



KEYSER MARSTON ASSOCIATES

RESIDENTIAL NEXUS ANALYSIS Fremont, California

Prepared for:
City of Fremont

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I. EXECUTIVE SUMMARY

Keyser Marston Associates (KMA) prepared this residential nexus analysis for the City of Fremont pursuant to a contractual agreement. This Executive Summary contains a concise overview of the residential nexus analysis; full documentation of the analysis is contained in the body of the Report and its Appendices.

A. Residential Nexus Analysis

A residential nexus analysis demonstrates and quantifies the impact of new market rate housing development on the demand for affordable housing. The underlying nexus concept is that the newly constructed market rate units represent net new households in Fremont. These households represent new income in Fremont that will consume goods and services, either through purchases of goods and services or 'consumption' of government services. New consumption translates to jobs; a portion of the jobs are at lower compensation levels; low compensation jobs relate to lower income households that cannot afford market rate units in Fremont and therefore need affordable housing.

1. Impact Methodology and Models Used

The analysis is performed using two models. The IMPLAN model is an industry accepted, commercially available model developed over 30 years ago to quantify the impacts of changes in a local economy, including the employment impacts of changes in personal income. The input into the IMPLAN model is net new personal income in Fremont available for expenditures; the IMPLAN model then estimates a distribution of expenditures and ultimately produces a quantification of jobs generated by industry. The KMA Jobs Housing Nexus model, which was initially developed over 25 years ago to analyze the income structure of job growth, is used to determine the household income of new employee households and identify how many are in four housing affordability tiers including Extremely Low-, Very Low-, Low-, and Moderate-Income.

2. Market Survey and Residential Prototypes

The first step of the nexus analysis is to identify residential prototypes that are representative of what is generally being built by the private marketplace in Fremont. KMA developed programmatic assumptions in consultation with the City of Fremont for five residential prototypes – four ownership prototypes and one rental prototype. KMA then undertook a market survey of projects covering these prototypes to estimate sales prices and rent levels for the prototype units. The prototypes are summarized in the following table.

Prototypical Residential Units					
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Avg. Unit Size	2,500 SF	2,000 SF	1,500 SF	1,300 SF	850 SF
Avg. No. of Bedrooms	4 BR	3 BR	3 BR	2 BR	2 BR
Avg. Sales Price / Rent	\$1,100,000	\$800,000	\$622,500	\$580,000	\$2,125 /mo.

From the sales prices and rent levels, household income is determined using assumptions with respect to a share of income spent on housing and housing purchase terms. For ownership units, 35% of income is spent on housing (including mortgage payments, property taxes, home owner association dues, and insurance). Renters are assumed to spend 30% of their income on rent. These relationships are reflective of the current averages for Alameda County.

Gross household income is adjusted to a net amount available for expenditures after deducting the portion of income dedicated to income taxes, contributions to Social Security and Medicare, savings, and repayment of household debt. Housing costs are not deducted as part of this adjustment step because they are addressed separately as expenditures within the IMPLAN model. The adjusted household income available for expenditures becomes the input into the IMPLAN model. As a result, household income associated with each of the prototypes is as follows:

Household Income					
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Gross Household Income	\$217,000	\$160,000	\$127,000	\$122,000	\$85,000
Percent Income Available for Expenditures	62%	67%	67%	67%	70%
Household Income Available for Expenditures [Input to IMPLAN model]	\$135,000	\$107,000	\$85,000	\$82,000	\$60,000

The nexus analysis is conducted on 100-unit project modules (i.e., 100 new households) for ease of presentation and to avoid awkward fractions.

3. IMPLAN Model Results

The IMPLAN model was applied to link household income to job growth occurring in Alameda County. The IMPLAN model distributes spending among various types of goods and services (industry sectors) based on data from the Consumer Expenditure Survey and the Bureau of Economic Analysis Benchmark input-output study, to estimate employment generated. Job creation, driven by increased demand for products and services, is projected for each of the industries that will serve the new households. The employment generated by this new household spending is summarized in the following table.

Jobs Generated Per 100 Units					
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Annual Household Expenditures, 100 Units	\$13,450,000	\$10,720,000	\$8,510,000	\$8,170,000	\$5,950,000
Total Jobs Generated, 100 Units	92.3	73.6	58.0	55.7	39.3

The IMPLAN model quantifies jobs generated at establishments that serve new residents directly (i.e. supermarkets, banks or schools), jobs generated by increased demand at firms which service or supply these establishments (wholesalers, janitorial contractors, accounting firms, or any jobs down the service/supply chain from direct jobs), and jobs generated when the new employees spend their wages in the local economy and generate additional jobs. Retail, restaurants, and health care represent the largest share of jobs generated by household expenditures.

4. Compensation Levels of Jobs and Household Income

The output of the IMPLAN model – the numbers of jobs by industry – is then entered into the Keyser Marston Associates jobs housing nexus analysis model to quantify the compensation levels of new jobs and the income of the new worker households. The KMA model sorts the jobs by industry into jobs by occupation, based on national data, and then attaches local wage distribution data to the occupations, using recent Alameda County data from the California Employment Development Department (EDD). The KMA model also converts the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers is reduced.

The output of the model is the number of new worker households by income level (expressed in relation to the Area Median Income, or AMI) attributable to the new residential units and new households in Fremont. Four categories of addressed: Extremely Low (under 30% of AMI), Very Low (30% to 50% of AMI), Low (50% to 80% of AMI) and Moderate (80% to 120% of AMI).

Following are the numbers of worker households by income level associated with the Fremont prototype units.

<i>New Worker Households by Income Level per 100 Market Rate Units</i>					
	<i>Single Family / Large Lot</i>	<i>Single Family / Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Extr. Low (Under 30% AMI)	5.8	4.6	3.7	3.5	2.5
Very Low (30%-50% AMI)	10.8	8.6	6.8	6.5	4.5
Low (50%-80% AMI)	9.3	7.4	5.8	5.6	3.9
Moderate (80%-120% AMI)	9.1	7.3	5.6	5.4	3.8
Total, Less than 120% AMI	35.0	27.9	21.9	21.0	14.8
Greater than 120% AMI	8.0	6.4	5.1	4.9	3.6
Total, New Households	43.0	34.3	27.0	26.0	18.3

5. Impact Fee Levels Supported by the Nexus Analysis

The last step in the analysis puts a dollar amount on the cost of mitigating the affordable housing impacts. The conclusions of the nexus analysis, expressed as the number of worker households by income affordability category, are linked to the cost of delivering housing to the households in need. Each income or affordability tier is associated with a subsidy needed to produce and deliver a unit at the specified affordability level; this subsidy is referred to as the 'affordability gap.'

Affordability gaps are calculated for each of the four affordable tiers. The analysis assumes households earning less than 80% of Area Median Income will be assisted in rental units, while households earning between 80% and 120% of Area Median Income will be assisted in ownership units.

The resulting affordability gaps are as follows:

- \$193,300 for households in the under 30% AMI category;
- \$125,500 for households in the 30% to 50% AMI category;
- \$214,000 for households in the 50% to 80% AMI category; and,
- \$233,450 for households in the 80% to 120% AMI category.

When the affordability gap conclusions for each income tier are linked to the number of affordable units required as a result of market rate development (as indicated in the inset table on the next page) and divided by 100 units, the result is a Total Nexus Cost per new market rate residential unit. The results per unit are:

Nexus Cost Per Market Rate Unit						
<i>Income Category</i>	<i>Affordability Gap</i>	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Ext. Low (Under 30% AMI)	\$193,300	\$11,200	\$8,900	\$7,100	\$6,900	\$4,800
Very Low (30%-50% AMI)	\$125,500	\$13,600	\$10,800	\$8,500	\$8,200	\$5,700
Low (50%-80% AMI)	\$214,000	\$19,900	\$15,900	\$12,400	\$11,900	\$8,300
Moderate (80%-120% AMI)	\$233,450	\$21,300	\$16,900	\$13,100	\$12,600	\$9,000
Total Nexus Costs		\$66,000	\$52,500	\$41,100	\$39,600	\$27,800

The Total Nexus Costs, or Mitigation Costs, indicated above, may also be expressed on a per square foot level. The results per square foot of building area (net rentable or sellable Sq.Ft.) are as follows:

Total Nexus Cost or Maximum Supported Impact Fee Per Sq.Ft. of Building Area¹						
<i>Income Category</i>	<i>Affordability Gap</i>	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
<i>Prototype Size</i>		<i>2,500 SF</i>	<i>2,000 SF</i>	<i>1,500 SF</i>	<i>1,300 SF</i>	<i>850 SF</i>
Ext. Low (Under 30% AMI)	\$193,300	\$4.50	\$4.50	\$4.70	\$5.30	\$5.60
Very Low (30%-50% AMI)	\$125,500	\$5.40	\$5.40	\$5.70	\$6.30	\$6.70
Low (50%-80% AMI)	\$214,000	\$8.00	\$8.00	\$8.30	\$9.20	\$9.80
Moderate (80%-120% AMI)	\$233,450	\$8.50	\$8.50	\$8.70	\$9.70	\$10.60
Total Nexus Costs		\$26.40	\$26.40	\$27.40	\$30.50	\$32.70

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

6. Inclusionary Percentages Supported

The findings of the nexus analysis can be used to calculate the percentage of units provided on-site within a project that would fully mitigate the affordable housing impacts. The percentages are calculated including both market rate and affordable units (for example, 25 affordable units per 100 market rate units translates to a project of 125 units; 25 affordable units out of 125 units equals 20%).

The table below presents the results of the analysis. Each tier is cumulative, or inclusive of the tiers above. The analysis supports maximum inclusionary percentages between 17.4% and 25.9%, depending on the prototype. A supported inclusionary percentage is not presented for the rental prototype as the *Palmer* case precludes cities from requiring the inclusion of affordable units in rental projects unless the developer receives city assistance, a density bonus

¹ Findings are presented based on net rentable or sellable square footage

or certain regulatory concessions and agrees by contract to restrict the rents. Fremont has an impact fee requirement applicable to rental projects.

Cumulative Inclusionary Percentage Supported by Nexus Analysis				
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>
Extr. Low (Under 30% AMI)	5.5%	4.4%	3.6%	3.4%
Very Low (30%-50% AMI)	14.3%	11.7%	9.5%	9.1%
Low (50%-80% AMI)	20.6%	17.1%	14.0%	13.5%
Moderate (80%-120% AMI)	25.9%	21.8%	18.0%	17.4%

The above percentages are supportive of Fremont’s existing 15% inclusionary requirement. The potential increase to a 20% requirement that is contemplated in the City’s affordable housing ordinance as of January 1, 2015 is supported for the two Single Family prototypes but not for the Townhome and Condo prototypes.

7. On-Site Equivalent In-Lieu Costs

In selecting fee levels for each type of unit, one important consideration could be the on-site compliance equivalent costs. This is especially the case if developers are given the option to pay a fee instead of providing the affordable units on site, as is the case in Fremont’s current program for for-sale units. The cost of on-site compliance is calculated by first estimating the lost revenue to the developer from designating a unit as affordable; this is the on-site affordability gap. In this case, the affordability gaps are calculated assuming that the affordable unit is the same as the relevant prototype (in the nexus analysis the affordability gaps were based on a smaller Townhome unit, which is the prototype the City is most likely to assist.) Below are the on-site affordability gaps, or the difference between the unit’s market value and the unit’s affordable values. The table also calculates the per unit allocation and the per square foot equivalent.

On-Site Equivalent In-Lieu Costs					
<i>Prototype</i>	<i>Market Price</i>	<i>Moderate Price</i>	<i>Affordability Gap</i>	<i>Per Unit Cost (15% requirement)</i>	<i>Per SF Cost</i>
Large Lot Single Family	\$1,100,000	\$380,200	\$719,800	\$107,970	\$43.19
Small Lot Single Family	\$800,000	\$353,350	\$446,650	\$66,998	\$33.50
Townhomes	\$622,500	\$353,350	\$269,150	\$40,373	\$26.92
Stacked Condominiums	\$580,000	\$319,050	\$260,950	\$39,143	\$30.11

The on-site equivalent in-lieu costs for the two single family detached prototypes are higher than the nexus supported fee levels. This would suggest that most developers of single family detached homes would be economically incentivized to pay the fee rather than build the affordable units on-site, even if the maximum fee levels were applied. For the two attached unit prototypes (townhomes and stacked condominiums), the on-site equivalent in-lieu costs are at

approximately the same level as the nexus supported fee levels. In the case of the townhomes and stacked condominiums, because of the near equivalency of the maximum fee and on-site alternatives, it is possible that some developers would elect to build on-site rather than pay the fee.

