space ranges widely depending on the type of retail, with furniture stores, for example, representing the lower end. The density range within this category is wide, with some types of retail as much as five times as dense as other types.
- *Hotel* – 800 square feet per employee. The 800 square feet per employee average covers a range from higher service hotels, which are far more employment intensive, to minimal service extended stay hotels which have very low employment density.
- *Light Industrial / R&D / Manufacturing* – 500 square feet per employee. This density covers flex space, light industrial, manufacturing, and research and development. This designation may also be applied to repair and maintenance servicing and other activities of a semi-industrial character. The 500 square feet per employee average was selected as a conservative assumption; however, it is likely that future activity will have a greater density of employment. As the central Bay Area becomes more densely developed, higher land costs have been forcing many lower density of employment uses, such as pure storage, to locations further east.
- *Warehouse* – 2,000 square feet per employee. This reflects that the primary activity in the building is assumed to be storage. A small amount of office or administrative space is assumed within warehouse structures. The warehouse category, for fee purposes, is often defined as structures over a threshold size, such as 50,000 square feet. Also some cities use this category to cover heavy manufacturing when the density of employment is similarly low.

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

Step 2 – Adjustment for Changing Industries

This step is an adjustment to take into account any declines, changes and shifts within all sectors of the economy and to recognize that new space is not always 100% equivalent to net new employees. A 20% downward adjustment is utilized to recognize long-term employment shifts and the likelihood of continuing changes in the local economy (see Section II discussion).

Step 3 – Adjustment from Employees to Employee Households

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

The number of workers per household in a given geographic area is a function of household size, labor force participation rate and employment availability, as well as other factors. According to the 2011-2013 ACS, the number of workers per worker household in Alameda County was 1.6, including full- and part-time workers. The total number of jobs created is divided by 1.6 to determine the number of new households. This is a conservative estimate because it excludes all non-worker households (such as students and the retired). If the average number of workers in all households was used, it would have produced a greater demand for housing units.

Step 4 – Occupational Distribution of Employees

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

- For office buildings, the mix of industries was customized based on employment by industry sector in Alameda County using California Employment Development Department (EDD) data. This category is inclusive of software development firms and other high tech users, medical and dental offices along with small firms such as realtors, insurance agents, employment services, legal and business services.
- For retail space, the industries include a mix of retail, restaurant and personal service uses tailored to Alameda County based on current employment levels reported by EDD.

- For hotel buildings, the industry includes Hotels, Motels and other accommodations, excluding casino hotels.
- For light industrial / R&D / manufacturing, the industries include a range of manufacturing, research and development, and automotive and other maintenance and repair services. The categories are weighted to reflect the mix of these industries within Alameda County.
- For warehouse buildings, the applicable industry category is Warehouse & Storage.

Once the industries are selected, the May 2014 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 five types of buildings has been estimated. The occupational compositions that reflect the expected mix of activities in the new buildings are presented in the tables in Appendix B.

- Office employment in Alameda County includes a range of administrative support occupations (25%), computer and mathematical (14%), business and financial (12%), and management occupations (9%), among others.
- Retail employment consists of predominantly retail sales, food preparation and serving occupations (38%) and sales related occupations (32%), with office and administrative support occupations making up an additional 10%.
- Hotels employ workers primarily from three main occupation categories: building and grounds cleaning and maintenance (maid service, etc.), food preparation and serving related, and office and administrative support, which together make up 77% of Hotel workers. Other Hotel occupations include personal care, management, sales, production and maintenance and repair.
- Light Industrial / R&D / Manufacturing occupations consist of production jobs (34%), maintenance and repair (9%), architecture and engineering (8%), office and administrative (10%), and others.
- Warehouse workers are largely engaged in transportation and material moving (60%), followed by office and administrative support.

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

Step 5 – Estimated Employee Household Income

In this step, occupations are translated to employee incomes based on recent Alameda County wage and salary information from EDD. The wage and salary information summarized in the tables in Appendix B provided the income inputs to the analysis. Worker compensation used in

the analysis assumes full time employment (40 hours per week) based on EDD's convention for reporting annual compensation.

In the even numbered Appendix B tables, EDD data provides a distribution of specific occupations within the category. For example, within the Food Preparation and Serving Category, there are Supervisors, Cooks, Bartenders, Waiters and Waitresses, Dishwashers, etc. For each detailed occupational category, the model uses the distribution of wages to calculate the percent of worker households that would fall into each income category. The occupations with the lowest compensation levels are in Retail and Hotel buildings.

The calculation is performed for each possible combination of household size and number of workers in the household. For households with more than one worker, individual *employee* income data was used to calculate the household income by assuming multiple earner households are, on average, formed of individuals with similar incomes. The model recognizes that many, but not all households have multiple incomes.

Step 6 – Distribution of Household Size and Number of Workers

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

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

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

Summary by Income Level

Table 3 at the end of this section indicates the results of the analysis for each of the five 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 associated with a 100,000 square foot building.

The findings in Table 3 are summarized below:

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

	Office	Retail	Hotel	Light Industrial / R&D / Manufacturing	Warehouse
Extremely Low (0%-30% AMI)	3.3	31.8	12.1	4.3	2.3
Very Low Income (30%-50% AMI)	17.5	43.0	20.1	13.8	6.5
Low Income (50%-80% AMI)	29.3	31.4	17.3	20.8	7.4
Moderate Income (80%-120% AMI)	34.0	12.4	8.3	20.8	5.2
Subtotal through 120% AMI	**84.1**	**118.5**	**57.8**	**59.7**	**21.5**
Above Moderate (over 120% AMI)	82.8	6.6	4.8	40.4	3.5
Total	**166.9**	**125.1**	**62.6**	**100.1**	**25.0**

The table below summarizes the percentage of total new worker households that falls into each income category. As indicated, over 90% of Retail / Restaurant and Hotel worker households are below the 120% of median income level. By contrast, in Office buildings, only 50% of worker households fall below 120% of median.

Nexus Analysis Result: Affordable Housing Need by Income Tier

	Office	Retail	Hotel	Light Industrial / R&D / Manufacturing	Warehouse
Extremely Low (0%-30% AMI)	2.0%	25.4%	19.3%	4.3%	9.2%
Very Low Income (30%-50% AMI)	10.5%	34.3%	32.1%	13.8%	26.1%
Low Income (50%-80% AMI)	17.6%	25.1%	27.6%	20.8%	29.6%
Moderate Income (80%-120% AMI)	20.3%	9.9%	13.3%	20.8%	21.0%
Subtotal through 120% AMI	**50.4%**	**94.7%**	**92.3%**	**59.7%**	**86.0%**
Above Moderate (over 120% AMI)	49.6%	5.3%	7.7%	40.3%	14.0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Summary by Square Foot Building Area

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

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

New Worker Households Per Square Foot of New Office Space	
Extremely Low (0%-30% AMI)	0.00003271
Very Low Income (30%-50% AMI)	0.00017537
Low Income (50%-80% AMI)	0.0002929
Moderate Income (80%-120% AMI)	0.00033954
Total, Less than 120% AMI	0.00084051

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

TABLE 1
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION BY BUILDING TYPE
JOBS HOUSING NEXUS ANALYSIS
FREMONT, CA

Per 100,000 Sq.Ft. of Building Area	**Office**	**Retail**	**Hotel**	**Light Industrial / R&D / Manufacturing**	**Warehouse**
Step 1 - Estimate of Number of Employees					
Employment Density (SF/Employee)	300	400	800	500	2,000
Number of Employees Per 100,000 SF Building Area	333	250	125	200	50
Step 2 - Net New Employees after Declining Industries Adjustment (20%)	267	200	100	160	40
Step 3 - Adjustment for Number of Households (1.60)	166.9	125.1	62.6	100.1	25.0
Step 4 - Occupation Distribution(1)					
Management Occupations	9.2%	2.4%	4.5%	7.5%	3.5%
Business and Financial Operations	11.8%	0.6%	1.5%	5.3%	2.0%
Computer and Mathematical	13.9%	0.1%	0.1%	5.3%	0.5%
Architecture and Engineering	5.9%	0.0%	0.0%	7.1%	0.2%
Life, Physical, and Social Science	3.5%	0.0%	0.0%	11.2%	0.0%
Community and Social Services	0.4%	0.0%	0.0%	0.2%	0.0%
Legal	1.8%	0.0%	0.0%	0.2%	0.0%
Education, Training, and Library	0.4%	0.0%	0.0%	0.3%	0.0%
Arts, Design, Entertainment, Sports, and Media	1.9%	0.4%	0.3%	1.0%	0.1%
Healthcare Practitioners and Technical	6.2%	1.7%	0.0%	1.2%	0.1%
Healthcare Support	3.3%	0.3%	0.5%	0.3%	0.0%
Protective Service	0.4%	0.3%	1.6%	0.3%	0.7%
Food Preparation and Serving Related	0.4%	38.3%	24.7%	1.3%	0.1%
Building and Grounds Cleaning and Maint.	1.0%	0.7%	31.9%	0.8%	1.0%
Personal Care and Service	0.5%	2.5%	4.0%	0.1%	0.0%
Sales and Related	6.0%	32.3%	2.2%	4.5%	1.7%
Office and Administrative Support	24.0%	9.8%	20.3%	10.9%	22.3%
Farming, Fishing, and Forestry	0.1%	0.0%	0.0%	0.3%	0.1%
Construction and Extraction	0.8%	0.2%	0.1%	0.3%	0.1%
Installation, Maintenance, and Repair	2.4%	2.7%	5.0%	11.8%	3.2%
Production	3.1%	2.5%	2.2%	21.6%	4.0%
Transportation and Material Moving	3.0%	5.2%	1.1%	8.5%	60.3%
Totals	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Management Occupations	15.4	2.9	2.8	7.5	0.9
Business and Financial Operations	19.6	0.8	0.9	5.3	0.5
Computer and Mathematical	23.2	0.1	0.1	5.3	0.1
Architecture and Engineering	9.9	0.0	0.0	7.2	0.1
Life, Physical, and Social Science	5.9	0.0	0.0	11.2	0.0
Community and Social Services	0.6	0.0	0.0	0.2	0.0
Legal	3.1	0.0	0.0	0.2	0.0
Education, Training, and Library	0.7	0.0	0.0	0.3	0.0
Arts, Design, Entertainment, Sports, and Media	3.2	0.5	0.2	1.0	0.0
Healthcare Practitioners and Technical	10.3	2.2	0.0	1.2	0.0
Healthcare Support	5.6	0.4	0.3	0.3	0.0
Protective Service	0.7	0.4	1.0	0.3	0.2
Food Preparation and Serving Related	0.6	47.9	15.5	1.3	0.0
Building and Grounds Cleaning and Maint.	1.7	0.9	20.0	0.8	0.3
Personal Care and Service	0.8	3.1	2.5	0.1	0.0
Sales and Related	10.0	40.5	1.4	4.5	0.4
Office and Administrative Support	40.1	12.2	12.7	10.9	5.6
Farming, Fishing, and Forestry	0.1	0.1	0.0	0.3	0.0
Construction and Extraction	1.3	0.2	0.1	0.3	0.0
Installation, Maintenance, and Repair	4.1	3.3	3.1	11.8	0.8
Production	5.1	3.1	1.4	21.7	1.0
Transportation and Material Moving	5.0	6.5	0.7	8.5	15.1
Totals	**166.9**	**125.1**	**62.6**	**100.1**	**25.0**