The City's 2010 fee resolution cited the 2010 Nexus Study findings regarding the on-site equivalent in-lieu costs as a basis for the City's decision on fee amounts. For example, in 2010 the on-site equivalent costs ranged from \$19.60 per square foot for the Townhome prototype to \$22.74 per square foot for the Large Single Family prototype, and the adopted fees capped out at \$19.50 and \$22.50 per square foot. In the current analysis, the on-site equivalent costs have risen to \$26.92 and \$43.19 per square foot for the Townhome and Large Single Family prototypes respectively. The increase in the on-site equivalent in-lieu costs since 2010 is attributable to the significant increase in the market rate home prices as compared with the increase in affordable prices which have been much more modest.

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II. INTRODUCTION AND OVERVIEW

This report documents and quantifies the linkages between new market-rate residential development in the City of Fremont and the demand for additional affordable housing. The analysis, which demonstrates ongoing support for an affordable housing requirement, has been prepared by Keyser Marston Associates (KMA) for the City of Fremont in accordance with a contractual agreement.

The City of Fremont has an Inclusionary Housing Ordinance requiring all for-sale residential projects to set-aside 15% of units as affordable, pay a fee in-lieu of providing units, or otherwise contribute to affordable housing production such building units off-site or dedicating property for affordable housing. For rental projects, the 2009 *Palmer* case precludes cities from requiring the inclusion of affordable units unless the developer receives city assistance or other form of city concession in which the developer agrees by contract to restrict the rents. As a result of *Palmer*, the City of Fremont's program requires rental housing projects to pay an affordable housing impact fee rather than requiring units on-site.

When the City's affordable housing fee resolution was adopted in 2010, the fees were set to increase annually by fixed amounts in July 2010, 2011, 2012, and 2013. The resolution contemplated that the fee levels would be re-evaluated after 2013. The current for-sale housing in-lieu fee is \$22.50 per habitable square foot for single family homes on lots 6,000 square feet and larger, and \$19.50 per square foot for all other for-sale units. The rental housing impact fee is currently set at \$19.50 per square foot for all rental unit types.

The current affordable housing requirement for for-sale projects is that 15% of units be affordable at Moderate Income levels; however the City's ordinance specifies that the requirement will increase to 20% on January 1, 2015 "provided that the city council finds that a nexus study quantifying the impacts of new market-rate units on the need for affordable housing supports a 20% requirement". As detailed in this report, a 20% requirement is supported by two of the four for-sale prototypes.

Analyses of the impacts of new development are called linkage or nexus analyses. This nexus analysis establishes maximum supportable fee levels based on a quantification of the impact that new market rate residential development has on the need for affordable housing.

The Nexus Concept

At its most simplified level, the underlying nexus concept is that the newly constructed units represent net new households in Fremont. These households represent new income in Fremont that will consume goods and services, either through purchases of goods and services or "consumption" of governmental services. New consumption translates to jobs; a portion of the jobs are at lower compensation levels; low compensation jobs relate to lower income households that cannot afford market rate units in Fremont and therefore need affordable housing.

Use of This Study

The nexus study has been prepared for the limited purpose of determining nexus support for the City of Fremont's Affordable Housing Ordinance affecting new residential construction. We caution against the use of this study, or any impact study for that matter, for purposes beyond the intended use. All impact studies are limited and imperfect, but can be helpful for understanding the externalities created by new development. The nexus analysis presented in this report is an impact analysis only and the nexus amounts are not recommended fee levels.

Methodology and Models Used

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

To illustrate the linkages by looking at a simplified example, we can take an average household that buys a house at a certain price. From that price, we estimate the gross income of the household (from mortgage rates and lending practices) and the portion of income available for expenditures. Households will "purchase" or consume a range of goods and services, such as purchases at the supermarket or services at the bank. Purchases in the local economy in turn generate employment. The jobs generated are at different compensation levels. Some of the jobs are low paying and as a result, even when there is more than one worker in the household, there are some lower and middle-income households who cannot afford market rate housing in Fremont.

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

Net New Underlying Assumption

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

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

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

Geographic Area of Impact

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

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

Market Rate Residential Project Types

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

- Single Family Detached (SFD) / Large Lot
- Single Family Detached / Small Lot
- Townhomes²
- Stacked Flat Condominiums (higher density with concrete parking)
- Apartments

Affordability Tiers

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

- Extremely Low Income (under 30% of Area Median Income or AMI)
- Very Low Income (30% to 50% AMI)
- Low Income (50% to 80% AMI)
- Moderate Income (80% to 120% AMI)

Report Organization

The report is organized into four sections as follows:

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

² The Townhome prototype is typically all wood frame construction and can include conventional townhomes and other similar all wood frame prototypes such as stacked flats.

III. NEXUS ANALYSIS

A. MARKET RATE UNITS AND HOUSEHOLD INCOME

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

This section provides a summary of the prototypes and household income. More description and supporting tables are provided in Appendix 1.

Recent Housing Market Activity and Prototypical Units

KMA identified five residential prototypes in consultation with City staff; these prototypes are representative of the types of development that the City of Fremont expects to see over the coming years. KMA then undertook a market survey of projects covering these prototypes in spring 2014. At that time, there were a very limited number of new residential projects actively being marketed in Fremont. As another indicator of market values, KMA also obtained data on sales of existing homes in Fremont, focusing on units built since 1990. Higher density stacked flat condos with concrete parking garages have not been built recently in Fremont but are included in the nexus analysis to address the potential for stacked flat condos to be built in Fremont at some point in the future. For the higher density stacked flat condos, the sales price is based on an estimate of the price required for development of this prototype to become feasible.

The results of the market survey and the selection of five prototypes are summarized in the table on the following page. The main objective of the survey was to establish current sales prices or rents per unit and per square foot for the various residential project types recently developed, or expected to be developed in the future, in Fremont. Table A-1 at the end of this section provides a more detailed summary of the five market rate prototypes.

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

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

Prototypical Residential Units					
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Avg. Unit Size	2,500 SF	2,000 SF	1,500 SF	1,300 SF	850 SF
Avg. No. of Bedrooms	4 BR	3 BR	3 BR	2 BR	2 BR
Avg. Sales Price / Rent	\$1,100,000	\$800,000	\$622,500	\$580,000	\$2,125 /mo.

Income of Housing Unit Purchaser or Renter

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

Ownership Units

To make the determination for ownership units, terms for the purchase of residential units used in the analysis are slightly less favorable than what can be achieved at the current time since current terms are not likely to endure. The selected terms for the analysis are: 20% down payment, 30 year fixed rate mortgage, 5.25% interest rate. The assumption of a 20% down payment is based on the median for purchase loans in Alameda County³. The interest rate at 5.25% reflects an estimate of the longer term average based on the experience over the past ten years.⁴ Current rates as of May 2014 are about 1% lower. Tables A-2 through A-5 at the end of this section provide the details.

All ownership product types include an estimate of homeowners' insurance, homeowner association dues, and property taxes which are included along with the mortgage payment as part of housing expenses for purposes of determining mortgage eligibility⁵. The analysis estimates gross household income based on the assumption that these housing costs represent, on average, approximately 35% of gross income. The assumption that housing expenses represent 35% of gross income is reflective of the average for new purchase loans originated in Alameda County⁶ and is consistent with criteria used by lenders to determine mortgage eligibility⁷.

³ Median down payment at 20% is based on Freddie Mac data on its portfolio of mortgages within zip codes corresponding to Alameda County and is specific to principal residence purchase loans originated during the 4th quarter of 2012, the most recent period available at the time the data was accessed.

⁴ Based on Freddie Mac Primary Mortgage Market Survey weekly average rates for 30 year fixed rate mortgages during the period from 2004 through 2013.

⁵ Housing expenses are combined with other debt payments such as credit cards and auto loans to compute a Debt To Income (DTI) ratio which is a key criteria used for determining mortgage eligibility.

⁶ New purchase loans in Alameda County have an average debt to income ratio of 35.4% based on data from Freddie Mac on its portfolio of mortgages within zip codes corresponding to Alameda County and specific to principal residence purchase loans originated during 2nd quarter of 2012, the most recent period available at the time the data was accessed. Debt to income ratio includes other forms of debt such as student loans, credit cards, and auto loans which suggests a ratio including only housing expenses would be less than 35%. Applying a ratio below 35% in the analysis would have produced a higher estimate of gross household income and higher resulting nexus findings; therefore, application of a 35% ratio represents a conservative assumption for purposes of the nexus analysis.

Apartment Units

Household income for renter households is estimated based on the assumption that rent represents, on average, 30% of gross household income, a percentage that is somewhat above the average for Fremont reported by the Census of 26.4%.⁸ While slightly above the average from the Census, the 30% factor was selected for consistency with the California Health and Safety Code standard for relating income to affordable rent levels⁹. Selection of 30% produces a lower estimate of gross household income and lower resulting nexus conclusions than if the average from the Census at 26.4% were used; therefore, this represents a conservative approach for purposes of the nexus analysis. While leasing agents and landlords may permit rental payments to represent a slightly higher share of total income, use of the 30% factor, which is representative of the average, is appropriate. Further, many renters will choose to spend less than 30% of their income on rent where possible, since, unlike an ownership situation, the unit is not viewed as an investment with value enhancement potential. The resulting relationship is that annual household income is 3.3 times annual rent.

The estimated gross household incomes of the purchasers or renters of the prototype units are calculated in tables A-2 through A-6, and summarized below.

Household Income					
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Gross Household Income	\$217,000	\$160,000	\$127,000	\$122,000	\$85,000

Income Available for Expenditures

The input into the IMPLAN model used in this analysis is the net income available for expenditures. To arrive at income available for expenditures, gross income must be adjusted for Federal and State income taxes, contributions to Social Security and Medicare, savings, and payments on household debt. Per KMA correspondence with the producers of the IMPLAN model (IMPLAN Group LLC), other taxes including sales tax, gas tax, and property tax are handled internally within the model as part of the analysis of expenditures. Housing costs are addressed separately, as described below, and so are not deducted as part of this adjustment step. Table A-7 at the end of this section shows the calculation of income available for expenditures.

Income available for expenditures is estimated at approximately 62% of gross income in the case of the large lot single family prototype and 67% for the other ownership prototypes. The

⁷ Fannie Mae mortgage underwriting eligibility criteria establishes a debt to income threshold of 36% above which tighter credit standards apply. A debt to income ratio of up to 45% is permitted for borrowers meeting specified credit criteria; however, most households have other forms of debt such as credit cards, student loans, and auto loans that would be considered as part of this ratio.

⁸ 2010-2012 American Community Survey.

⁹ Health and Safety Code Section 50052.5 defines affordable rent levels based on 30% of income.

estimate is based on a review of data from the Internal Revenue Service and California Franchise Tax Board tax tables. Per the Internal Revenue Service, households earning between \$200,000 and \$500,000 per year, or the residents of our prototypical large lot single family units, who itemize deductions on their returns will pay an average of 16.8% of gross income for federal taxes. Residents of the other ownership prototypes fall into the \$100,000 to \$200,000 income range where households who itemize deductions pay an average of 12.3% of their gross income toward federal income taxes. State taxes are estimated to average 5% to 6% of gross income based on tax rates per the California Franchise Tax Board. The employee share of FICA payroll taxes for Social Security and Medicare is 7.65% of gross income (conservatively assumes all earners in the household are within the \$117,000 ceiling on income subject to Social Security taxes).

Savings and repayment of household debt represent another necessary adjustment to gross income. Savings includes various IRA and 401 K type programs as well as non-retirement household savings and investments. Debt repayment includes auto loans, credit cards, and all other non-mortgage debt. Savings and repayment of debt are estimated to represent a combined 8% of gross income based on the 20 year average derived from United States Bureau of Economic Analysis data.

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

After deducting income taxes, Social Security, Medicare, savings, and repayment of debt, for purchasers of one of the new ownership prototypes, the estimated income available for expenditures is 62% for the Large Lot Single Family prototype and 67% for the other ownership prototypes. This is the factor used to adjust from gross income to the income available for expenditures for input into the IMPLAN model. As indicated above, other forms of taxation such as property tax are handled internally within the IMPLAN model.

Income available for expenditures for the prototypical renter household is based on the same evaluation, but a lower income tax bracket applies to the renter households. The result is that the renter household would have an estimated 70% of income available for expenditures. The rate of savings and debt repayment is assumed to be the same for the renter household as for households in the ownership prototypes.

Estimates of household income available for expenditures are presented in the following table:

Income Available for Expenditures					
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Gross Household Income	\$217,000	\$160,000	\$127,000	\$122,000	\$85,000
Percent Income Available for Expenditures	62%	67%	67%	67%	70%
Household Income Available for Expenditures [Input to IMPLAN model]	\$135,000	\$107,000	\$85,000	\$82,000	\$60,000

The nexus analysis is conducted on 100-unit building modules for ease of presentation, and to avoid awkward fractions. Tables A-8 and A-9 summarize the conclusions of this section and calculate the household income for the 100-unit building modules. This is the input into the IMPLAN model.