Notes:
(1) Appendix B Tables 1 through 10 contain additional information regarding worker occupation categories.

TABLE 2-A
ESTIMATE OF QUALIFYING HOUSEHOLDS - EXTREMELY LOW INCOME
JOBS HOUSING NEXUS ANALYSIS
FREMONT, CA

Analysis for Households Earning up to 30% of Median

	Office	Retail	Hotel	Light Industrial / R&D / Manufacturing	Warehouse
Per 100,000 Sq.Ft. of Building Area					
Step 5, 6, & 7 - Households Earning up to 30% of Median[1]					
Management	0.00	0.00	0.04	0.00	0.00
Business and Financial Operations	0.00	0.00	0.00	0.00	0.00
Computer and Mathematical	0.00	0.00	0.00	0.00	0.00
Architecture and Engineering	0.00	0.00	0.00	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00	0.01	0.00
Community and Social Services	0.00	0.00	0.00	0.00	0.00
Legal	0.00	0.00	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00	0.00	0.00
Healthcare Practitioners and Technical	0.00	0.00	0.00	0.00	0.00
Healthcare Support	0.07	0.00	0.00	0.00	0.00
Protective Service	0.00	0.00	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	17.98	5.67	0.00	0.00
Building Grounds and Maintenance	0.00	0.00	2.90	0.00	0.00
Personal Care and Service	0.00	0.81	0.61	0.00	0.00
Sales and Related	0.46	8.51	0.16	0.43	0.00
Office and Admin	1.06	1.37	1.69	0.39	0.53
Farm, Fishing, and Forestry	0.00	0.00	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00	0.00	0.00
Installation Maintenance and Repair	0.00	0.05	0.06	0.07	0.01
Production	0.61	0.51	0.36	1.71	0.09
Transportation and Material Moving	0.69	1.14	0.00	1.49	1.57
HH earning up to 30% of Median - major occupations	2.89	30.38	11.47	4.09	2.20
HH earning up to 30% of Median - all other occupations	0.38	1.42	0.62	0.22	0.11
Total Households Earning up to 30% of Median	**3.3**	**31.8**	**12.1**	**4.3**	**2.3**

Notes:
(1) Appendix B Tables 1 through 10 contain additional information regarding worker occupation categories.

TABLE 2-B
ESTIMATE OF QUALIFYING HOUSEHOLDS - VERY LOW INCOME
JOBS HOUSING NEXUS ANALYSIS
FREMONT, CA

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

	Office	Retail	Hotel	Light Industrial / R&D / Manufacturing	Warehouse
Per 100,000 Sq.Ft. of Building Area					
Step 5, 6, & 7 - Households Earning from 30% to 50% of Median[1]					
Management	0.04	0.11	0.22	0.00	0.00
Business and Financial Operations	0.16	0.00	0.00	0.05	0.01
Computer and Mathematical	0.14	0.00	0.00	0.02	0.00
Architecture and Engineering	0.02	0.00	0.00	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00	0.37	0.00
Community and Social Services	0.00	0.00	0.00	0.00	0.00
Legal	0.00	0.00	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00	0.00	0.00
Healthcare Practitioners and Technical	0.16	0.00	0.00	0.00	0.00
Healthcare Support	1.46	0.00	0.00	0.00	0.00
Protective Service	0.00	0.00	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	17.98	5.85	0.00	0.00
Building Grounds and Maintenance	0.00	0.00	6.31	0.00	0.00
Personal Care and Service	0.00	1.20	1.01	0.00	0.00
Sales and Related	1.59	14.62	0.32	0.94	0.00
Office and Admin	8.82	3.43	4.17	2.29	1.59
Farm, Fishing, and Forestry	0.00	0.00	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00	0.00	0.00
Installation Maintenance and Repair	0.00	0.57	0.62	1.48	0.13
Production	1.53	1.00	0.54	5.21	0.26
Transportation and Material Moving	1.58	2.16	0.00	2.75	4.25
HH earning from 30%-50% of Median - major occupations	15.50	41.07	19.04	13.13	6.24
HH earning from 30%-50% of Median - all other occupations	2.04	1.92	1.03	0.70	0.31
Total Households Earning from 30%-50% of Median	**17.5**	**43.0**	**20.1**	**13.8**	**6.5**

Notes:
(1) Appendix B Tables 1 through 10 contain additional information regarding worker occupation categories.

TABLE 2-C
ESTIMATE OF QUALIFYING HOUSEHOLDS - LOW INCOME
JOBS HOUSING NEXUS ANALYSIS
FREMONT, CA

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

	Office	Retail	Hotel	Light Industrial / R&D / Manufacturing	Warehouse
Per 100,000 Sq.Ft. of Building Area					
Step 5, 6, & 7 - Households Earning from 50% to 80% of Median[1]					
Management	0.41	0.29	0.36	0.13	0.03
Business and Financial Operations	2.47	0.00	0.00	0.69	0.08
Computer and Mathematical	1.37	0.00	0.00	0.24	0.00
Architecture and Engineering	0.41	0.00	0.00	0.27	0.00
Life, Physical and Social Science	0.00	0.00	0.00	1.41	0.00
Community and Social Services	0.00	0.00	0.00	0.00	0.00
Legal	0.00	0.00	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00	0.00	0.00
Healthcare Practitioners and Technical	0.77	0.00	0.00	0.00	0.00
Healthcare Support	1.94	0.00	0.00	0.00	0.00
Protective Service	0.00	0.00	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	10.51	3.45	0.00	0.00
Building Grounds and Maintenance	0.00	0.00	6.42	0.00	0.00
Personal Care and Service	0.00	0.79	0.67	0.00	0.00
Sales and Related	2.21	10.85	0.32	1.01	0.00
Office and Admin	13.11	3.81	3.82	3.53	1.77
Farm, Fishing, and Forestry	0.00	0.00	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00	0.00	0.00
Installation Maintenance and Repair	0.00	0.90	0.94	2.98	0.22
Production	1.64	0.94	0.39	7.06	0.32
Transportation and Material Moving	1.56	1.91	0.00	2.43	4.64
HH earning from 50%-80% of Median - major occupations	25.89	29.99	16.36	19.74	7.06
HH earning from 50%-80% of Median - all other occupations	3.40	1.40	0.89	1.05	0.35
Total Households Earning from 50%-80% of Median	**29.3**	**31.4**	**17.3**	**20.8**	**7.4**

Notes:
(1) Appendix B Tables 1 through 10 contain additional information regarding worker occupation categories.

TABLE 2-D
ESTIMATE OF QUALIFYING HOUSEHOLDS - MODERATE INCOME
JOBS HOUSING NEXUS ANALYSIS
FREMONT, CA

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

	Office	Retail	Hotel	Light Industrial / R&D / Manufacturing	Warehouse
Per 100,000 Sq.Ft. of Building Area					
Step 5, 6, & 7 - Households Earning from 80% to 120% of Median[1]					
Management	1.74	0.54	0.54	0.77	0.14
Business and Financial Operations	4.67	0.00	0.00	1.31	0.13
Computer and Mathematical	4.46	0.00	0.00	0.92	0.00
Architecture and Engineering	1.89	0.00	0.00	1.36	0.00
Life, Physical and Social Science	0.00	0.00	0.00	2.51	0.00
Community and Social Services	0.00	0.00	0.00	0.00	0.00
Legal	0.00	0.00	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00	0.00	0.00
Healthcare Practitioners and Technical	1.47	0.00	0.00	0.00	0.00
Healthcare Support	1.48	0.00	0.00	0.00	0.00
Protective Service	0.00	0.00	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	1.14	0.43	0.00	0.00
Building Grounds and Maintenance	0.00	0.00	3.42	0.00	0.00
Personal Care and Service	0.00	0.27	0.20	0.00	0.00
Sales and Related	2.28	5.10	0.27	0.89	0.00
Office and Admin	10.26	2.42	2.12	2.75	1.14
Farm, Fishing, and Forestry	0.00	0.00	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00	0.00	0.00
Installation Maintenance and Repair	0.00	0.97	0.83	3.56	0.23
Production	0.90	0.43	0.09	4.37	0.20
Transportation and Material Moving	0.88	0.93	0.00	1.32	3.17
HH earning from 80%-120% of Median - major occupations	30.01	11.80	7.91	19.76	5.00
HH earning from 80%-120% of Median - all other occupations	3.94	0.55	0.43	1.05	0.25
Total Households Earning from 80%-120% of Median	**34.0**	**12.4**	**8.3**	**20.8**	**5.2**

Notes:
(1) Appendix B Tables 1 through 10 contain additional information regarding worker occupation categories.

TABLE 3
WORKER HOUSEHOLDS BY AFFORDABILITY LEVEL
JOBS HOUSING NEXUS ANALYSIS
FREMONT, CA

Per 100,000 Sq.Ft. of Building Area

	Office	Retail	Hotel	Light Industrial / R&D / Manufacturing	Warehouse
NUMBER OF HOUSEHOLDS BY INCOME TIER [1]					
Extremely Low (0% - 30% AMI)	3.3	31.8	12.1	4.3	2.3
Very Low Income (30% - 50% AMI)	17.5	43.0	20.1	13.8	6.5
Low Income (50% to 80% AMI)	29.3	31.4	17.3	20.8	7.4
Moderate Income (80% to 120% AMI)	34.0	12.4	8.3	20.8	5.2
Subtotal - Affordable Categories	**84.1**	**118.5**	**57.8**	**59.7**	**21.5**
Above Moderate Income (> 120% AMI)	82.8	6.6	4.8	40.4	3.5
Total New Worker Households	**166.9**	**125.1**	**62.6**	**100.1**	**25.0**
PERCENTAGE OF HOUSEHOLDS BY INCOME TIER					
Extremely Low (0% - 30% AMI)	2.0%	25.4%	19.3%	4.3%	9.2%
Very Low Income (30% - 50% AMI)	10.5%	34.3%	32.1%	13.8%	26.1%
Low Income (50% to 80% AMI)	17.6%	25.1%	27.6%	20.8%	29.6%
Moderate Income (80% to 120% AMI)	20.3%	9.9%	13.3%	20.8%	21.0%
Subtotal - Affordable Categories	**50.4%**	**94.7%**	**92.3%**	**59.7%**	**86.0%**
Above Moderate Income (> 120% AMI)	49.6%	5.3%	7.7%	40.3%	14.0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Notes:

(1) Appendix B Tables 1 through 10 contain additional information regarding worker occupation categories.

Prepared by: Keyser Marston Associates, Inc.
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TABLE 4
HOUSING DEMAND NEXUS FACTORS PER SQ.FT. OF BUILDING AREA
JOBS HOUSING NEXUS ANALYSIS
FREMONT, CA

	Number of Housing Units per Square Foot of Building Area[1]				
	Office	**Retail**	**Hotel**	**Light Industrial / R&D / Manufacturing**	**Warehouse**
Extremely Low (0% - 30% AMI)	0.00003271	0.00031796	0.00012097	0.00004308	0.00002309
Very Low Income (30% - 50% AMI)	0.00017537	0.00042986	0.00020070	0.00013827	0.00006544
Low Income (50% to 80% AMI)	0.00029290	0.00031393	0.00017250	0.00020792	0.00007411
Moderate Income (80% to 120% AMI)	0.00033954	0.00012355	0.00008339	0.00020807	0.00005250
Total	**0.00084051**	**0.00118530**	**0.00057755**	**0.00059734**	**0.00021514**

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

IV. TOTAL HOUSING NEXUS COSTS

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

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

City Assisted Affordable Unit Prototypes

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

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

Development Costs

KMA prepared an estimate of the total development cost for the two affordable housing prototypes described above (inclusive of land acquisition costs, direct construction costs, indirect costs of development, and financing) based on a review of development pro formas for recent affordable projects, recent residential land sale comps, and other construction data sources such as RS Means. It is estimated that the new affordable for-sale townhome unit would have a total development cost of approximately $560,000 and the new affordable multi-family apartment unit would have a total development cost of approximately $513,000.

Development Costs for Affordable Units

Income Group	Unit Tenure / Type	Development Cost
Under 30% AMI	Rental	$513,000
30% to 50% AMI	Rental	$513,000
50% to 80% AMI	Rental	$513,000
80% to 120% AMI	Ownership	$560,000

The multi-family construction costs reflect the costs of building at higher densities, including structured parking garages in some cases, as well as the inclusion of common building areas such internal hallways, lobbies, community rooms, and a manager's office, which townhome developments typically do not have. As a result, the total development cost for the multi-family units is estimated to be somewhat similar to that of the attached townhome units despite a smaller unit size. Prevailing wages are assumed in the construction of both affordable housing prototypes, as it is assumed that public funds will be used to subsidize the projects. Tables 5 and 7 provide further details.

Development cost estimates were informed by KMA's review of pro forma information for over a dozen local multi-family affordable housing projects. Direct construction costs from these projects were adjusted to account for such factors as time, unit size, housing type, and project density to appropriately reflect the multi-family prototype assumed in the analysis. Other costs, such as land acquisition costs, are more site and area specific than direct construction costs and therefore the inputs for those costs were derived from other sources.

The list below identifies some of the multi-family affordable projects for which KMA had pro forma information. In addition to the following projects, KMA also had access to the pro formas for several other active, pending projects, which are not listed due to their preliminary nature.

- Ashland-Kent, Alameda County
- Downtown Hayward Senior, Hayward
- Hayward Senior II, Hayward
- Laguna Commons, Fremont
- Marea Alta, San Leandro
- Onizuka Crossing, Sunnyvale
- Dublin Veterans Housing, Dublin
- Sequoia Belle Haven, Menlo Park
- South Hayward BART, Hayward
- San Lorenzo Senior, San Lorenzo
- South Second St Studios, San Jose
- Station Center 1 & 2, Union City
- University Ave Senior, East Palo Alto

Unit Values

For affordable ownership units, unit values are based on an estimate of the restricted affordable purchase prices for a qualifying Moderate Income household. For a 3-bedroom unit, KMA calculated the affordable sales price for the matching 4-person household at $329,000. Details of the calculation are presented in Table 6.

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

On this basis, KMA estimated the unit value (total permanent funding sources) of the Extremely Low-Income rental units at $219,500, the Very Low-Income units at $286,500, and the Low-income units at $319,500. Details for these calculations are presented in Table 7.

Unit Values for Affordable Units

Income Group	Unit Tenure / Type	Household Size	Unit Values / Sales Price
Under 30% AMI	Rental	3 persons	$219,500
30% to 50% AMI	Rental	3 persons	$286,500
50% to 80% AMI	Rental	3 persons	$319,500
80% to 120% AMI	Ownership	4 persons	$329,000

Affordability Gap

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

The resulting affordability gaps are as follows:

Affordability Gap Calculation

	Unit Value / Sales Price	Development Cost	Affordability Gap
Affordable Rental Units			
Extremely Low (Under 30% AMI)	$219,500	$513,000	$293,500
Very Low (30% to 50% AMI)	$286,500	$513,000	$226,500
Low (50% to 80% AMI)	$319,500	$513,000	$193,500
Affordable Ownership Units			
Moderate (80% to 120% AMI)	$329,000	$560,000	$231,000

AMI = Area Median Income

Tables 5 through 7 present the detailed affordability gap calculations.

Maximum Fees Supported by Analysis

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

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

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

The maximum impact fees for the five building types in Fremont are as follows:

Maximum Fee Per Square Foot of Building Area

Building Type	Maximum Supported Fee Per Square Foot
Office	$184.40
Retail	$279.90
Hotel	$133.70
Light Industrial / R&D / Manufacturing	$132.20
Warehouse	$48.00

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

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

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

EDD data for 2015 indicates compensation for Retail workers in Alameda County averages approximately $32,000 per year. This means many workers qualify as Very Low Income (four-person households earning $48,750 and below[2]); as shown in Table 3, over 50% of Retail workers fall in the Extremely Low or Very Low Income categories. Virtually all Retail employee households earn less than 120% of median. Hotel workers have similar compensation levels

[2] Income criteria vary by household size.

(averaging $35,000 annually); however, since there are fewer employees per square feet of building area, the resulting mitigation costs are much lower on a per square foot basis.

Conservative Assumptions

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

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

- A downward adjustment of 20% has been reflected in the analysis to account for declining industries and the potential that displaced workers from declining sectors of the economy will fill a portion of jobs in new workplace buildings. This is a conservative assumption because many displaced workers may exit the workforce entirely by retiring. In addition, development of new workspace buildings will typically occur only to the extent net new demand exists after space vacated by businesses in declining sectors of the economy has been re-occupied. The 20% adjustment is conservative in that it is mainly necessary to cover a special case scenario in which buildings vacated by declining industries cannot be readily occupied by other users due to their special purpose nature or due to obsolescence.

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

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

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

Table 5.
Affordability Gap Calculation for Moderate Income
Jobs Housing Nexus Analysis
Fremont, CA

I. Affordable Prototype	
Tenure	For-Sale
Density	18 du/acre
Unit Size	1,300 SF
Bedrooms	3-Bedrooms
Construction Type	Townhomes

II. Development Costs	Per Unit
Land Acquisition	$157,000
Directs	$299,000 [1]
Indirects	$90,000
Financing	$14,000
Total Costs	$560,000

III. Affordable Sales Price	Per Unit
Household Size	4 person HH
110% of Median Income [2]	$93,600
Maximum Affordable Sales Price	$329,000 [3]

IV. Affordability Gap	Per Unit
Affordable Sales Price	$329,000
(Less) Development Costs	($560,000)
Affordability Gap - Moderate Income	($231,000)

[1] Construction costs include prevailing wages.

[2] Per California Health and Safety Code Section 50052.5, the affordable sale price for a Moderate Income household is to be based on 110% of AMI, whereas qualifying income can be up to 120% of AMI.