**TABLE A-1
SUMMARY OF PROTOTYPES
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT**

	Large Lot Single Family Detached	Small Lot Single Family Detached	Townhomes	Stacked Flat Condominiums ⁽¹⁾	Apartments
Density	8 du/acre	12 du/acre	25 du/acre	50 du/acre	25 du/acre
Average Unit Size	2,500 sf	2,000 sf	1,500 sf	1,300 sf	850 sf
Avg. Number of Bedrooms	4 BR	3 BR	3 BR	2 BR	2 BR
Market Rate Price	\$440 \$1,100,000	\$400 \$800,000	\$415 \$622,500	\$446 \$580,000	\$2.50 \$2,125

⁽¹⁾ The Stacked Flat Condominium is a higher density prototype with a concrete parking garage. The sale price is based on an estimated feasible price.

**TABLE A-2
 PROTOTYPE 1: SFD / LARGE LOT
 SALES PRICE TO INCOME RATIO
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

			<u>Prototype 1</u> <u>SFD / Large Lot</u>
Sales Price	\$440 /SF	2,500 SF ¹	\$1,100,000 ¹
Mortgage Payment			
Downpayment @ 20%		20% ²	\$220,000
Loan Amount			\$880,000
Interest Rate			5.25% ³
Term of Mortgage			30 years
Annual Mortgage Payment			\$58,300
Other Costs			
Property Taxes	1.20% of sales price ⁴		\$13,200
HOA Dues / Maintenance	\$200 per month ⁵		\$2,400
Homeowner Insurance	0.20% sale price ⁶		\$2,200
Total Annual Housing Cost			<hr/> \$76,100
% of Income Spent on Hsg			35% ⁷
Annual Household Income Required			\$217,000
Sales Price to Income Ratio			5.1

Notes

(1) Based on Market Survey.

(2) Median down payment at 20% is based on Freddie Mac data on its portfolio of mortgages within zip codes corresponding to Alameda County and specific to principal residence purchase loans originated during 4th quarter of 2012.

(3) Average mortgage interest rate for prior 10 years derived from Freddie Mac Primary Mortgage Market Survey and about 1% above current favorable rates. Based on weekly average rates for 30 year fixed rate mortgages during the period from 2004 through 2013.

(4) 1.2% property tax rate is inclusive of ad valorem taxes plus estimated fixed charges and assessments.

(5) Based on HOA dues for new single family project currently selling in Fremont from the Market Survey.

(6) Estimated from quote obtained from Progressive Insurance.

(7) Based on Freddie Mac data on mortgages originated in Alameda County which reflect an average debt to income ratio of 35% including both housing expenses and other debt like auto loans and credit cards. Were other debt excluded, the ratio would likely be lower than 35%. Using a ratio less than 35% would have increased the supported maximum fee levels from those reflected in the analysis; therefore, 35% represents a conservative estimate.

**TABLE A-3
 PROTOTYPE 2: SFD / SMALL LOT
 SALES PRICE TO INCOME RATIO
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

		<u>Prototype 2 SFD / Small Lot</u>
Sales Price	\$400 /SF 2,000 SF ¹	\$800,000 ¹
Mortgage Payment		
Downpayment @ 20%	20% ²	\$160,000
Loan Amount		\$640,000
Interest Rate		5.25% ³
Term of Mortgage		30 years
Annual Mortgage Payment		\$42,400
Other Costs		
Property Taxes	1.20% of sales price ⁴	\$9,600
HOA Dues / Maintenance	\$200 per month ⁵	\$2,400
Homeowner Insurance	0.20% sale price ⁶	\$1,600
Total Annual Housing Cost		<hr/> \$56,000
% of Income Spent on Hsg		35% ⁷
Annual Household Income Required		\$160,000
Sales Price to Income Ratio		5.0

Notes

(1) Based on Market Survey.

(2) Median down payment at 20% is based on Freddie Mac data on its portfolio of mortgages within zip codes corresponding to Alameda County and specific to principal residence purchase loans originated during 4th quarter of 2012.

(3) Average mortgage interest rate for prior 10 years derived from Freddie Mac Primary Mortgage Market Survey and about 1% above current favorable rates. Based on weekly average rates for 30 year fixed rate mortgages during the period from 2004 through 2013.

(4) 1.2% property tax rate is inclusive of ad valorem taxes plus estimated fixed charges and assessments.

(5) Based on HOA dues for new single family project currently selling in Fremont from the Market Survey.

(6) Estimated from quote obtained from Progressive Insurance.

(7) Based on Freddie Mac data on mortgages originated in Alameda County which reflect an average debt to income ratio of 35% including both housing expenses and other debt like auto loans and credit cards. Were other debt excluded, the ratio would likely be lower than 35%. Using a ratio less than 35% would have increased the supported maximum fee levels from those reflected in the analysis; therefore, 35% represents a conservative estimate.

**TABLE A-4
 PROTOTYPE 3: TOWNHOME
 SALES PRICE TO INCOME RATIO
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

			<u>Prototype 3 Townhome</u>
Sales Price	\$415 /SF	1,500 SF ¹	\$622,500 ¹
Mortgage Payment			
Downpayment @ 20%		20% ²	\$124,500
Loan Amount			\$498,000
Interest Rate			5.25% ³
Term of Mortgage			30 years
Annual Mortgage Payment			\$33,000
Other Costs			
Property Taxes	1.20% of sales price ⁴		\$7,500
HOA Dues / Maintenance	\$235 per month ⁵		\$2,820
Homeowner Insurance	0.20% sale price ⁶		\$1,200
Total Annual Housing Cost			<hr/> \$44,520
% of Income Spent on Hsg			35% ⁷
Annual Household Income Required			\$127,000
Sales Price to Income Ratio			4.9

Notes

(1) Based on Market Survey.

(2) Median down payment at 20% is based on Freddie Mac data on its portfolio of mortgages within zip codes corresponding to Alameda County and specific to principal residence purchase loans originated during 4th quarter of 2012.

(3) Average mortgage interest rate for prior 10 years derived from Freddie Mac Primary Mortgage Market Survey and about 1% above current favorable rates. Based on weekly average rates for 30 year fixed rate mortgages during the period from 2004 through 2013.

(4) 1.2% property tax rate is inclusive of ad valorem taxes plus estimated fixed charges and assessments.

(5) Based on average HOA dues for two townhome projects currently selling in Fremont identified in the market survey.

(6) Estimated from quote obtained from Progressive Insurance for HO-6 "walls in" policy covering interior of unit and personal property. Exterior of structure and common area assumed to be covered by separate homeowners association

(7) Based on Freddie Mac data on mortgages originated in Alameda County which reflect an average debt to income ratio of 35% including both housing expenses and other debt like auto loans and credit cards. Were other debt excluded, the ratio would likely be lower than 35%. Using a ratio less than 35% would have increased the supported maximum fee levels from those reflected in the analysis; therefore, 35% represents a conservative estimate.

**TABLE A-5
 PROTOTYPE 4: CONDO
 SALES PRICE TO INCOME RATIO
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

			<u>Prototype 4 Condo</u>
Sales Price	\$446 /SF	1,300 SF ¹	\$580,000 ¹
Mortgage Payment			
Downpayment @ 20%		20% ²	\$116,000
Loan Amount			\$464,000
Interest Rate			5.25% ³
Term of Mortgage			30 years
Annual Mortgage Payment			\$30,700
Other Costs			
Property Taxes	1.20% of sales price ⁴		\$7,000
HOA Dues / Maintenance	\$330 per month ⁵		\$3,960
Homeowner Insurance	0.20% sale price ⁶		\$1,200
Total Annual Housing Cost			\$42,860
% of Income Spent on Hsg			35% ⁷
Annual Income Required			\$122,000
Sales Price to Income Ratio			4.8

Notes

- (1) No new or newer stacked flat condos were identified in the market survey. Price represents an estimate of the sales price required for development feasibility.
- (2) Median down payment at 20% is based on Freddie Mac data on its portfolio of mortgages within zip codes corresponding to Alameda County and specific to principal residence purchase loans originated during 4th quarter of 2012.
- (3) Average mortgage interest rate for prior 10 years derived from Freddie Mac Primary Mortgage Market Survey and about 1% above current favorable rates. Based on weekly average rates for 30 year fixed rate mortgages during the period from 2004 through 2013.
- (4) 1.2% property tax rate is inclusive of ad valorem taxes plus estimated fixed charges and assessments.
- (5) Based on average HOA dues for a sampling of existing 2 bedroom condos in Fremont as reported by MLS.
- (6) Estimated from quote obtained from Progressive Insurance for HO-6 "walls in" policy covering interior of unit and personal property. Exterior of structure and common area assumed to be covered by separate homeowners association policy.
- (7) Based on Freddie Mac data on mortgages originated in Alameda County which reflect an average debt to income ratio of 35% including both housing expenses and other debt like auto loans and credit cards. Were other debt excluded, the ratio would likely be lower than 35%. Using a ratio less than 35% would have increased the supported maximum fee levels from those reflected in the analysis; therefore, 35% represents a conservative estimate.

**TABLE A-6
 PROTOTYPE 5: APARTMENT
 RENT TO INCOME RATIO
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

	Prototype 5 Apartment		
Market Rent			
Monthly	\$2.50 /SF	850 SF ¹	\$2,125 ¹
Annual			\$25,500
% of Income Spent on Rent (excludes utilities)			30% ²
Annual Household Income Required			\$85,000
Annual Rent to Income Ratio			3.3

Notes

(1) Based on the results of the market survey. Represents rent levels applicable to new units.

(2) Renter households are assumed to spend 30% of income on rent, or slightly more than the median for Fremont renter households at 26.2% and slightly less than the median for all of Alameda County at 31% per the 2008 - 2012 American Community Survey. While landlords may permit rental payments to represent a slightly higher share of total income, 30% represents an average.

**TABLE A-7
INCOME AVAILABLE FOR EXPENDITURES¹
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

	Prototype 1: SFD / Large Lot	Prototype 2: SFD / Small Lot	Prototype 3: Townhome	Prototype 4: Condo	Prototype 5: Apartment
Gross Income	100%	100%	100%	100%	100%
<u>Less:</u>					
Federal Income Taxes ²	16.8%	12.3%	12.3%	12.3%	10.3%
State Income Taxes ³	6%	5%	5%	5%	4%
FICA Tax Rate ⁴	7.65%	7.65%	7.65%	7.65%	7.65%
Savings & other deductions ⁵	8%	8%	8%	8%	8%
Percent of Income Available for Expenditures⁶ [Input to IMPLAN model]	62%	67%	67%	67%	70%

Notes:

- ¹ Gross income after deduction of taxes and savings. Income available for expenditures is the input to the IMPLAN model which is used to estimate the resulting employment impacts. Housing costs are not deducted as part of this adjustment step because they are addressed separately as expenditures within the IMPLAN model.
- ² Reflects average tax rates (as opposed to marginal) based on U.S. Internal Revenue Services, Tax Statistics, Tables 1.1 and 2.1. Figures are for the 2011 tax year, the most recent for which data is available. Homeowners are assumed to itemize deductions. Renter households are assumed to take the standard deduction. For Prototype 1, the average tax rate for AGI of \$200,000 to \$500,000 for those itemizing deductions at 16.8% is applied. For Prototypes 2, 3, and 4 tax rates for AGI of \$100,000 to \$200,000 for those itemizing deductions is applied at 12.3%. For prototype 5 the average rate for AGI of \$75,000 to \$100,000 for tax payers not itemizing deductions is applied at 10.3%.
- ³ Average tax rate estimated by KMA based on marginal rates per the California Franchise Tax Board and ratios of taxable income to gross income estimated based on U.S. Internal Revenue Service data. The higher average tax rates applicable to single or married filing separately tax filers is applied in the analysis so as to produce a conservative (likely understated) estimate.
- ⁴ For Social Security and Medicare. Conservatively assumes all income will be subject to Social Security taxes. The current ceiling on applicability of Social Security taxes is \$117,000 (ceiling applies per earner not per household).
- ⁵ Household savings including retirement accounts like 401k / IRA and other deductions such as interest costs on credit cards, auto loans, etc, necessary to determine the amount of income available for expenditures. The 8% rate used in the analysis is based on the average over the past 20 years computed from U.S. Bureau of Economic Analysis data, specifically the National Income and Product Accounts, Table 2.1 "Personal Income and It's Disposition."
- ⁶ Deductions from gross income to arrive at the income available for expenditures are consistent with the way the IMPLAN model and National Income and Product Accounts (NIPA) defines income available for personal consumption expenditures. Income taxes, contributions to Social Security and Medicare, and savings are deducted; however, property taxes and sales taxes are not. Housing costs are not deducted as part of the adjustment because they are addressed separately as expenditures within the IMPLAN model.

**TABLE A-8
FOR SALE PROTOTYPES: SALES PRICE TO INCOME SUMMARY
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

	<u>Per Unit</u>	<u>Per Sq.Ft.</u>	<u>100 Unit Building Module</u>
<i>Page 1 of 2</i>			
PROTOTYPE 1: SFD / LARGE LOT			
Units			100 Units
Building Sq.Ft. (net salable area)	2,500		250,000
Sales Price	\$1,100,000	\$440	\$110,000,000
Sales Price to Income Ratio	5.1		5.1
Gross Household Income	\$217,000		\$21,700,000
Income Available for Expenditur 62% of gross	\$135,000		\$13,450,000
PROTOTYPE 2: SFD / SMALL LOT			
Units			100 Units
Building Sq.Ft. (net salable area)	2,000		200,000
Sales Price	\$800,000	\$400	\$80,000,000
Sales Price to Income Ratio	5.0		5.0
Gross Household Income	\$160,000		\$16,000,000
Income Available for Expenditur 67% of gross	\$107,000		\$10,720,000

**TABLE A-8
FOR SALE PROTOTYPES: SALES PRICE TO INCOME SUMMARY
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

	<u>Per Unit</u>	<u>Per Sq.Ft.</u>	<u>100 Unit Building Module</u>
<i>Page 2 of 2</i>			
PROTOTYPE 3: TOWNHOME			
Units			100 Units
Building Sq.Ft. (net salable area)	1,500		150,000
Sales Price	\$622,500	\$415	\$62,250,000
Sales Price to Income Ratio	4.9		4.9
Gross Household Income	\$127,000		\$12,700,000
Income Available for Expenditur	67% of gross	\$85,000	\$8,510,000
PROTOTYPE 4: CONDO			
Units			100 Units
Building Sq.Ft. (net salable area)	1,300		130,000
Sales Price	\$580,000	\$446	\$58,000,000
Sales Price to Income Ratio	4.8		4.8
Gross Household Income	\$122,000		\$12,200,000
Income Available for Expenditur	67% of gross	\$82,000	\$8,170,000

Notes:

(1) Represents net income available for expenditures after income tax, payroll taxes, and savings. See Table A-7 for derivation.

Source: See Tables A-2 to A-7.

**TABLE A-9
 NEW MARKET RATE RESIDENTIAL HOUSEHOLD SUMMARY
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

	<u>Per Unit</u>	<u>Per Sq.Ft.</u>	<u>100 Unit Building Module</u>
PROTOTYPE 5: APARTMENT			
Units			100 Units
Building Sq.Ft. (net rentable area)	850		85,000
Rent			
Monthly	\$2,125	\$2.50 /SF	\$213,000
Annual	\$25,500	\$30.00 /SF	\$2,550,000
Rent to Income Ratio	3.3		3.3
Gross Household Income	\$85,000		\$8,500,000
Income Available for Expenditure ¹ 70% of gross	\$60,000		\$5,950,000

Notes:

(1) Represents net income available for expenditures after income tax, payroll taxes, and savings. See Table A-7 for derivation.

Source: Table A-6 and A-7.

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B. THE IMPLAN MODEL

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

IMPLAN Model Description

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

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

The output or result of the model is generated by tracking changes in purchases for final use (final demand) as they filter through the supply chain. Industries that produce goods and services for final demand or consumption must purchase inputs from other producers, which in turn, purchase goods and services. The model tracks these relationships through the economy to the point where leakages from the region stop the cycle. This allows the user to identify how a change in demand for one industry will affect a list of over 400 other industry sectors. The projected response of an economy to a change in final demand can be viewed in terms of economic output, employment, or income.

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

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

Application of the IMPLAN Model to Estimate Job Growth

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

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

Jobs Generated Per 100 Units					
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Annual Household Expenditures, 100 Units	\$13,450,000	\$10,720,000	\$8,510,000	\$8,170,000	\$5,950,000
Total Jobs Generated, 100 Units	92.3	73.6	58.0	55.7	39.3

Table B-1 provides a detailed summary of employment generated by industry. The table shows industries sorted by projected employment. The Consumer Expenditure Survey published by the Bureau of Labor Statistics tracks expenditure patterns by income level. IMPLAN utilizes this data to reflect the pattern by income bracket. In the case of the Fremont prototypes, the single family prototypes are in the \$150,000 and up income category, while the other ownership prototypes are in the \$100,000 to \$150,000 category and the apartment prototype is in the \$75,000 to \$100,000 category. Estimated employment is shown for each IMPLAN industry sector representing 1% or more of total employment. The jobs that are generated are heavily retail jobs, jobs in restaurants and other eating establishments, and in services that are provided locally such as health care. The jobs counted in the IMPLAN model cover all jobs, full and part time, similar to the U.S. Census and all reporting agencies (unless otherwise indicated).

**TABLE B-1
IMPLAN MODEL OUTPUT
EMPLOYMENT GENERATED
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Per 100 Market Rate Units

	Prototype 1: SFD / Large Lot	Prototype 2: SFD / Small Lot	Prototype 3: Townhome	Prototype 4: Condo	Prototype 5: Apartment	% of Jobs
Household Expenditures (100 Market Rate Units) ¹	\$13,450,000	\$10,720,000	\$8,510,000	\$8,170,000	\$5,950,000	
Jobs Generated by Industry ²						
Retail Stores - Food and beverage	3.5	2.8	2.1	2.0	1.3	4%
Retail Stores - General merchandise	3.3	2.6	2.0	1.9	1.2	3%
Retail Stores - Motor vehicle and parts	2.1	1.7	1.3	1.2	0.8	2%
Retail Stores - Miscellaneous	2.0	1.6	1.2	1.2	0.8	2%
Retail Stores - Clothing and accessories	1.9	1.5	1.2	1.1	0.7	2%
Retail Stores - Health and personal care	1.4	1.1	0.8	0.8	0.5	1%
Retail Stores - Building and garden supply	1.1	0.9	0.7	0.6	0.4	1%
Retail Nonstores - Direct and electronic sales	<u>1.0</u>	<u>0.8</u>	<u>0.6</u>	<u>0.6</u>	<u>0.4</u>	<u>1%</u>
Subtotal Retail	16.3	13.0	9.9	9.5	6.1	17%
Offices of physicians and dentists	5.0	4.0	3.7	3.5	2.6	6%
Private hospitals	4.3	3.4	3.1	3.0	2.2	5%
Nursing and residential care facilities	3.1	2.5	2.2	2.2	1.6	4%
Medical and diagnostic labs and outpatient care	<u>1.2</u>	<u>1.0</u>	<u>0.9</u>	<u>0.9</u>	<u>0.6</u>	<u>2%</u>
Subtotal Health Care	13.6	10.8	9.9	9.5	7.1	17%
Food services and drinking places	12.1	9.6	8.1	7.8	5.5	14%
Real estate including property management	2.9	2.3	2.1	2.0	1.9	4%
Private household operations	3.3	2.6	1.9	1.8	1.3	3%
Wholesale trade businesses	2.0	1.6	1.6	1.6	1.5	3%
Individual and family services	2.3	1.9	1.4	1.4	0.9	2%
Civic, social, professional organizations	1.6	1.3	1.0	1.0	0.6	2%
Other private educational services	2.3	1.8	1.0	0.9	0.5	2%
Elementary and secondary schools	2.2	1.7	1.0	0.9	0.6	2%
Personal care services	1.3	1.1	0.9	0.9	0.6	2%
Employment services	1.3	1.1	0.9	0.8	0.6	2%
Banking and depository credit	1.3	1.0	0.8	0.8	0.5	1%
Home health care services	1.0	0.8	0.7	0.7	0.5	1%
Securities, investments, and related	1.1	0.9	0.7	0.6	0.4	1%
Automotive repair and maintenance	1.0	0.8	0.7	0.6	0.5	1%
Services to buildings and dwellings	1.0	0.8	0.6	0.6	0.4	1%
Child day care services	1.5	1.2	0.6	0.6	0.3	1%
Grantmaking and social advocacy organizations	1.1	0.8	0.5	0.5	0.3	1%
Colleges, universities, and professional schools	1.2	0.9	0.5	0.4	0.2	1%
All Other	21.8	17.4	13.1	12.6	8.7	23%
Total Number of Jobs Generated	92.3	73.6	58.0	55.7	39.3	100%

¹ Estimated employment generated by expenditures of households within 100 prototypical market rate units. Employment estimates are based on the IMPLAN Group's economic model, IMPLAN, for Alameda County.

² For Industries representing more than 1% of total employment.

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C. THE KMA JOBS HOUSING NEXUS MODEL

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

Analysis Approach and Framework

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

The analysis addresses the affordable unit demand associated with single family detached, townhomes, condos, and rental units in Alameda County. The table below shows the 2014 Alameda County Area Median Income (AMI), as well as the income limits for the four categories that were evaluated: Extremely Low (30% of AMI), Very Low (50% of AMI), Low (80% of AMI), and Moderate (120% of AMI). The income definitions used in the analysis are those published by the California Department of Housing and Community Development (HCD).

2014 Income Limits for Alameda County	Household Size (Persons)					
	1	2	3	4	5	6 +
Extr. Low (Under 30% AMI)	\$19,650	\$22,450	\$25,250	\$28,050	\$30,300	\$32,550
Very Low (30%-50% AMI)	\$32,750	\$37,400	\$42,100	\$46,750	\$50,500	\$54,250
Low (50%-80% AMI)	\$47,350	\$54,100	\$60,850	\$67,600	\$73,050	\$78,450
Moderate (80%-120% AMI)	\$78,550	\$89,750	\$101,000	\$112,200	\$121,200	\$130,150
Median (100% of Median)	\$65,450	\$74,800	\$84,150	\$93,500	\$101,000	\$108,450

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

Analysis Steps

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

Step 1 – Estimate of Total New Employees

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

Step 2 – Changing Industries Adjustment and Net New Jobs

The local economy, like that of the U.S. as a whole, is constantly evolving. In the Oakland, Fremont, Hayward Metropolitan Division (defined as Alameda and Contra Costa Counties), over the past twenty years, employment in certain sectors of the economy declined including manufacturing, State and Federal government, telecommunications, and banking. Defense related employment has also declined from around 12,000 jobs twenty years ago to near zero today. Jobs lost in these declining sectors were replaced by job growth in other industry sectors.

Step 2 makes an adjustment to take ongoing changes in the economy into account recognizing that jobs added are not 100% net new in all cases. A 25% 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 certain sectors of the economy mean that some of the new jobs are being filled by workers that have been displaced from another industry and who are presumed to already have housing locally. Existing workers downsized from declining industries are assumed to be available to fill a portion of the new retail, restaurant, health care, and other jobs associated with services to residents. This is a conservative assumption given some displaced workers may exit the workforce entirely by retiring rather than seek a new job in one of the industries serving new residents.

The 25% downward adjustment used for purposes of the analysis was derived from California Employment Development Department data on employment by industry in Alameda and Contra Costa County over the twenty year period from 2012 to 1992. The 2012 data set reflects a higher unemployment rate at 9% than the 6.6% unemployment rate in 1992 which will tend to overstate any long term declines since the 2012 data also reflects some cyclical or short term declines relative to the 1992 employment data. Over this period, approximately 38,000 jobs were lost in declining industry sectors. Over the same period, growing and stable industries added a total of 158,000 jobs. Figures are adjusted to exclude losses in department of defense employment given there are almost no defense jobs left in the area and so continuing declines in this sector is not expected to be a factor in the future. The figures are used to establish a ratio between jobs lost in declining industries to jobs gained in growing and stable industries at 25%¹⁰. The 25% factor is applied as an adjustment in the analysis, effectively assuming one in every four new jobs is filled by a worker down-sized from a declining industry and who already lives locally.

¹⁰ The 25% ratio is calculated as 38,000 jobs lost in declining sectors excluding defense divided by 158,000 jobs gained in growing and stable sectors = 23.9% (rounded to 25%).

Step 3 – Adjustment from Employees to Employee Households

This step (Table C-1) converts the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers is reduced. The workers-per-worker-household ratio eliminates from the equation all non-working households, such as retired persons, students, and those on public assistance. The County average of 1.61 workers per worker household (from the U. S. Census Bureau 2010-2012 American Community Survey) is used for this step in the analysis. The number of jobs is divided by 1.61 to determine the number of worker households. This ratio is distinguished from the overall number of workers per household in that the denominator includes only households with at least one worker. If the average number of workers in all households were used, it would have produced a greater demand for housing units. The 1.61 ratio covers all workers, full and part time.