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

Table 6.
Estimated Affordable Home Prices - Moderate Income
Jobs Housing Nexus Analysis
Fremont, CA

Unit Size Household Size	2-Bedroom Unit 3-person HH	3-Bedroom Unit 4-person HH	4-Bedroom Unit 5-person HH
100% AMI Alameda County 2016	$84,250	$93,600	$101,100
Annual Income @ 110%	$92,675	$102,960	$111,210
% for Housing Costs	35%	35%	35%
Available for Housing Costs	$32,436	$36,036	$38,924
(Less) Property Taxes	($3,540)	($3,948)	($4,260)
(Less) HOA	($2,700)	($2,820)	($2,940)
(Less) Utilities	($1,560)	($1,932)	($2,316)
(Less) Insurance	($700)	($800)	($900)
(Less) Maintenance	($1,500)	($1,500)	($1,500)
(Less) Mortgage Insurance	($3,780)	($4,212)	($4,550)
Income Available for Mortgage	$18,656	$20,824	$22,458
Mortgage Amount	$280,000	$312,500	$337,000
Down Payment (homebuyer cash)	$14,750	$16,450	$17,750
Supported Home Price	$294,750	$328,950	$354,750
Key Assumptions (reviewed by Fremont city staff)			
- Mortgage Interest Rate [1]	5.30%	5.30%	5.30%
- Down Payment [2]	5.0%	5.0%	5.0%
- Property Taxes (% of sales price) [3]	1.20%	1.20%	1.20%
- HOA (per month) [4]	$225	$235	$245
- Utilities (per month) [5]	$130	$161	$193
- Mortgage Insurance (% of loan amount)	1.35%	1.35%	1.35%

(1) Mortgage interest rate based on 15-year Freddie Mac average; assumes 30-year fixed rate mortgage.
(2) Down payment amount is an estimate for Moderate Income homebuyers.
(3) Property tax rate is an estimated average for new projects.
(4) Homeowners Association (HOA) dues is an estimate for the average new project.
(5) Utility allowances from Alameda County Housing Authority (2016).

Table 7.
Affordability Gaps for Extremely Low, Very Low, and Low Income
Jobs Housing Nexus Analysis
Fremont, CA

		Extremely Low	Very Low	Low Income
I. Affordable Prototype				
Tenure		Rental		
Average Unit Size		800 square feet		
Density		~40-70 du/acre		
II. Development Costs [1]		Per Unit	Per Unit	Per Unit
Land Acquisition		$51,000	$51,000	$51,000
Directs		$328,000	$328,000	$328,000
Indirects		$115,000	$115,000	$115,000
Financing		$19,000	$19,000	$19,000
Total Development Costs		$513,000	$513,000	$513,000
III. Supported Financing		Per Unit	Per Unit	Per Unit
Affordable Rents				
Average Number of Bedrooms		2 Bedrooms	2 Bedrooms	2 Bedrooms
Maximum TCAC Rent [2]		$658	$1,097	$1,317
(Less) Utility Allowance [3]		($83)	($83)	($83)
Maximum Monthly Rent		$575	$1,014	$1,234
Net Operating Income (NOI)				
Gross Potential Income				
Monthly		$575	$1,014	$1,234
Annual		$6,900	$12,168	$14,808
Other Income		$250	$250	$250
(Less) Vacancy	5.0%	($358)	($621)	($753)
Effective Gross Income (EGI)		$6,793	$11,797	$14,305
(Less) Operating Expenses		($5,600)	($5,600)	($5,600)
(Less) Property Taxes [4]		$0	$0	$0
Net Operating Income (NOI)		$1,193	$6,197	$8,705
Permanent Financing				
Permanent Loan (tax exempt)	5.0%	$16,000	$83,000	$116,000
Deferred Developer Fee		$2,500	$2,500	$2,500
4% Tax Credit Equity		$201,000	$201,000	$201,000
Total Sources		$219,500	$286,500	$319,500
IV. Affordability Gap		Per Unit	Per Unit	Per Unit
Supported Permanent Financing		$219,500	$286,500	$319,500
(Less) Total Development Costs		($513,000)	($513,000)	($513,000)
Affordability Gap		($293,500)	($226,500)	($193,500)

[1] Development costs estimated by KMA based on affordable project pro formas in Alameda County (includes prevailing wages) and residential land sale comps.

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

[3] Utility allowances from Alameda County Housing Authority (2016).

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

TABLE 8
TOTAL HOUSING NEXUS COST
JOBS HOUSING NEXUS ANALYSIS
FREMONT, CA

		Nexus Cost Per Sq.Ft. of Building Area[3]				
INCOME CATEGORY	**Affordability Gap Per Unit**	**Office**	**Retail**	**Hotel**	**Light Industrial / R&D / Manufacturing**	**Warehouse**
Extremely Low (0% - 30% AMI)	$293,500 [1]	$9.60	$93.30	$35.50	$12.60	$6.80
Very Low Income (30% - 50% AMI)	$226,500 [1]	$39.70	$97.40	$45.50	$31.30	$14.80
Low Income (50% to 80% AMI)	$193,500 [1]	$56.70	$60.70	$33.40	$40.20	$14.30
Moderate Income (80% to 120% AMI)	$231,000 [2]	$78.40	$28.50	$19.30	$48.10	$12.10
Total		**$184.40**	**$279.90**	**$133.70**	**$132.20**	**$48.00**

Notes:

(1) Assumes rental units. Affordability Gap reflected is the remaining gap after financing available through 4% tax credits. See Table 7.

(2) Assumes ownership unit. See Table 5.

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

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

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

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

This nexus 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.

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

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

2. No Excess Supply of Affordable Housing

An assumption of this residential nexus analysis is that there is no excess supply of affordable housing available to absorb or offset new demand; therefore, new affordable units are needed to mitigate the new affordable housing demand generated by development of new market rate residential units. Based on a review of the current Census information for Fremont, conditions are consistent with this underlying assumption. According to the Census (2010 to 2014 ACS), approximately 34% of all households in the City were paying thirty percent or more of their income on housing. In addition, housing vacancy is minimal.

3. Substitution Factor

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

4. Indirect Employment and Multiplier Effects

The multiplier effect refers to the concept that the income generated by a new job recycles through the economy and results in additional jobs. The total number of jobs generated is broken down into three categories – direct, indirect and induced. In the case of the nexus analysis, the direct jobs are those located in the new workspace buildings that would be subject to the linkage fee. Multiplier effects encompass indirect and induced employment. Indirect jobs are generated by suppliers to the businesses located in the new workspace buildings. Induced jobs are generated by local spending on goods and services by employees.

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

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

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

5. Economic Cycles

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

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

To the limited extent that new workspace buildings are built during a recession, housing impacts from these new buildings may not be fully experienced immediately, but the impacts will be experienced at some point. New buildings delivered during a recession can sometimes sit vacant for a period after completion. Even if new buildings are immediately occupied, overall absorption of space can still be zero or negative if other buildings are vacated in the process. Jobs added may also be filled in part by unemployed or underemployed workers who are already housed locally. As the economy recovers, firms will begin to expand and hire again filling unoccupied space as unemployment is reduced. New space delivered during the recession still adds to the total supply of employment space in the region. Though the jobs are not realized immediately, as the economy recovers and vacant space is filled, this new employment space absorbs or accommodates job growth. Although there may be a delay in experiencing the impacts, the fundamental relationship between new buildings, added jobs, and housing needs remains over the long term.

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

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

APPENDIX B: SUPPORTING NEXUS TABLES

APPENDIX B TABLE 1
2014 NATIONAL OFFICE WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Major Occupations (3% or more)	2014 National Office Industry Occupation Distribution	
Management Occupations	2,236,881	*8.9%*
Business and Financial Operations Occupations	3,002,123	*12.0%*
Computer and Mathematical Occupations	3,521,054	*14.1%*
Architecture and Engineering Occupations	1,231,164	*4.9%*
Healthcare Practitioners and Technical Occupations	1,636,188	*6.5%*
Healthcare Support Occupations	902,875	*3.6%*
Sales and Related Occupations	1,607,178	*6.4%*
Office and Administrative Support Occupations	6,355,176	*25.4%*
Production Occupations	790,942	*3.2%*
Transportation and Material Moving Occupations	816,578	*3.3%*
All Other Office Occupations	2,901,415	*11.6%*
INDUSTRY TOTAL	25,001,574	100.0%

Industries weighted to reflect Alameda County industry mix.