Step 4 – Occupational Distribution of Employees

The occupational breakdown of employees is the first step to arrive at income level. The output from the IMPLAN model provides the number of employees by industry sector, shown in Table B-1. The IMPLAN output is paired with data from the Department of Labor, Bureau of Labor Statistics May 2012 Occupational Employment Survey (OES) to estimate the occupational composition of employees for each industry sector.

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

The output of the IMPLAN model is jobs by industry sector using IMPLAN's own industry classification system which consists of 440 industry sectors. The OES occupation data uses the North American Industry Classification System (NAICS). Estimates of jobs by IMPLAN sector must be translated into estimates by NAICS code for consistency with the OES data.

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

The table below illustrates analysis Step 4a in which employment estimates by IMPLAN Code are translated to NAICS codes and then aggregated at the four digit NAICS code level. The

examples used are Child Day Care Centers and Food and Drinking Places. The process is applied to all the industry sectors.

Illustration of Model Step 4a.						
A. IMPLAN Output by IMPLAN Industry Sector		B. Link to Corresponding NAICS Code		C. Aggregate at 4-Digit NAICS Code Level		
<u>Jobs</u>	<u>IMPLAN Sector</u>	<u>Jobs</u>	<u>NAICS Code</u>	<u>Jobs</u>	<u>% Total Employment</u>	<u>4-Digit NAICS</u>
1.5	399 - Child day care services	1.5	6244 Child day care services	1.5	100%	6244 Child day care services
12.1	413 - Food and Drinking Places	12.1	722 Food and Drinking Places	10.9	90%	7225 Restaurants and Other Eating Places
				0.7	6%	7223 Special Food Services
				0.5	4%	7224 Drinking Places (Alcoholic Beverages)

Step 4b – Apply OES Data to Estimate Occupational Distribution

Employment estimates by four-digit NAICS code from step 4a are paired with data on occupational composition within each industry from the OES to generate an estimate of employment by detailed occupational category. As shown on Table C-1, new jobs will be distributed across a variety of occupational categories. The three largest occupational categories are office and administrative support (15%), sales (15%), and food preparation and serving (14%-15%). Step 4 of Table C-1 indicates the percentage and number of employee households by occupation associated with 100 market rate units.

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

In this step, occupations are translated to employee incomes based on recent Alameda County wage and salary information from the California Employment Development Department (EDD). The wage and salary information summarized in Appendix 2 Tables 2, 4, and 6 provided the income inputs to the model.

For each occupational category shown in Table C-1, the OES data provides a distribution of specific occupations within the category. For example, within the Food Preparation and Serving Category, there are Supervisors, Cooks, Bartenders, Waiters and Waitresses, Dishwashers, etc. In total there are over 100 detailed occupation categories included in the analysis as shown in Appendix 2, Tables 2, 4, and 6. Each of these over 100 occupation categories has a different distribution of wages which was obtained from EDD and is specific to workers in Alameda County as of 2013.

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

The table below illustrates Step 5 as applied to food preparation and serving workers. Annual compensation for food preparation and serving workers in Alameda County as of 2013 is distributed¹¹ around a mean of \$21,500. For households with one worker, 52% of one person households are estimated to qualify as Extremely Low, 70% of 2 person households and 100% of households with three or more people. No households that have two or more workers are estimated to qualify as Extremely Low.

Step 5 Illustration for Food Preparation and Serving Worker Households						
<i>Percent Qualifying as Extremely Low for Each Possible Household Size / No. of Workers Combination</i>						
Percent of Worker Households That Would Qualify as Extremely Low For Each Possible Combination of Household Size and No. of Workers Applying 2014 Income Limits for Alameda County						
HH Size Limit	1 Person \$19,650	2 Person \$22,450	3 Person \$25,250	4 Person \$28,050	5 Person \$30,300	6 Person \$32,550
No. Workers in Household						
1	52%	70%	100%	100%	100%	100%
2	N/A	0%	0%	0%	0%	0%
3 or more ¹²	N/A	N/A	0%	0%	0%	0%

The step illustrated above is repeated around 400 times for each of the over 100 detailed occupations and at each of the four affordable income tiers. At the end of Step 5, the nexus model has established a matrix indicating the percentages of households that would qualify in the affordable income tiers for every detailed occupational category and every potential combination of household size and number of workers in the household.

Step 6 – Distribution of Household Size and Number of Workers

In this step, the model examines the demographics of Alameda County in order to develop probability factors for each potential combination of household size and number of workers.

The following table presents the probability factors used in the model. The factors represent the probability that a worker is a member of a household of a given size and number of workers.

¹¹ In addition to the mean compensation, EDD reported 25th, 50th, and 75th percentile compensations are utilized.

¹² Census data aggregates households with three or more workers; therefore, a corresponding aggregation is necessary for purposes of the analysis.

Step 6: Probability Factors for Combinations of Number of Workers and Household Size						
	Household Size (Persons)					
	1	2	3	4	5	6+
No. Workers in Household						
1	0.190781	0.148746	0.084114	0.060346	0.027678	0.023864
2	N/A	0.147885	0.095065	0.071567	0.032824	0.028302
3 or more	N/A	N/A	0.024071	0.034927	0.016019	0.013812

Note: probability factors sum to 1.00000

Probability factors are specific to Alameda County and are derived from the 2010 – 2012 American Community Survey. Application of these probability factors accounts for the following:

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

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

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

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

Table C-2 shows the result after completing Steps 5, 6, and 7. The results shown are for the under 50% of AMI category. The methodology is repeated for each of the four income tiers, resulting in a total count of worker households per 100 units.

Summary Findings

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

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

New Worker Households by Income Level per 100 Market Rate Units					
	<i>Single Family / Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Extr. Low (Under 30% AMI)	5.8	4.6	3.7	3.5	2.5
Very Low (30%-50% AMI)	10.8	8.6	6.8	6.5	4.5
Low (50%-80% AMI)	9.3	7.4	5.8	5.6	3.9
Moderate (80%-120% AMI)	9.1	7.3	5.6	5.4	3.8
Total, Less than 120% AMI	35.0	27.9	21.9	21.0	14.8
Greater than 120% AMI	8.0	6.4	5.1	4.9	3.6
Total, New Households	43.0	34.3	27.0	26.0	18.3

Housing demand for new worker households earning less than 120% of AMI ranges from 35 units per 100 market rate units for large lot Single Family units, to 14.8 units per 100 market rate units for apartments. Housing demand is distributed across the lower income tiers with the greatest number of households in the Very Low tier. The finding that the jobs associated with consumer spending tend to be low-paying jobs where the workers will require housing affordable at the lower income levels is not surprising. As noted above, direct consumer spending results in employment that is concentrated in lower paid occupations including food preparation, administrative, and retail sales.

Inclusionary Percentages Supported

The analysis findings identify how many lower income households are generated for every 100 market rate units. These findings are adjusted to a supported inclusionary percentage which represents the percentage of units provided on-site within a project that would fully mitigate the affordable housing impacts as documented in this nexus analysis.

The percentages are calculated including both market rate and affordable units (for example, 25 affordable units per 100 market rate units translates to a project of 125 units; 25 affordable units out of 125 units equals 20%).

The table below presents the results of the analysis, drawn from Table C-4. Each tier is cumulative, or inclusive of the tiers above. The analysis supports maximum inclusionary percentages between 17.4% and 25.9%, depending on the prototype. A supported inclusionary percentage is not presented for the rental prototype as the *Palmer* case precludes cities from requiring the inclusion of affordable units in rental projects unless the developer receives a density bonus or certain regulatory concessions and agrees by contract to restrict the rents. Fremont has an impact fee based requirement applicable to rental projects.

Cumulative Inclusionary Percentage Supported by Nexus Analysis					
	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
Extr. Low (Under 30% AMI)	5.5%	4.4%	3.6%	3.4%	N/A
Very Low (30%-50% AMI)	14.3%	11.7%	9.5%	9.1%	N/A
Low (50%-80% AMI)	20.6%	17.1%	14.0%	13.5%	N/A
Moderate (80%-120% AMI)	25.9%	21.8%	18.0%	17.4%	N/A

The above percentages are supportive of Fremont's existing 15% inclusionary requirement. The potential increase to a 20% requirement that is contemplated in the City's affordable housing ordinance as of January 1, 2015 is supported for the two Single Family prototypes but not for the Townhome and Condo prototypes.

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

	Prototype 1:		Prototype 2:		Prototype 3: Townhome	Prototype 4: Condo	Prototype 5: Apartment
	SFD / Large Lot	SFD / Small Lot	SFD / Small Lot	SFD / Small Lot			
Step 1 - Employees ¹	92.3	73.6			58.0	55.7	39.3
Step 2 - Adjustment for Changing Industries (25%)	69.2	55.2			43.5	41.8	29.5
Step 3 - Adjustment for Number of Households (1.61)	43.0	34.3			27.0	26.0	18.3
Step 4 - Occupation Distribution ³							
Management Occupations	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.2%
Business and Financial Operations	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%	3.5%
Computer and Mathematical	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Architecture and Engineering	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Life, Physical, and Social Science	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%
Community and Social Services	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	1.9%
Legal	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
Education, Training, and Library	4.6%	4.6%	3.3%	3.3%	3.3%	3.3%	2.8%
Arts, Design, Entertainment, Sports, and Media	1.8%	1.8%	1.6%	1.6%	1.6%	1.6%	1.6%
Healthcare Practitioners and Technical	7.4%	7.4%	8.3%	8.3%	8.3%	8.3%	8.7%
Healthcare Support	4.2%	4.2%	4.7%	4.7%	4.7%	4.7%	4.9%
Protective Service	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Food Preparation and Serving Related	14.3%	14.3%	15.1%	15.1%	15.1%	15.1%	15.2%
Building and Grounds Cleaning and Maint.	6.0%	6.0%	5.7%	5.7%	5.7%	5.7%	5.8%
Personal Care and Service	5.9%	5.9%	5.7%	5.7%	5.7%	5.7%	5.5%
Sales and Related	15.4%	15.4%	15.1%	15.1%	15.1%	15.1%	14.7%
Office and Administrative Support	15.4%	15.4%	15.6%	15.6%	15.6%	15.6%	15.7%
Farming, Fishing, and Forestry	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Construction and Extraction	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Installation, Maintenance, and Repair	3.5%	3.5%	3.6%	3.6%	3.6%	3.6%	3.8%
Production	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
Transportation and Material Moving	5.5%	5.5%	5.4%	5.4%	5.4%	5.4%	5.5%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Management Occupations	1.8	1.4	1.1	1.1	1.1	1.1	0.8
Business and Financial Operations	1.5	1.2	1.0	0.9	0.9	0.9	0.6
Computer and Mathematical	0.5	0.4	0.3	0.3	0.3	0.3	0.2
Architecture and Engineering	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Life, Physical, and Social Science	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Community and Social Services	0.9	0.7	0.5	0.5	0.5	0.5	0.3
Legal	0.3	0.2	0.2	0.2	0.2	0.2	0.1
Education, Training, and Library	2.0	1.6	0.9	0.9	0.9	0.9	0.5
Arts, Design, Entertainment, Sports, and Media	0.8	0.6	0.4	0.4	0.4	0.4	0.3
Healthcare Practitioners and Technical	3.2	2.5	2.2	2.2	2.2	2.2	1.6
Healthcare Support	1.8	1.4	1.3	1.2	1.2	1.2	0.9
Protective Service	0.6	0.5	0.3	0.3	0.3	0.3	0.2
Food Preparation and Serving Related	6.2	4.9	4.1	3.9	3.9	3.9	2.8
Building and Grounds Cleaning and Maint.	2.6	2.0	1.6	1.5	1.5	1.5	1.1
Personal Care and Service	2.5	2.0	1.5	1.5	1.5	1.5	1.0
Sales and Related	6.6	5.3	4.1	3.9	3.9	3.9	2.7
Office and Administrative Support	6.6	5.3	4.2	4.0	4.0	4.0	2.9
Farming, Fishing, and Forestry	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction and Extraction	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Installation, Maintenance, and Repair	1.5	1.2	1.0	0.9	0.9	0.9	0.7
Production	0.7	0.6	0.5	0.4	0.4	0.4	0.3
Transportation and Material Moving	2.4	1.9	1.5	1.4	1.4	1.4	1.0
Totals	43.0	34.3	27.0	26.0	26.0	26.0	18.3

Notes:

¹ Estimated employment generated by expenditures of households within 100 prototypical market rate units. Employment estimates based on economic model, IMPLAN.

² Adjustment from number of workers to households using average of 1.61 workers per worker household derived from the U.S. Census

³ See Appendix 2, Tables 1 through 6 for additional information on Major Occupation Categories.