Source: Bureau of Labor Statistics;
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Office Major Occupations Matrix; 10/13/2016; dd

APPENDIX B TABLE 2
AVERAGE ANNUAL COMPENSATION, 2015
OFFICE WORKER OCCUPATIONS
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers
Page 1 of 3			
Management Occupations			
General and Operations Managers	$134,000	25.6%	2.3%
Marketing Managers	$169,200	6.0%	0.5%
Sales Managers	$146,600	5.8%	0.5%
Computer and Information Systems Managers	$162,000	12.7%	1.1%
Financial Managers	$151,000	11.7%	1.0%
Architectural and Engineering Managers	$176,700	4.2%	0.4%
Property, Real Estate, and Community Association Managers	$80,600	5.7%	0.5%
Managers, All Other	$138,000	6.1%	0.5%
All Other Management Occupations (Avg. All Categories)	$132,900	22.1%	2.0%
Weighted Mean Annual Wage	***$141,200***	**100.0%**	**8.9%**
Business and Financial Operations Occupations			
Human Resources Specialists	$76,000	7.5%	0.9%
Management Analysts	$103,100	14.7%	1.8%
Market Research Analysts and Marketing Specialists	$84,100	10.6%	1.3%
Business Operations Specialists, All Other	$88,800	11.5%	1.4%
Accountants and Auditors	$83,600	17.6%	2.1%
Financial Analysts	$105,600	5.4%	0.7%
Loan Officers	$85,100	4.7%	0.6%
All Other Business and Financial Operations (Avg. All Categories)	$85,000	28.0%	3.4%
Weighted Mean Annual Wage	***$88,200***	**100.0%**	**12.0%**
Computer and Mathematical Occupations			
Computer Systems Analysts	$92,100	14.6%	2.1%
Computer Programmers	$84,500	10.3%	1.4%
Software Developers, Applications	$122,900	22.7%	3.2%
Software Developers, Systems Software	$126,000	11.2%	1.6%
Network and Computer Systems Administrators	$97,000	7.4%	1.0%
Computer User Support Specialists	$62,700	12.3%	1.7%
All Other Computer and Mathematical Occupations (Avg. All Categories)	$102,400	21.5%	3.0%
Weighted Mean Annual Wage	***$101,100***	**100.0%**	**14.1%**
Architecture and Engineering Occupations			
Architects, Except Landscape and Naval	$95,300	8.6%	0.4%
Civil Engineers	$109,500	16.0%	0.8%
Electrical Engineers	$115,600	6.6%	0.3%
Electronics Engineers, Except Computer	$108,500	4.7%	0.2%
Industrial Engineers	$104,300	4.4%	0.2%
Mechanical Engineers	$101,100	9.0%	0.4%
Architectural and Civil Drafters	$62,500	7.7%	0.4%
All Other Architecture and Engineering Occupations (Avg. All Categories)	$99,800	43.0%	2.1%
Weighted Mean Annual Wage	***$99,900***	**100.0%**	**4.9%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Office Compensation; 10/13/2016; dd

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers
Page 2 of 3			
Healthcare Practitioners and Technical Occupations			
Dentists, General	$159,900	6.3%	0.4%
Family and General Practitioners	$213,300	4.0%	0.3%
Physicians and Surgeons, All Other	$227,900	6.9%	0.5%
Registered Nurses	$124,500	14.0%	0.9%
Dental Hygienists	$96,400	13.2%	0.9%
Veterinary Technologists and Technicians	$42,200	4.8%	0.3%
Licensed Practical and Licensed Vocational Nurses	$62,100	6.1%	0.4%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	$107,400	44.7%	2.9%
Weighted Mean Annual Wage	***$118,300***	**100.0%**	**6.5%**
Healthcare Support Occupations			
Nursing Assistants	$35,400	5.2%	0.2%
Dental Assistants	$41,500	37.0%	1.3%
Medical Assistants	$41,200	35.2%	1.3%
Veterinary Assistants and Laboratory Animal Caretakers	$36,700	6.2%	0.2%
All Other Healthcare Support Occupations (Avg. All Categories)	$39,900	16.5%	0.6%
Weighted Mean Annual Wage	***$40,500***	**100.0%**	**3.6%**
Sales and Related Occupations			
First-Line Supervisors of Non-Retail Sales Workers	$88,600	4.4%	0.3%
Counter and Rental Clerks	$36,700	5.8%	0.4%
Advertising Sales Agents	$72,300	4.6%	0.3%
Insurance Sales Agents	$85,600	10.5%	0.7%
Securities, Commodities, and Financial Services Sales Agents	$86,100	7.1%	0.5%
Sales Representatives, Services, All Other	$75,100	24.7%	1.6%
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Prod	$107,700	6.8%	0.4%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scienti	$72,000	6.1%	0.4%
Real Estate Sales Agents	$69,800	8.1%	0.5%
Telemarketers	$31,300	6.5%	0.4%
All Other Sales and Related Occupations (Avg. All Categories)	$46,700	15.5%	1.0%
Weighted Mean Annual Wage	***$69,600***	**100.0%**	**6.4%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Office Compensation; 10/13/2016; dd

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers
Page 3 of 3			
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$63,100	7.2%	1.8%
Bookkeeping, Accounting, and Auditing Clerks	$46,700	7.9%	2.0%
Tellers	$32,700	4.7%	1.2%
Customer Service Representatives	$43,900	14.6%	3.7%
Receptionists and Information Clerks	$34,300	7.1%	1.8%
Executive Secretaries and Executive Administrative Assistants	$65,200	4.2%	1.1%
Medical Secretaries	$44,500	4.3%	1.1%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	$43,400	9.8%	2.5%
Office Clerks, General	$38,600	13.0%	3.3%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$44,100	27.1%	6.9%
Weighted Mean Annual Wage	***$44,500***	**100.0%**	**25.4%**
Production Occupations			
Team Assemblers	$35,600	20.0%	0.6%
Assemblers and Fabricators, All Other	$31,500	8.9%	0.3%
Inspectors, Testers, Sorters, Samplers, and Weighers	$47,100	11.3%	0.4%
Packaging and Filling Machine Operators and Tenders	$33,100	8.1%	0.3%
Helpers--Production Workers	$29,500	12.1%	0.4%
Production Workers, All Other	$30,600	8.2%	0.3%
All Other Production Occupations (Avg. All Categories)	$41,600	31.4%	1.0%
Weighted Mean Annual Wage	***$37,100***	**100.0%**	**3.2%**
Transportation and Material Moving Occupations			
Heavy and Tractor-Trailer Truck Drivers	$48,200	5.4%	0.2%
Light Truck or Delivery Services Drivers	$38,200	4.0%	0.1%
Industrial Truck and Tractor Operators	$50,200	7.6%	0.2%
Laborers and Freight, Stock, and Material Movers, Hand	$34,100	57.4%	1.9%
Packers and Packagers, Hand	$24,900	15.7%	0.5%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	$42,600	9.9%	0.3%
Weighted Mean Annual Wage	***$35,600***	**100.0%**	**3.3%**
Weighted Average Annual Wage - All Occupations	***$79,000***		88.4%

[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 2014 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2014 Occupational Employment Survey data applicable to Alameda County, updated by the California Employment Development Department to 2015 wage levels.

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Office Compensation; 10/13/2016; dd

APPENDIX B TABLE 3
2014 NATIONAL RETAIL WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Major Occupations (2% or more)	2014 National Retail Industry Occupation Distribution	
Management Occupations	645,978	*2.4%*
Food Preparation and Serving Related Occupations	10,503,365	*38.3%*
Personal Care and Service Occupations	678,723	*2.5%*
Sales and Related Occupations	8,875,888	*32.3%*
Office and Administrative Support Occupations	2,683,886	*9.8%*
Installation, Maintenance, and Repair Occupations	732,395	*2.7%*
Production Occupations	681,586	*2.5%*
Transportation and Material Moving Occupations	1,415,829	*5.2%*
All Other Retail Occupations	1,224,157	*4.5%*
INDUSTRY TOTAL	27,441,806	100.0%

Industries weighted to reflect Alameda County industry mix.

Source: Bureau of Labor Statistics;
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Retail Major Occupations Matrix; 10/13/2016; dd

APPENDIX B TABLE 4
AVERAGE ANNUAL COMPENSATION, 2015
RETAIL WORKER OCCUPATIONS
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Retail Workers
Page 1 of 2			
Management Occupations			
General and Operations Managers	$134,000	51.1%	1.2%
Sales Managers	$146,600	12.7%	0.3%
Food Service Managers	$53,100	25.4%	0.6%
All Other Management Occupations (Avg. All Categories)	$132,900	10.7%	0.3%
Weighted Mean Annual Wage	***$114,900***	**100.0%**	**2.4%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	$35,800	7.1%	2.7%
Cooks, Fast Food	$20,600	5.1%	2.0%
Cooks, Restaurant	$23,300	9.9%	3.8%
Food Preparation Workers	$22,200	6.5%	2.5%
Combined Food Preparation and Serving Workers, Including Fast Food	$21,600	28.4%	10.9%
Waiters and Waitresses	$24,400	21.3%	8.1%
Dishwashers	$21,700	4.1%	1.6%
All Other Business and Financial Operations (Avg. All Categories)	$23,800	17.6%	6.7%
Weighted Mean Annual Wage	***$23,800***	**100.0%**	**38.3%**
Personal Care and Service Occupations			
First-Line Supervisors of Personal Service Workers	$43,800	4.4%	0.1%
Nonfarm Animal Caretakers	$26,700	13.8%	0.3%
Hairdressers, Hairstylists, and Cosmetologists	$28,700	47.9%	1.2%
Manicurists and Pedicurists	$20,700	11.5%	0.3%
Skincare Specialists	$35,900	4.4%	0.1%
All Other Personal Care and Service Occupations (Avg. All Categories)	$27,900	18.0%	0.4%
Weighted Mean Annual Wage	***$28,300***	**100.0%**	**2.5%**
Sales and Related Occupations			
First-Line Supervisors of Retail Sales Workers	$50,300	11.9%	3.8%
Cashiers	$26,200	31.6%	10.2%
Retail Salespersons	$30,300	49.0%	15.8%
All Other Sales and Related Occupations (Avg. All Categories)	$46,700	7.6%	2.5%
Weighted Mean Annual Wage	***$32,600***	**100.0%**	**32.3%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Retail Compensation; 10/13/2016; dd