TABLE C-2
EXTREMELY LOW-INCOME EMPLOYEE HOUSEHOLDS¹ GENERATED
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA

Per 100 Market Rate Units

	Prototype 1: SFD / Large Lot	Prototype 2: SFD / Small Lot	Prototype 3: Townhome	Prototype 4: Condo	Prototype 5: Apartment
Step 5 & 6 - Extremeley Low Income Households (under 30% AMI) within Major Occupation Categories ²					
Management	-	-	-	-	-
Business and Financial Operations	-	-	-	-	-
Computer and Mathematical	-	-	-	-	-
Architecture and Engineering	-	-	-	-	-
Life, Physical and Social Science	-	-	-	-	-
Community and Social Services	-	-	-	-	-
Legal	-	-	-	-	-
Education Training and Library	0.03	0.02	0.01	0.01	0.01
Arts, Design, Entertainment, Sports, & Medi	-	-	-	-	-
Healthcare Practitioners and Technical	-	-	-	-	-
Healthcare Support	0.10	0.08	0.07	0.07	0.05
Protective Service	-	-	-	-	-
Food Preparation and Serving Related	2.28	1.82	1.51	1.45	1.03
Building Grounds and Maintenance	0.30	0.24	0.19	0.18	0.13
Personal Care and Service	0.62	0.49	0.39	0.37	0.25
Sales and Related	1.21	0.96	0.74	0.71	0.48
Office and Admin	0.26	0.21	0.16	0.16	0.11
Farm, Fishing, and Forestry	-	-	-	-	-
Construction and Extraction	-	-	-	-	-
Installation Maintenance and Repair	0.01	0.01	0.01	0.01	0.00
Production	-	-	-	-	-
Transportation and Material Moving	0.29	0.23	0.18	0.17	0.12
ELI Households - Major Occupations	5.09	4.05	3.25	3.12	2.17
ELI Households¹ - all other occupations	0.72	0.57	0.45	0.43	0.30
Total ELI Households¹	5.81	4.63	3.69	3.55	2.47

¹ Includes households earning from zero through 30% of Alameda County Area Median Income.

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

**TABLE C-3
IMPACT ANALYSIS SUMMARY
EMPLOYEE HOUSEHOLDS GENERATED
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

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

Number of New Households¹	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
Percent of New Households ¹					
Under 30% Area Median Income	13%	13%	14%	14%	13%
30% to 50% Area Median Income	25%	25%	25%	25%	25%
50% to 80% Area Median Income	22%	22%	21%	21%	21%
80% to 120% Area Median Income	21%	21%	21%	21%	21%
Subtotal through 120% of Median	81%	81%	81%	81%	81%
Over 120% Area Median Income	19%	19%	19%	19%	19%
Total Employee Households	100%	100%	100%	100%	100%

Notes

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

**TABLE C-4
INCLUSIONARY REQUIREMENT SUPPORTED
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

	Prototype 1: SFD / Large Lot	Prototype 2: SFD / Small Lot	Prototype 3: Townhome	Prototype 4: Condo
Supported Inclusionary Requirement				
Per 100 Market Rate Units - Cumulative Through				
30% OF MEDIAN INCOME	5.8 Units	4.6 Units	3.7 Units	3.5 Units
50% OF MEDIAN INCOME	16.6 Units	13.3 Units	10.5 Units	10.1 Units
80% OF MEDIAN INCOME	25.9 Units	20.7 Units	16.3 Units	15.6 Units
120% OF MEDIAN INCOME	35.0 Units	27.9 Units	21.9 Units	21.0 Units
Supported Inclusionary Percentage - Cumulative Through ¹				
30% OF MEDIAN INCOME	5.5%	4.4%	3.6%	3.4%
50% OF MEDIAN INCOME	14.3%	11.7%	9.5%	9.1%
80% OF MEDIAN INCOME	20.6%	17.1%	14.0%	13.5%
120% OF MEDIAN INCOME	25.9%	21.8%	18.0%	17.4%

Notes:

A supported inclusionary percentage is not presented for the rental prototype as the Palmer case precludes cities from requiring the inclusion of affordable units in rental projects unless the developer receives a density bonus or certain regulatory concessions and agrees by contract to restrict the rents. Fremont has an impact fee based requirement applicable to rental projects.

¹ Calculated by dividing the supported number of affordable units by the total number of units (supported affordable units + 100 market rate units).

D. MITIGATION COSTS

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

A key component of the analysis is the size of the gap between what households can afford and the cost of producing new housing in Fremont, known as the ‘affordability gap.’ Affordability gaps are calculated for each of the four categories of area median income: 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. Detailed affordability gap calculations are presented in Tables D-1 through D-3 at the end of this section.

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 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, which in the case of Fremont is assumed to be a three person household in a two-bedroom townhome unit (for reference, the average household size in Fremont is 3.3 persons and for Alameda County the average is 2.8 based on the 2010-2012 American Community Survey). The analysis assumes households earning less than 80% of Area Median Income will be assisted in rental units. The analysis uses a two bedroom affordable rental prototype.

For Very Low- and Extremely Low-Income, it is assumed that the City will assist these households in multi-family rental units and that 4% low income housing tax credits paired with tax-exempt financing would be utilized as a subsidy source. The highly competitive 9% tax credits are not assumed in the analysis 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 becoming more difficult to obtain and therefore are not assumed in this analysis. Of importance, Fremont has a sizable existing deficiency of affordable housing units and the limited amount of outside subsidy sources has not been sufficient to fully address the existing needs of the community let alone the future needs created by new market rate residential units.

For the Low-Income households, it is assumed that these units would be privately financed without outside subsidy sources. Tax credit financing typically requires deeper levels of affordability with most units at Extremely Low and Very Low-Income levels, especially those projects that rely upon State tax credits in addition to Federal tax credits. Since tax credits would not typically be used for Low-Income units in isolation from the deeper affordability levels, the assumption of private financing was utilized to estimate the Low-Income unit affordability gaps.

Development Costs

KMA prepared an estimate of total development cost for a typical two bedroom affordable rental unit (inclusive of land, all fees and permits, financing and other indirect costs) based on a review of development pro formas for recent affordable and market rate rental developments, comparable land sale data, and construction cost data sources such as RS Means. It is noted that the construction costs assume payment of prevailing wages, which would typically be required in publicly subsidized affordable housing projects. On this basis, KMA concluded that on average, the new affordable rental units would have a total development cost per unit ranging from \$310,000 to \$321,000¹³.

For ownership units, total development costs (including profit) under normal market conditions, is equal to the market rate sales price. Based on the spring 2014 market survey, KMA estimated the market sales price for a typical two bedroom, 1,300 square foot townhome to be \$552,500 unit (\$425 per square foot).

Development Costs		
<i>Income Group</i>	<i>Unit Tenure / Type</i>	<i>Development Cost</i>
Under 30% AMI	Rental	\$321,000
30% to 50% AMI	Rental	\$321,000
50% to 80% AMI	Rental	\$310,000
80% to 120% AMI	Ownership	\$552,500

Unit Values

For affordable ownership units, unit values are the affordable purchase prices. Affordable purchase prices for ownership units are calculated based on the purchase price affordable to a household earning 110% of the Alameda County area median income. For a two bedroom unit, KMA calculated the affordable sales price as \$319,050. Details of the calculation are presented in Table D-3.

For the Very Low and Extremely 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

¹³ The range of apartment development costs is attributable to the certain indirect/soft costs applicable to tax credit projects which would not typically apply to a privately financed project.

developer fee, and equity generated by the 4% low income housing tax credits. It is assumed that the project would qualify for the non-profit property tax exemption, which is a significant economic benefit to the project. On this basis, KMA estimated the unit value (total funding sources) of the Very Low-Income units at \$195,500, and the Extremely Low-Income rental units at \$127,700.

For the Low-Income units, the unit values are estimated based on capitalizing the net operating income (NOI) generated by the units. The analysis assumes a 7.5% return is needed in order to support private development of these units. The 7.5% return, which is higher than would be needed for a market rate unit, is assumed because future rent growth for affordable units is highly constrained by the growth in median incomes.

Maximum Affordable Sales Prices and Rent Levels				
<i>Income Group</i>	<i>Unit Tenure / Type</i>	<i>Household Size</i>	<i>Maximum Monthly Housing Costs¹⁴</i>	<i>Unit Values / Sales Price</i>
Under 30% AMI	Rental	3 persons	\$621 / Month	\$127,700
30% to 50% AMI	Rental	3 persons	\$1,035 / Month	\$195,500
50% to 80% AMI	Rental	3 persons	\$1,262 / Month	\$96,000
80% to 120% AMI	Ownership	3 persons	\$2,700 / Month	\$319,050

Affordability Gap

The affordability gap is the difference between the cost of developing a residential unit and the unit values at the affordable rents or sales prices.

The resulting affordability gaps are as follows:

Affordability Gap Calculation			
	<i>Unit Value / Sales Price</i>	<i>Development Cost</i>	<i>Affordability Gap</i>
<u><i>Affordable Rental Units</i></u>			
Extremely Low (Under 30% AMI)	\$127,700	\$321,000	\$193,300
Very Low (30% to 50% AMI)	\$195,500	\$321,000	\$125,500
Low (50% to 80% AMI)	\$96,000	\$310,000	\$214,000
<u><i>Affordable Ownership Units</i></u>			
Moderate (80% to 120% AMI)	\$319,050	\$552,500	\$233,450

Tables D-1 to D-5 present the detailed affordability gap calculations.

¹⁴ For rental units, maximum housing costs are the affordable rents before utility allowance. For the moderate-income ownership unit, maximum monthly housing costs includes all housing expenses such as mortgage, insurance, property taxes, HOA dues, and utilities.

Total Linkage Costs

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

Table D-1 summarizes the analysis. The Affordability Gaps are drawn from the prior discussion. The “Total Nexus Cost per Market Rate Unit” shows the results of the following calculation: the affordability gap times the number of affordable units demanded per market rate unit. (Demand for affordable units for each of the income ranges is drawn from Table C-3 in the previous section and is adjusted to a per-unit basis from the 100 unit building module.)

The total nexus costs for each of the prototypes are as follows:

Nexus Cost Per Market Rate Unit					
<i>Income Category</i>	<i>Affordability Gap</i>	<i>Single Family/ Large Lot</i>	<i>Single Family/ Small Lot</i>	<i>Townhome</i>	<i>Condo</i>
Ext. Low (Under 30% AMI)	\$193,300	\$11,200	\$8,900	\$7,100	\$6,900
Very Low (30%-50% AMI)	\$125,500	\$13,600	\$10,800	\$8,500	\$8,200
Low (50%-80% AMI)	\$214,000	\$19,900	\$15,900	\$12,400	\$11,900
Moderate (80%-120% AMI)	\$233,450	\$21,300	\$16,900	\$13,100	\$12,600
Total Nexus Costs		\$66,000	\$52,500	\$41,100	\$39,600

The Total Nexus Costs, or Mitigation Costs, indicated above, may also be expressed on a per square foot level. The square foot area of the prototype unit used throughout the analysis becomes the basis for the calculation. Again, see Appendix 1 for more discussion of the prototypes. The results per square foot of building area are as follows:

Total Nexus Cost or Maximum Supported Impact Fee Per Sq.Ft. of Building Area¹⁵						
<i>Income Category</i>	<i>Affordability Gap</i>	<i>Single Family / Large Lot</i>	<i>Single Family / Small Lot</i>	<i>Townhome</i>	<i>Condo</i>	<i>Apartment</i>
<i>Prototype Size</i>		<i>2,500 SF</i>	<i>2,000 SF</i>	<i>1,500 SF</i>	<i>1,300 SF</i>	<i>850 SF</i>
Ext. Low (Under 30% AMI)	\$193,300	\$4.50	\$4.50	\$4.70	\$5.30	\$5.60
Very Low (30%-50% AMI)	\$125,500	\$5.40	\$5.40	\$5.70	\$6.30	\$6.70
Low (50%-80% AMI)	\$214,000	\$8.00	\$8.00	\$8.30	\$9.20	\$9.80
Moderate (80%-120% AMI)	\$233,450	\$8.50	\$8.50	\$8.70	\$9.70	\$10.60
Total Nexus Costs		\$26.40	\$26.40	\$27.40	\$30.50	\$32.70

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

¹⁵ Findings are presented based on net rentable or sellable square footage

**TABLE D-1
SUPPORTED FEE / NEXUS SUMMARY PER UNIT
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

TOTAL NEXUS COST PER MARKET RATE UNIT

	Affordability Gap ¹	Nexus Cost Per Market Rate Unit ³				
		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	\$193,300 ¹	\$11,200	\$8,900	\$7,100	\$6,900	\$4,800
30% to 50% Area Median Income	\$125,500 ¹	\$13,600	\$10,800	\$8,500	\$8,200	\$5,700
50% to 80% Area Median Income	\$214,000 ¹	\$19,900	\$15,900	\$12,400	\$11,900	\$8,300
80% to 120% Area Median Income	\$233,450 ²	\$21,300	\$16,900	\$13,100	\$12,600	\$9,000
Total Supported Fee / Nexus		\$66,000	\$52,500	\$41,100	\$39,600	\$27,800

TOTAL NEXUS COST PER SQUARE FOOT OF BUILDING AREA*

	Unit Size (SF)	Nexus Cost Per Square Foot (Net Rentable / Sellable) ⁴				
		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		\$4.50	\$4.50	\$4.70	\$5.30	\$5.60
30% to 50% Area Median Income		\$5.40	\$5.40	\$5.70	\$6.30	\$6.70
50% to 80% Area Median Income		\$8.00	\$8.00	\$8.30	\$9.20	\$9.80
80% to 120% Area Median Income		\$8.50	\$8.50	\$8.70	\$9.70	\$10.60
Total Supported Fee / Nexus		\$26.40	\$26.40	\$27.40	\$30.50	\$32.70

Notes:

- ¹ Assumes affordable rental units. ELI and Very Low Income affordability gaps represent the remaining affordability gap after 4% tax credit financing.
- ² Affordability gap for moderate income households based on ownership unit (townhome) priced at 110% AMI. See Table D-1.
- ³ Nexus cost per unit computed by multiplying affordable unit demand per 100 units from Table C-3 by the affordability gap and dividing by 100 units.
- ⁴ Computed by dividing the nexus cost per unit by the square footage of the unit.

TABLE D2
AFFORDABILITY GAP CALCULATION FOR MODERATE INCOME
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT

I. City-Assisted Affordable For-Sale Prototype

Building Type	2-BR Townhome
Unit Size	1,300 SF ⁽¹⁾
Market Rate Sale Price	\$552,500

II. Affordable Sales Price

Household Size	3 person HH
110% of Median Income	\$84,150
Maximum Affordable Sales Price	\$319,050 ⁽²⁾

III. Affordability Gap

Market Rate Sale Price	\$552,500
(Less) Affordable Price	<u>(\$319,050)</u>
Affordability Gap	\$233,450

⁽¹⁾ Note: The affordable townhome prototype is assumed to be smaller than the market rate townhome prototype.

⁽²⁾ See Table D-3 for Moderate Income home price estimate.

TABLE D3
ESTIMATED AFFORDABLE HOME PRICES - MODERATE INCOME
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT

Unit Size	1-Bedroom Unit	2-Bedroom Unit	3-Bedroom Unit	4-Bedroom Unit
Household Size	<u>2-person HH</u>	<u>3-person HH</u>	<u>4-person HH</u>	<u>5-person HH</u>
100% AMI Alameda County 2014	\$74,800	\$84,150	\$93,500	\$101,000
Annual Income @ 110%	\$82,280	\$92,565	\$102,850	\$111,100
% of AMI	110.0%	110.0%	110.0%	110.0%
% for Housing Costs	35%	35%	35%	35%
Available for Housing Costs	\$28,798	\$32,398	\$35,998	\$38,885
(Less) Property Taxes	(\$3,396)	(\$3,828)	(\$4,236)	(\$4,560)
(Less) HOA	(\$2,580)	(\$2,700)	(\$2,820)	(\$2,940)
(Less) Utilities	(\$828)	(\$1,068)	(\$1,296)	(\$1,548)
(Less) Insurance	(\$1,080)	(\$1,080)	(\$1,200)	(\$1,200)
(Less) Maintenance	(\$900)	(\$1,200)	(\$1,500)	(\$1,800)
(Less) Mortgage Insurance	(\$3,632)	(\$4,091)	(\$4,536)	(\$4,874)
Income Available for Mortgage	\$16,383	\$18,431	\$20,410	\$21,964
Mortgage Amount	\$269,400	\$303,100	\$335,700	\$361,200
Down Payment (homebuyer cash)	\$14,150	\$15,950	\$17,650	\$19,000
Supported Home Price	\$283,550	\$319,050	\$353,350	\$380,200
Key Assumptions				
- Mortgage Interest Rate	4.50%	4.50%	4.50%	4.50%
- Down Payment	5.0%	5.0%	5.0%	5.0%
- Property Taxes (% of sales price)	1.20%	1.20%	1.20%	1.20%
- HOA (per month)	\$215	\$225	\$235	\$245
- Utilities (per month)	\$69	\$89	\$108	\$129
- Mortgage Insurance (% of loan amount)	1.35%	1.35%	1.35%	1.35%

**TABLE D4
AFFORDABILITY GAPS FOR LOW INCOME
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT**

		60% AMI
I. Affordable Rent		
Average Number of Bedrooms		2 Bedrooms
Average Household Size		3 Persons per HH
Household Income		\$50,490
Income Allocation to Housing		30%
Monthly Housing Cost		\$1,262
(Less) Utility Allowance		(\$44) ⁽¹⁾
Maximum Monthly Rent		\$1,218
II. Net Operating Income (NOI)		
		Per Unit
Gross Scheduled Income (GSI)		
Monthly		\$1,218
Annual		\$14,619
Other Income		\$250
(Less) Vacancy	5%	(\$743)
Effective Gross Income (EGI)		\$14,126
(Less) Operating Expenses ⁽²⁾		(\$5,500)
(Less) Property Taxes	1.25%	(\$1,390)
Net Operating Income (NOI)		\$7,236
III. Capitalized Value and Affordability Gap		
Net Operating Income (NOI)		\$7,236
Target Return on Investment ⁽³⁾		7.50%
Total Capitalized Value		\$96,000
(Less) Total Development Costs ⁽⁴⁾		(\$310,000)
Affordability Gap		(\$214,000)

⁽¹⁾ Utility allowances from Alameda County Housing Authority.

⁽²⁾ Includes replacement reserves.

⁽³⁾ Return on investment is higher for affordable units because future rent escalations are limited by median incomes.

**TABLE D5
AFFORDABILITY GAPS FOR EXTREMELY LOW AND VERY LOW INCOME
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT**

	30% AMI	50% AMI
I. Affordable Rent		
Average Number of Bedrooms	2 Bedrooms	2 Bedrooms
Maximum TCAC Rent	\$621	\$1,035
(Less) Utility Allowance	(\$44)	(\$44) ⁽¹⁾
Maximum Monthly Rent	\$577	\$991
II. Net Operating Income (NOI)		
	Per Unit	Per Unit
Gross Scheduled Income (GSI)		
Monthly	\$577	\$991
Annual	\$6,924	\$11,892
Other Income	\$250	\$250
(Less) Vacancy	5% (\$359)	(\$607)
Effective Gross Income (EGI)	\$6,815	\$11,535
(Less) Operating Expenses ⁽²⁾	(\$5,500)	(\$5,500)
(Less) Property Taxes ⁽³⁾	\$0	\$0
Net Operating Income (NOI)	\$1,315	\$6,035
III. Permanent Financing		
Permanent Loan (tax exempt)	\$19,000	\$85,000
Deferred Developer Fee	\$1,700	\$3,500
4% Tax Credit Equity	\$107,000	\$107,000
Total Sources	\$127,700	\$195,500
(Less) Total Development Costs ⁽⁴⁾	(\$321,000)	(\$321,000)
Affordability Gap	(\$193,300)	(\$125,500)

⁽¹⁾ Utility allowances from Alameda County Housing Authority.

⁽²⁾ Includes replacement reserves.

⁽³⁾ Assumes tax exemption for non-profit general partner.

⁽⁴⁾ Development costs estimated by KMA (includes prevailing wages).

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IV. ADDENDUM: ADDITIONAL BACKGROUND AND NOTES ON SPECIFIC ASSUMPTIONS

No Excess Supply of Affordable Housing

An assumption of this residential nexus analysis is that there is no excess supply of affordable housing available to absorb or offset new demand; therefore, new affordable units are needed to mitigate the new affordable housing demand generated by development of new market rate residential units. Based on a review of the City's current Housing Element, conditions in Fremont are consistent with this underlying assumption. According to the Housing Element for the 2007 to 2014 period, approximately 30% of all households in the City were paying more than thirty percent of their income on housing. Households spending more than 30% of their income on housing were heavily those who are in the lower income categories. Current Census data (2010 to 2012 ACS) indicates that the percentage of households spending more than 30% of their income on housing has now risen to 38% of all households in Fremont. Vacancy rates in Fremont are around 4.6% according to Census data.

Geographic Area of Impact

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

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

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

Affordability Gap

The use of the affordability gap for establishing a maximum fee supported from the nexus analysis is grounded in the concept that a jurisdiction will be responsible for delivering affordable units to mitigate impacts. The nexus analysis has established that units will be needed at one or more different affordability levels and the type of unit to be delivered depends

on the income/affordability level. In Fremont, the City is anticipated to assist in the development of rental units for household incomes less than 80% of median and for moderate income households, ownership units are assumed to be assisted.

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

If the affordability gap is the difference between total development cost and the affordable sales price, the question sometimes arises as to how total development cost is defined. KMA defines total development costs as including land costs, construction costs, site improvements, architectural and engineering, financing and all other indirect costs, and an allowance for an industry profit (non-profit developers receive a development fee instead).

In a healthy and stable economy, the sales price is the same as the total development cost inclusive of profit. In down market cycles, sales prices are depressed such that they may not be high enough to cover total development costs and there is no profit. Projects are not feasible during these periods.

Excess Capacity of Labor Force

In the context of economic downturns such as the recent severe recession, the question is sometimes raised as to whether there is excess capacity in the labor force to the extent that consumption impacts generated by new households will be in part, absorbed by existing jobs and workers, thus resulting in fewer net new jobs. In response, an impact analysis of this nature is a one-time impact requirement to address impacts generated over the life of the project. Recessions are temporary conditions; a healthy economy will return and the impacts will be experienced. The economic cycle also self-adjusts. Development of new residential units is not likely to occur until conditions improve or there is confidence that improved conditions are imminent. When this occurs, the improved economic condition of the households in the local area will absorb the current underutilized capacity of existing workers, employed and unemployed. By the time new units become occupied, economic conditions will have likely improved.

The Burden of Paying for Affordable Housing

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

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

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

Disclaimers

This report has been prepared using the best and most recent data available at the time of the analysis. Local data and sources were used wherever possible. Major sources include the U.S. Census Bureau: 2010-2012 American Community Survey, California Employment Development Department and the IMPLAN model. While we believe all sources utilized are sufficiently sound and accurate for the purposes of this analysis, we cannot guarantee their accuracy. Keyser Marston Associates, Inc. assumes no liability for information from these and other sources.

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APPENDIX 1: MARKET SURVEY

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I. INTRODUCTION

One of the underlying components of the Residential Nexus Study is the identification of residential building prototypes that are expected to be developed in the City of Fremont, both today and in the future, and what the market prices for those prototypes will be. These market prices are then used to estimate the incomes of new households that will live in those units and a quantification of the number and types of new jobs that will be created as a result of those households. In this section, Keyser Marston Associates (KMA) describes the residential building prototypes utilized for the analysis, summarizes the residential market data researched, and describes the market price point conclusions drawn therefrom.

II. RESIDENTIAL PROTOTYPES

A total of five market rate residential prototypes were selected for market pricing – four for-sale prototypes and one rental prototype. The intent of the selected prototypes is to identify representative development prototypes that are more or less envisioned to be developed in Newark in the future. It is noted that one prototype, the higher density stacked flat condominiums (with concrete parking), is not commonly being developed outside of San Francisco and select high-value Peninsula and South Bay locales. However, higher density stacked flat condos may become feasible in Fremont as the market continues to improve.

Residential Prototypes	Density	Avg. Unit Size
<u>For-Sale Prototypes</u>		
1) Larger Lot Single Family Detached Homes	8 du/acre	2,500 sq. ft.
2) Small Lot Single Family Detached	12 du/acre	2,000 sq. ft.
3) Townhomes ¹⁶	18 du/acre	1,500 sq. ft.
4) Stacked Flat Condominiums	50 du/acre	1,300 sq. ft.
<u>Rental Prototype</u>		
5) Apartments	25 du/acre	850 sq. ft.