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Retail Workers
Page 2 of 2			
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$63,100	6.4%	0.6%
Bookkeeping, Accounting, and Auditing Clerks	$46,700	6.9%	0.7%
Customer Service Representatives	$43,900	11.3%	1.1%
Shipping, Receiving, and Traffic Clerks	$36,000	4.9%	0.5%
Stock Clerks and Order Fillers	$29,200	47.1%	4.6%
Office Clerks, General	$38,600	8.4%	0.8%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$44,100	15.0%	1.5%
Weighted Mean Annual Wage	***$37,600***	**100.0%**	**9.8%**
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$81,200	8.2%	0.2%
Computer, Automated Teller, and Office Machine Repairers	$37,000	4.6%	0.1%
Automotive Body and Related Repairers	$50,100	4.2%	0.1%
Automotive Service Technicians and Mechanics	$52,200	39.0%	1.0%
Tire Repairers and Changers	$33,700	9.0%	0.2%
Maintenance and Repair Workers, General	$45,300	7.9%	0.2%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	$56,000	27.1%	0.7%
Weighted Mean Annual Wage	***$52,600***	**100.0%**	**2.7%**
Production Occupations			
First-Line Supervisors of Production and Operating Workers	$70,200	6.4%	0.2%
Bakers	$29,900	13.9%	0.3%
Butchers and Meat Cutters	$31,000	18.7%	0.5%
Meat, Poultry, and Fish Cutters and Trimmers	$25,400	4.0%	0.1%
Laundry and Dry-Cleaning Workers	$24,900	20.8%	0.5%
Pressers, Textile, Garment, and Related Materials	$25,500	8.4%	0.2%
All Other Production Occupations (Avg. All Categories)	$41,600	27.7%	0.7%
Weighted Mean Annual Wage	***$34,300***	**100.0%**	**2.5%**
Transportation and Material Moving Occupations			
Driver/Sales Workers	$31,200	15.9%	0.8%
Light Truck or Delivery Services Drivers	$38,200	16.0%	0.8%
Parking Lot Attendants	$27,100	6.7%	0.3%
Cleaners of Vehicles and Equipment	$25,800	7.5%	0.4%
Laborers and Freight, Stock, and Material Movers, Hand	$34,100	24.8%	1.3%
Packers and Packagers, Hand	$24,900	12.5%	0.6%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	$42,600	16.6%	0.9%
Weighted Mean Annual Wage	***$33,500***	**100.0%**	**5.2%**
Weighted Average Annual Wage - All Occupations	***$32,000***		90.4%

[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 2014 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2014 Occupational Employment Survey data applicable to Alameda County, updated by the California Employment Development Department to 2015 wage levels.

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Retail Compensation; 10/13/2016; dd

APPENDIX B TABLE 5
2014 NATIONAL HOTEL WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Major Occupations (2% or more)	2014 National Hotel Industry Occupation Distribution	
Management Occupations	68,960	*4.5%*
Food Preparation and Serving Related Occupations	379,520	*24.7%*
Building and Grounds Cleaning and Maintenance Occupations	489,570	*31.9%*
Personal Care and Service Occupations	61,530	*4.0%*
Sales and Related Occupations	33,960	*2.2%*
Office and Administrative Support Occupations	310,980	*20.3%*
Installation, Maintenance, and Repair Occupations	76,990	*5.0%*
Production Occupations	34,090	*2.2%*
All Other Hotel Occupations	78,960	*5.1%*
INDUSTRY TOTAL	1,534,560	100.0%

Excludes casino hotels.

Source: Bureau of Labor Statistics;
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Hotel Major Occupations Matrix; 10/13/2016; dd

APPENDIX B TABLE 6
AVERAGE ANNUAL COMPENSATION, 2015
HOTEL WORKER OCCUPATIONS
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Hotel Workers
Page 1 of 2			
Management Occupations			
General and Operations Managers	$134,000	22.9%	1.0%
Sales Managers	$146,600	9.3%	0.4%
Financial Managers	$151,000	4.4%	0.2%
Food Service Managers	$53,100	11.1%	0.5%
Lodging Managers	$72,300	40.2%	1.8%
All Other Management Occupations (Avg. All Categories)	$132,900	12.2%	0.5%
Weighted Mean Annual Wage	***$102,000***	**100.0%**	**4.5%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors of Food Preparation and Serving Workers	$35,800	5.3%	1.3%
Cooks, Restaurant	$23,300	13.8%	3.4%
Bartenders	$24,600	7.8%	1.9%
Waiters and Waitresses	$24,400	29.5%	7.3%
Food Servers, Nonrestaurant	$25,700	8.3%	2.1%
Dining Room and Cafeteria Attendants and Bartender Helpers	$21,000	10.5%	2.6%
Dishwashers	$21,700	6.5%	1.6%
All Other Business and Financial Operations (Avg. All Categories)	$23,800	18.1%	4.5%
Weighted Mean Annual Wage	***$24,300***	**100.0%**	**24.7%**
Building and Grounds Cleaning and Maintenance Occupations			
First-Line Supervisors of Housekeeping and Janitorial Workers	$46,100	5.8%	1.9%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	$31,600	6.1%	1.9%
Maids and Housekeeping Cleaners	$32,400	85.1%	27.1%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. All Ca	$33,100	3.0%	1.0%
Weighted Mean Annual Wage	***$33,200***	**100.0%**	**31.9%**
Personal Care and Service Occupations			
First-Line Supervisors of Personal Service Workers	$43,800	4.3%	0.2%
Amusement and Recreation Attendants	$23,700	15.0%	0.6%
Baggage Porters and Bellhops	$28,400	34.4%	1.4%
Concierges	$23,900	17.8%	0.7%
Recreation Workers	$28,700	9.8%	0.4%
All Other Personal Care and Service Occupations (Avg. All Categories)	$27,900	18.6%	0.7%
Weighted Mean Annual Wage	***$27,500***	**100.0%**	**4.0%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Hotel Compensation; 10/13/2016; dd

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Hotel Workers
Page 2 of 2			
Sales and Related Occupations			
Cashiers	$26,200	24.1%	0.5%
Retail Salespersons	$30,300	11.7%	0.3%
Sales Representatives, Services, All Other	$75,100	50.6%	1.1%
All Other Sales and Related Occupations (Avg. All Categories)	$46,700	13.5%	0.3%
Weighted Mean Annual Wage	***$54,200***	**100.0%**	**2.2%**
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$63,100	7.5%	1.5%
Bookkeeping, Accounting, and Auditing Clerks	$46,700	5.2%	1.1%
Hotel, Motel, and Resort Desk Clerks	$27,800	71.8%	14.5%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$44,100	15.5%	3.1%
Weighted Mean Annual Wage	***$34,000***	**100.0%**	**20.3%**
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$81,200	8.0%	0.4%
Maintenance and Repair Workers, General	$45,300	89.8%	4.5%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	$56,000	2.1%	0.1%
Weighted Mean Annual Wage	***$48,400***	**100.0%**	**5.0%**
Production Occupations			
Bakers	$29,900	6.7%	0.1%
Laundry and Dry-Cleaning Workers	$24,900	85.0%	1.9%
All Other Production Occupations (Avg. All Categories)	$41,600	8.3%	0.2%
Weighted Mean Annual Wage	***$26,600***	**100.0%**	**2.2%**
Weighted Average Annual Wage - All Occupations	***$35,000***		92.6%

[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 2014 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2014 Occupational Employment Survey data applicable to Alameda County, updated by the California Employment Development Department to 2015 wage levels.

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Hotel Compensation; 10/13/2016; dd

APPENDIX B TABLE 7
2014 NATIONAL LIGHT INDUSTRIAL / R&D / MANUF. WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Major Occupations (2% or more)	2014 National Light Ind. / R&D / Manuf. Occupation Distribution	
Management Occupations	749,040	*7.4%*
Business and Financial Operations Occupations	521,547	*5.1%*
Computer and Mathematical Occupations	477,789	*4.7%*
Architecture and Engineering Occupations	827,628	*8.2%*
Life, Physical, and Social Science Occupations	756,486	*7.5%*
Sales and Related Occupations	380,770	*3.8%*
Office and Administrative Support Occupations	1,001,727	*9.9%*
Installation, Maintenance, and Repair Occupations	879,507	*8.7%*
Production Occupations	3,404,092	*33.5%*
Transportation and Material Moving Occupations	641,544	*6.3%*
All Other Light Industrial / R&D / Manufucturing Occupations	511,684	*5.0%*
INDUSTRY TOTAL	10,151,814	100.0%

Source: Bureau of Labor Statistics;
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; LIndustrial Major Occupations; 10/13/2016; dd

APPENDIX B TABLE 8
AVERAGE ANNUAL COMPENSATION, 2015
LIGHT INDUSTRIAL / R&D / MANUFUCTURING WORKER OCCUPATIONS
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Light Ind. / R&D / Manuf. Workers
Page 1 of 3			
Management Occupations			
General and Operations Managers	$134,000	27.3%	2.0%
Marketing Managers	$169,200	4.5%	0.3%
Sales Managers	$146,600	4.5%	0.3%
Computer and Information Systems Managers	$162,000	5.7%	0.4%
Financial Managers	$151,000	5.6%	0.4%
Industrial Production Managers	$125,800	10.6%	0.8%
Architectural and Engineering Managers	$176,700	10.2%	0.7%
Natural Sciences Managers	$162,100	9.3%	0.7%
Managers, All Other	$138,000	6.5%	0.5%
All Other Management Occupations (Avg. All Categories)	$132,900	15.8%	1.2%
Weighted Mean Annual Wage	***$144,900***	**100.0%**	**7.4%**
Business and Financial Operations Occupations			
Purchasing Agents, Except Wholesale, Retail, and Farm Products	$74,700	13.3%	0.7%
Compliance Officers	$82,800	6.4%	0.3%
Cost Estimators	$78,000	5.4%	0.3%
Human Resources Specialists	$76,000	6.6%	0.3%
Logisticians	$86,200	5.3%	0.3%
Management Analysts	$103,100	8.4%	0.4%
Market Research Analysts and Marketing Specialists	$84,100	9.6%	0.5%
Business Operations Specialists, All Other	$88,800	16.0%	0.8%
Accountants and Auditors	$83,600	14.9%	0.8%
Financial Analysts	$105,600	4.4%	0.2%
All Other Business and Financial Operations (Avg. All Categories)	$85,000	9.8%	0.5%
Weighted Mean Annual Wage	***$85,300***	**100.0%**	**5.1%**
Computer and Mathematical Occupations			
Computer Systems Analysts	$92,100	10.4%	0.5%
Computer Programmers	$84,500	5.9%	0.3%
Software Developers, Applications	$122,900	20.9%	1.0%
Software Developers, Systems Software	$126,000	21.5%	1.0%
Network and Computer Systems Administrators	$97,000	8.8%	0.4%
Computer User Support Specialists	$62,700	8.0%	0.4%
All Other Computer and Mathematical Occupations (Avg. All Categories)	$102,400	24.5%	1.2%
Weighted Mean Annual Wage	***$106,000***	**100.0%**	**4.7%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; LIndustrial Compensation; 10/13/2016; dd

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Light Ind. / R&D / Manuf. Workers
Page 2 of 3			
Architecture and Engineering Occupations			
Aerospace Engineers	$109,700 [4]	5.4%	0.4%
Electrical Engineers	$115,600	10.3%	0.8%
Electronics Engineers, Except Computer	$108,500	7.2%	0.6%
Industrial Engineers	$104,300	16.5%	1.3%
Mechanical Engineers	$101,100	17.0%	1.4%
Engineers, All Other	$113,800	6.2%	0.5%
Electrical and Electronics Engineering Technicians	$70,600	6.5%	0.5%
All Other Architecture and Engineering Occupations (Avg. All Categories)	$99,800	31.0%	2.5%
Weighted Mean Annual Wage	***$102,500***	**100.0%**	**8.2%**
Life, Physical, and Social Science Occupations			
Biochemists and Biophysicists	$133,800	9.3%	0.7%
Medical Scientists, Except Epidemiologists	$111,500	20.7%	1.5%
Chemists	$84,600	11.7%	0.9%
Biological Technicians	$57,100	12.4%	0.9%
Chemical Technicians	$51,100	5.0%	0.4%
Social Science Research Assistants	$56,800	5.2%	0.4%
All Other Life, Physical, and Social Science Occupations (Avg. All Categories)	$88,100	35.7%	2.7%
Weighted Mean Annual Wage	***$89,400***	**100.0%**	**7.5%**
Sales and Related Occupations			
Cashiers	$26,200	12.5%	0.5%
Counter and Rental Clerks	$36,700	5.1%	0.2%
Retail Salespersons	$30,300	13.8%	0.5%
Sales Representatives, Services, All Other	$75,100	7.7%	0.3%
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Prod	$107,700	14.3%	0.5%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scienti	$72,000	30.7%	1.2%
All Other Sales and Related Occupations (Avg. All Categories)	$46,700	15.8%	0.6%
Weighted Mean Annual Wage	***$60,100***	**100.0%**	**3.8%**
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$63,100	5.4%	0.5%
Bookkeeping, Accounting, and Auditing Clerks	$46,700	9.7%	1.0%
Customer Service Representatives	$43,900	10.7%	1.1%
Production, Planning, and Expediting Clerks	$55,600	6.2%	0.6%
Shipping, Receiving, and Traffic Clerks	$36,000	10.1%	1.0%
Stock Clerks and Order Fillers	$29,200	5.5%	0.5%
Executive Secretaries and Executive Administrative Assistants	$65,200	6.6%	0.7%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	$43,400	14.2%	1.4%
Office Clerks, General	$38,600	16.8%	1.7%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$44,100	14.8%	1.5%
Weighted Mean Annual Wage	***$44,800***	**100.0%**	**9.9%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; LIndustrial Compensation; 10/13/2016; dd

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Light Ind. / R&D / Manuf. Workers
Page 3 of 3			
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$81,200	8.4%	0.7%
Automotive Body and Related Repairers	$50,100	11.5%	1.0%
Automotive Service Technicians and Mechanics	$52,200	26.9%	2.3%
Industrial Machinery Mechanics	$68,200	12.5%	1.1%
Maintenance and Repair Workers, General	$45,300	11.5%	1.0%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	$56,000	29.3%	2.5%
Weighted Mean Annual Wage	***$56,700***	**100.0%**	**8.7%**
Production Occupations			
First-Line Supervisors of Production and Operating Workers	$70,200	6.3%	2.1%
Team Assemblers	$35,600	22.9%	7.7%
Machinists	$57,800	6.5%	2.2%
Inspectors, Testers, Sorters, Samplers, and Weighers	$47,100	4.8%	1.6%
Packaging and Filling Machine Operators and Tenders	$33,100	5.2%	1.7%
All Other Production Occupations (Avg. All Categories)	$41,600	54.3%	18.2%
Weighted Mean Annual Wage	***$42,900***	**100.0%**	**33.5%**
Transportation and Material Moving Occupations			
Driver/Sales Workers	$31,200	4.6%	0.3%
Heavy and Tractor-Trailer Truck Drivers	$48,200	6.0%	0.4%
Light Truck or Delivery Services Drivers	$38,200	7.0%	0.4%
Automotive and Watercraft Service Attendants	$28,300	6.3%	0.4%
Industrial Truck and Tractor Operators	$50,200	9.7%	0.6%
Cleaners of Vehicles and Equipment	$25,800	23.3%	1.5%
Laborers and Freight, Stock, and Material Movers, Hand	$34,100	17.9%	1.1%
Packers and Packagers, Hand	$24,900	14.1%	0.9%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	$42,600	11.1%	0.7%
Weighted Mean Annual Wage	***$34,000***	**100.0%**	**6.3%**
Weighted Average Annual Wage - All Occupations	***$67,000***		95.0%

[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 2014 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2014 Occupational Employment Survey data applicable to Alameda County, updated by the California Employment Development Department to 2015 wage levels.

[4] Wage data not available for Alameda County; wages estimated based on Santa Clara County wages for that occupation.

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; LIndustrial Compensation; 10/13/2016; dd

APPENDIX B TABLE 9
2014 NATIONAL WAREHOUSE WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Major Occupations (2% or more)	2014 National Warehouse Industry Occupation Distribution	
Management Occupations	25,100	*3.5%*
Business and Financial Operations Occupations	14,700	*2.0%*
Office and Administrative Support Occupations	161,880	*22.3%*
Installation, Maintenance, and Repair Occupations	23,190	*3.2%*
Production Occupations	29,150	*4.0%*
Transportation and Material Moving Occupations	438,040	*60.3%*
All Other Warehouse Occupations	34,030	*4.7%*
INDUSTRY TOTAL	726,090	100.0%

Source: Bureau of Labor Statistics;
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; Wareh Major Occupations Matrix; 10/13/2016; dd

APPENDIX B TABLE 10
AVERAGE ANNUAL COMPENSATION, 2015
WAREHOUSE WORKER OCCUPATIONS
JOBS HOUSING NEXUS MODEL
FREMONT, CA

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Warehouse Workers
Page 1 of 2			
Management Occupations			
General and Operations Managers	$134,000	37.2%	1.3%
Sales Managers	$146,600	4.9%	0.2%
Administrative Services Managers	$97,300	5.3%	0.2%
Transportation, Storage, and Distribution Managers	$110,100	36.1%	1.2%
All Other Management Occupations (Avg. All Categories)	$132,900	16.6%	0.6%
Weighted Mean Annual Wage	***$123,900***	**100.0%**	**3.5%**
Business and Financial Operations Occupations			
Wholesale and Retail Buyers, Except Farm Products	$56,200	9.9%	0.2%
Purchasing Agents, Except Wholesale, Retail, and Farm Products	$74,700	7.7%	0.2%
Human Resources Specialists	$76,000	12.2%	0.2%
Logisticians	$86,200	15.2%	0.3%
Training and Development Specialists	$85,000	9.1%	0.2%
Market Research Analysts and Marketing Specialists	$84,100	5.3%	0.1%
Business Operations Specialists, All Other	$88,800	18.9%	0.4%
Accountants and Auditors	$83,600	10.0%	0.2%
All Other Business and Financial Operations (Avg. All Categories)	$85,000	11.8%	0.2%
Weighted Mean Annual Wage	***$81,000***	**100.0%**	**2.0%**
Office and Administrative Support Occupations			
First-Line Supervisors of Office and Administrative Support Workers	$63,100	5.4%	1.2%
Customer Service Representatives	$43,900	8.5%	1.9%
Shipping, Receiving, and Traffic Clerks	$36,000	21.2%	4.7%
Stock Clerks and Order Fillers	$29,200	34.5%	7.7%
Office Clerks, General	$38,600	6.0%	1.3%
All Other Office and Administrative Support Occupations (Avg. All Categories)	$44,100	24.3%	5.4%
Weighted Mean Annual Wage	***$37,900***	**100.0%**	**22.3%**

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; WareH Compensation; 10/13/2016; dd

Occupation [1]	2015 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Warehouse Workers
Page 2 of 2			
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors of Mechanics, Installers, and Repairers	$81,200	9.1%	0.3%
Bus and Truck Mechanics and Diesel Engine Specialists	$61,300	7.7%	0.2%
Maintenance and Repair Workers, General	$45,300	61.6%	2.0%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	$56,000	21.6%	0.7%
Weighted Mean Annual Wage	***$52,100***	**100.0%**	**3.2%**
Production Occupations			
First-Line Supervisors of Production and Operating Workers	$70,200	8.3%	0.3%
Team Assemblers	$35,600	19.1%	0.8%
Inspectors, Testers, Sorters, Samplers, and Weighers	$47,100	21.9%	0.9%
Packaging and Filling Machine Operators and Tenders	$33,100	17.1%	0.7%
Helpers--Production Workers	$29,500	9.8%	0.4%
All Other Production Occupations (Avg. All Categories)	$41,600	23.8%	1.0%
Weighted Mean Annual Wage	***$41,400***	**100.0%**	**4.0%**
Transportation and Material Moving Occupations			
First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	$55,400	4.9%	2.9%
Heavy and Tractor-Trailer Truck Drivers	$48,200	8.1%	4.9%
Industrial Truck and Tractor Operators	$50,200	21.0%	12.7%
Laborers and Freight, Stock, and Material Movers, Hand	$34,100	42.8%	25.8%
Machine Feeders and Offbearers	$31,400	5.4%	3.2%
Packers and Packagers, Hand	$24,900	10.4%	6.3%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	$42,600	7.4%	4.5%
Weighted Mean Annual Wage	***$39,200***	**100.0%**	**60.3%**
Weighted Average Annual Wage - All Occupations	***$43,000***		95.3%

[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 2014 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2014 Occupational Employment Survey data applicable to Alameda County, updated by the California Employment Development Department to 2015 wage levels.

Sources: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Appendix B Fremont modified; WareH Compensation; 10/13/2016; dd

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

The City of Fremont is considering establishing an impact fee on non-residential construction to help mitigate the impacts of new workplace buildings on the demand for affordable housing in the City. KMA conducted a Non-Residential Nexus Analysis for the City of Fremont to support the potential new fee. The City previously established an affordable housing impact fee on residential construction supported by a Residential Nexus Analysis dated August 2014, also prepared by KMA. In this appendix, KMA conducts an 'overlap analysis' to determine whether any double-counting of impacts is possible.

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

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

Some of the jobs that are counted in this Non-Residential Nexus Analysis are also counted in the Residential 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. However, many jobs counted in the Non-Residential Nexus are not addressed in the Residential Nexus Analysis at all. Firms in office, industrial, warehouse and hotel buildings often serve a much broader, sometimes international, market and are generally not focused on providing services to local residents. These non-local serving jobs are not counted in the Residential Nexus Analysis. Retail, which typically is primarily local-serving, is the building type that has the greatest potential for overlap between the jobs counted in the residential and non-residential nexus analyses.

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

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

Recommended Non-Residential Fee as a Percent of Maximum Fee

The Non-Residential Nexus Analysis calculates the maximum mitigation amount supported by the analysis. KMA recommended a fee in the range of $2 - $4 per square foot for retail development. The overlap analysis is conducted on the high end of this range; if the City ultimately selects a higher fee level, the overlap analysis should be revised to the higher fee level.

Building Type	Maximum Nexus Amount	Maximum Recommended Fee Level	Percent of Maximum
Retail	$279	$4.00	1.4%

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

The conclusion is that the maximum recommended fee level for Fremont represents 1.4% of the nexus cost. So, at most, the Non-Residential fee in Fremont would mitigate approximately 1.4% of the demand for affordable units generated by new retail space.

KMA notes that new residents in Fremont will also make retail purchases in other jurisdictions in Alameda County, some of which have non-residential housing impact fee programs in place. The highest retail fee in Alameda County is currently in Berkeley, which charges $4.50 per square foot for new retail space. This represents a similar percentage of the maximum nexus amount for new retail space.

Residential Requirement as a Percent of Maximum Fee

The City of Fremont adopted an affordable housing impact fee of $26 for detached for-sale units, $27 for attached for-sale units and $17.50 for rental units. This includes an $8.50 in-lieu fee amount, which is an alternative to on-site construction of moderate-income units and not technically an impact fee requiring nexus support.

KMA has updated the findings of our 2014 Residential Nexus Analysis to reflect the current cost of producing affordable units as documented in Section IV of this report. Updating the affordability gaps increases the maximum supported fee amounts from the fee levels presented in the 2014 Residential Nexus Analysis. Appendix C Tables 1 and 2 at the end of this appendix

section present the updated findings and supporting calculations. KMA did not update other inputs such as market prices and rents, which have continued to escalate since the 2014 analysis was prepared.

The table below compares the maximum supported fee amounts from Appendix C Table 2 to the adopted fee levels.

Adopted Fee as Percent of Maximum Fee Amount					
	Prototype 1: SFD / Large Lot	*Prototype 2: SFD / Small Lot*	*Prototype 3: Townhome*	*Prototype 4: Condo*	*Prototype 5: Apartment*
Maximum Nexus Amount*	$32.20	$32.20	$33.70	$37.20	$40.00
Adopted Residential Fee**	$26.00	$26.00	$27.00	$27.00	$17.50
Max Fee as Percent of Nexus	80.75%	80.75%	80.12%	72.58%	43.75%

* See Appendix C Table 2.

** Rate assuming no moderate-income units are provided on-site.

Source: Keyser Marston Associates, Inc. 2014 Residential Nexus Analysis, as updated for current affordability gaps

The conclusion is that the affordable housing impact fee in Fremont is equal to 44% to 81% of the maximum supported by the Residential Nexus analysis depending on the prototype.

Combined Requirements within Nexus Maximums

The highest recommended retail fee level for Fremont mitigates 1.4% of the maximum supported impact fee amount in Fremont. The adopted impact fee level for new residential projects represents 44% - 81% of the maximum supported impact fee amount, depending on the prototype. Therefore, the combined affordable housing mitigations would not exceed the nexus even if there were 100% overlap in the jobs counted in the two nexus analyses.

Adopted Fee as Percent of Maximum Fee Amount					
	Prototype 1: SFD / Large Lot	*Prototype 2: SFD / Small Lot*	*Prototype 3: Townhome*	*Prototype 4: Condo*	*Prototype 5: Apartment*
Residential Fee as Percent of Residential Nexus	80.75%	80.75%	80.12%	72.58%	43.75%
Max Non-Res. Fee as Percent of Non-Residential Nexus for Retail	1.4%	1.4%	1.4%	1.4%	1.4%
Total Percent of Demand Mitigated	82.1%	82.1%	81.5%	74.0%	45.2%

While the analysis of overlap is focused on retail, findings that combined affordable housing mitigations would never exceed the nexus maximums also holds for other non-residential uses.

APPENDIX C, TABLE 1
2014 RESIDENTIAL NEXUS FINDINGS - AFFORDABLE UNITS NEEDED PER 100 MARKET RATE UNITS
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA

RESIDENTIAL UNIT DEMAND IMPACTS

PER 100 MARKET RATE UNITS

Number of New Households[1]	Prototype 1: SFD / Large Lot	Prototype 2: SFD / Small Lot	Prototype 3: Townhome	Prototype 4: Condo	Prototype 5: Apartment
Under 30% Area Median Income	5.8	4.6	3.7	3.5	2.5
30% to 50% Area Median Income	10.8	8.6	6.8	6.5	4.5
50% to 80% Area Median Income	9.3	7.4	5.8	5.6	3.9
80% to 120% Area Median Income	9.1	7.3	5.6	5.4	3.8
Subtotal through 120% of Median	35.0	27.9	21.9	21.0	14.8
Over 120% Area Median Income	8.0	6.4	5.1	4.9	3.6
Total Employee Households	43.0	34.3	27.0	26.0	18.3

PER (1) MARKET RATE UNIT

Number of New Households[1]

Under 30% Area Median Income	0.058	0.046	0.037	0.035	0.025
30% to 50% Area Median Income	0.108	0.086	0.068	0.065	0.045
50% to 80% Area Median Income	0.093	0.074	0.058	0.056	0.039
80% to 120% Area Median Income	0.091	0.073	0.056	0.054	0.038
Subtotal through 120% of Median	0.350	0.279	0.219	0.210	0.148
Over 120% Area Median Income	0.080	0.064	0.051	0.049	0.036
Total Employee Households	0.430	0.343	0.270	0.260	0.183

Source: Keyser Marston Associates, Inc. Residential Nexus Analysis, City of Fremont. August 2014.

Notes
[1] Households of retail, education, healthcare and other workers that serve residents of new market rate units.

APPENDIX C, TABLE 2
SUPPORTED FEE / NEXUS SUMMARY PER UNIT - WITH UPDATED AFFORDABILITY GAPS
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA

TOTAL NEXUS COST PER MARKET RATE UNIT

		Nexus Cost Per Market Rate Unit [2]				
	Affordability Gap [1]	Prototype 1: SFD / Large Lot	Prototype 2: SFD / Small Lot	Prototype 3: Townhome	Prototype 4: Condo	Prototype 5: Apartment
Household Income Level						
Under 30% Area Median Income	$293,500 [1]	$17,000	$13,600	$10,800	$10,400	$7,300
30% to 50% Area Median Income	$226,500 [1]	$24,500	$19,500	$15,400	$14,700	$10,300
50% to 80% Area Median Income	$193,500 [1]	$18,000	$14,300	$11,200	$10,800	$7,500
80% to 120% Area Median Income	$231,000 [2]	$21,000	$16,800	$13,000	$12,500	$8,900
Total Supported Fee / Nexus		**$80,500**	**$64,200**	**$50,400**	**$48,400**	**$34,000**

TOTAL NEXUS COST PER SQUARE FOOT OF BUILDING AREA[4]

		Nexus Cost Per Square Foot (Net Rentable / Sellable)[3]				
		Prototype 1: SFD / Large Lot	Prototype 2: SFD / Small Lot	Prototype 3: Townhome	Prototype 4: Condo	Prototype 5: Apartment
	Unit Size (SF)	2,500 SF	2,000 SF	1,500 SF	1,300 SF	850 SF
Household Income Level						
Under 30% Area Median Income		$6.80	$6.80	$7.20	$8.00	$8.60
30% to 50% Area Median Income		$9.80	$9.80	$10.30	$11.30	$12.10
50% to 80% Area Median Income		$7.20	$7.20	$7.50	$8.30	$8.80
80% to 120% Area Median Income		$8.40	$8.40	$8.70	$9.60	$10.50
Total Supported Fee / Nexus		**$32.20**	**$32.20**	**$33.70**	**$37.20**	**$40.00**

Notes:
[1] See Section IV of Report for supporting analysis and discussion of updated affordability gaps.
[2] Nexus cost per unit computed by multiplying affordable unit demand per market rate unit from Appendix C Table 1 by the affordability gap.
[3] Computed by dividing the nexus cost per unit by the square footage of the unit.