Source: KMA in collaboration with City of Fremont

III. MARKET SURVEY & PRICING ESTIMATES

a) Residential Building Activity

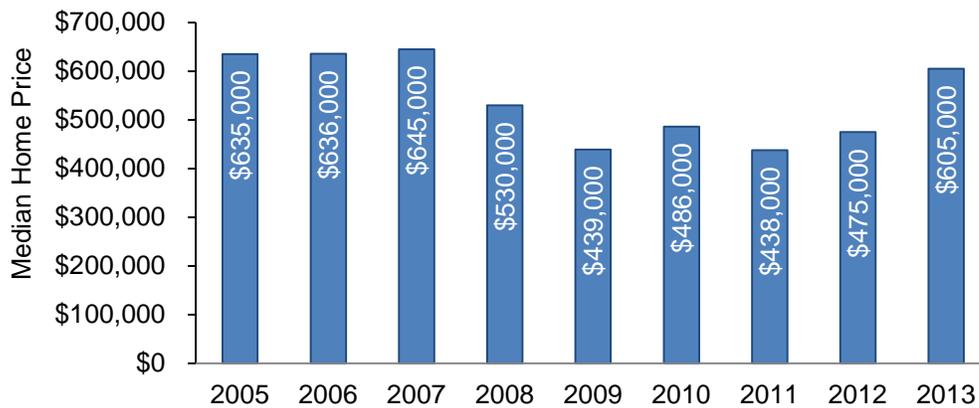
A limited amount of developable land in Fremont in combination with the downturn in the real estate market resulting from the recession has kept residential construction to a minimum. There are several new residential developments planned however, and Fremont is poised to capture its share of new residential development in the years to come.

¹⁶ The Townhome prototype is typically all wood frame construction and can include conventional townhomes and other similar all wood frame prototypes such as stacked flats.

b) Overview of For-Sale Market

The median home price in Fremont declined nearly one-third during the recession – from a high of \$645,000 in 2007 to \$438,000 in 2011 (there was a slight uptick in pricing in 2010 resulting from a temporary federal homebuyer tax credit). The median price rebounded significantly, about 27%, between 2012 and 2013.

Median Home Price Trends, City of Fremont



Source: Dataquick

The recent rebound in median home prices can be attributed to improvement in the broader economy as well as to continued favorable mortgage interest rates and low home inventories. It would be expected that the pace of home price escalation will begin to moderate as home inventories increase to more typical levels, and as federal policy makers continue to allow mortgage interest rates to rise gradually from the historic lows experienced over the course of the last couple of years.

c) New For-Sale Home Projects and Pricing

In order to estimate market pricing of the four for-sale residential prototypes, KMA first researched asking prices of newly constructed homes currently on the market. Market research firm Real Estate Economics identified just one single family home development and two attached townhome developments currently being marketed for sale in the City of Fremont.

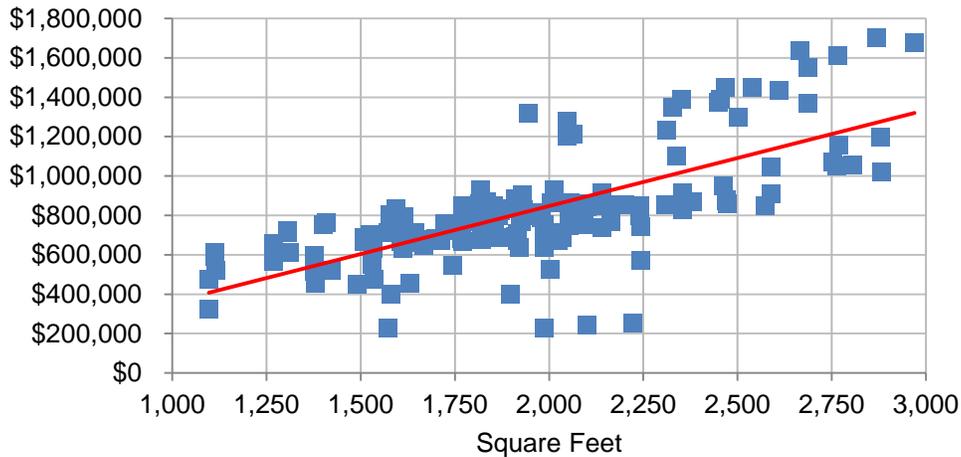
Newly Built Residential Projects				
Projects	Location	Unit Sizes	Price	Price PSF
<u>Single Family Detached</u>				
1) Central Park Terraces	Union St & Main St	1,644 sf	\$694,990	\$423
		1,712 sf	\$723,990	\$423
		2,094 sf	\$779,990	\$372
<u>Attached Townhomes</u>				
1) Lunare Townhomes	Blacow & Fremont Blvd	1,198 sf	\$495,000	\$413
		1,425 sf	\$575,000	\$404
2) Tavenna	Ardenwood Blvd & Paseo Padre	1,246 sf	\$576,990	\$463
		1,617 sf	\$691,990	\$428
		1,701 sf	\$718,990	\$423
		1,969 sf	\$751,990	\$382

Source: Real Estate Economics, project websites.

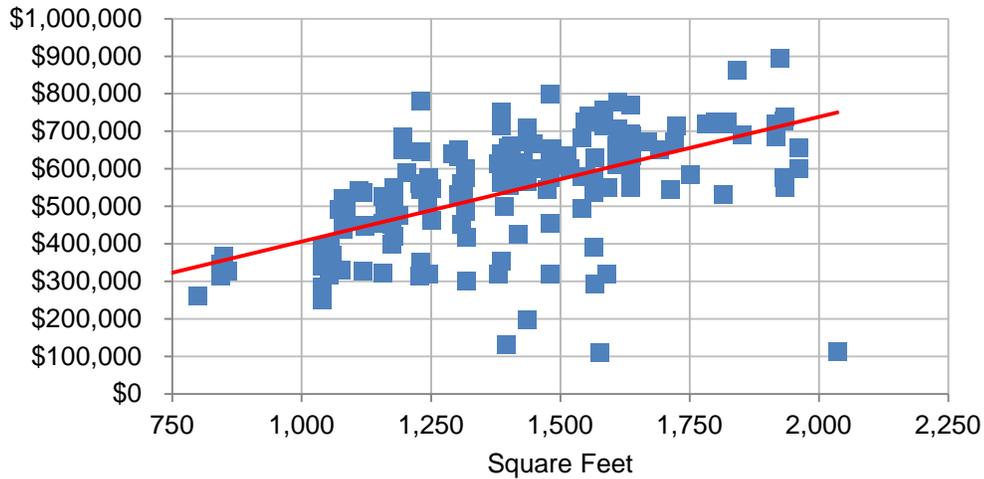
d) Re-Sale Home Prices

Given the limited number of newly built homes currently on the market, KMA also analyzed re-sale prices of existing homes (both detached and attached) as an additional source of data to estimate the prototype home prices. These prices are shown in the charts below.

**Single Family Detached Residential Sales, Fremont
2013 - 2014 (YTD)
Homes Built Since 1990**



**Attached Residential Sales, Fremont
2013 - 2014 (YTD)
Homes Built Since 1990**



Source: Dataquick (April 2014)

e) For-Sale Prototype Price Estimates

The pricing of new home developments currently on the market combined with the re-sale data noted above formed the basis for KMA’s prototype price estimates. The prototype pricing estimates took into consideration the following factors:

- In general, newly built homes sell for a premium over re-sales, all else being equal; and
- In general, larger homes sell for a higher total price but a lower price per square foot than smaller homes.

The following table summarizes KMA’s conclusions regarding current for-sale prototype pricing.

For-Sale Prototype Price Estimates	Size	Price	Price PSF
Prototype 1: Larger Lot Single Family Detached Homes	2,500 sf	\$1,100,000	\$440
Prototype 2: Small Lot Single Family Detached	2,000 sf	\$800,000	\$400
Prototype 3: Townhomes	1,500 sf	\$622,500	\$415
Prototype 4: Stacked Flat Condos (w// concrete parking)	1,300 sf	\$580,000*	\$446*

**Price required for feasibility*

It is noted that the sale price for the higher density stacked flat condominium prototype is based on a price required for feasibility rather than a theoretical current market price. Historically, stacked flat condominiums with concrete parking have not been built in large numbers in Fremont due to the fact that the prices that these types of units can be sold for in this area are not sufficient to offset the higher cost of construction and generate an acceptable return for developers. This study assumes that if stacked flat condominiums are built, they will require a sufficiently high price to enable them to be financially feasible.

f) *Rental Housing Market*

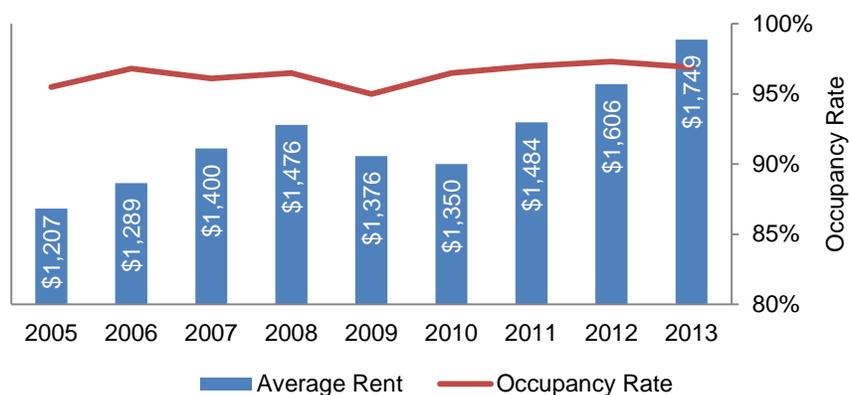
According to apartment market data source RealFacts, average apartment rents in Fremont are positioned at roughly the mid-point of other cities in Alameda County as shown below. It is noted however that the RealFacts survey focuses on larger apartment developments and therefore does not include some small, older properties where rents would be lower than newer properties.

Alameda County Average Apartment Rents (Q4 2013)		
1.	Berkeley	\$2,502
2.	Emeryville	\$2,294
3.	Oakland	\$2,133
4.	Dublin	\$2,035
5.	Pleasanton	\$1,924
6.	Newark	\$1,856
7.	Fremont	\$1,801
8.	Union City	\$1,798
9.	Alameda	\$1,757
10.	Livermore	\$1,615
11.	Hayward	\$1,465
12.	Castro Valley	\$1,430
13.	San Leandro	\$1,305

Source: RealFacts

In general, the apartment market throughout the Bay Area has enjoyed increasingly healthy conditions in the last few years, evidenced by rising rents and high occupancy rates.

**Average Apartment Rent & Occupancy Rate
City of Fremont**



Source: RealFacts

In order to estimate apartment rents for newly built units in Fremont, KMA conducted a survey of apartment developments in Fremont. Of these properties, the range of rents is roughly as follows (additional detail is contained in Appendix 1: Table 1):

Apartment Survey	Average Sq. Ft.	Average Rent	Rent/Sq. Ft.
1-Bedroom	815 sf	\$2,067 - \$2,155	\$2.53 - \$2.64
2-Bedroom	1,051 sf	\$2,523 - \$2,683	\$2.40 - \$2.55
All Unit Sizes	940 sf	\$2,296 - \$2,415	\$2.44 - \$2.57

Source: KMA Survey (April 2014)

g) Rental Prototype Rent Estimates

The following are KMA's rent estimates for the Fremont rental prototype. As with home prices, rents for newly built apartment projects will be higher than older properties, all else being equal. While rent growth has been significant over the course of the last several years in the Fremont market, we have not escalated current rents for purposes of this analysis.

Rental Prototype Rent Estimates	Sq. Ft.	Rent/Month	Rent/Sq. Ft.
Prototype 5: Apartments	850 sf	\$2,125	\$2.50

APPENDIX I, TABLE 1
ASKING APARTMENT RENTS - SELECT DEVELOPMENTS
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT

	<u>Sq. Ft.</u>	<u>Low Rent</u>	<u>High Rent</u>	<u>Low \$/SF</u>	<u>High \$/SF</u>
Paragon <i>3700 Beacon Avenue, Fremont (Built 2013)</i>					
1 BD/ 1 BA	685	\$1,915	\$1,945	\$2.80	\$2.84
1 BD/ 1 BA	738	\$2,020	\$2,070	\$2.74	\$2.80
1 BD/ 1 BA	832	\$2,055	\$2,205	\$2.47	\$2.65
1 BD/ 1 BA	854	\$2,240	\$2,300	\$2.62	\$2.69
2 BD/ 2 BA	1,058	\$2,530	\$2,575	\$2.39	\$2.43
2 BD/ 2 BA	1,111	\$2,720	\$2,720	\$2.45	\$2.45
2 BD/ 2 BA	1,159	\$2,725	\$2,795	\$2.35	\$2.41
2 BD/ 2 BA	1,179	\$2,705	\$2,705	\$2.29	\$2.29
Average	952	\$2,364	\$2,414	\$2.48	\$2.54
Archstone Fremont Center <i>39410 Civic Drive, Fremont (Built 2001)</i>					
1 BD/ 1 BA	723	\$1,915	\$2,055	\$2.65	\$2.84
1 BD/ 1 BA	786	\$2,000	\$2,000	\$2.54	\$2.54
1 BD/ 1 BA	925	\$2,165	\$2,205	\$2.34	\$2.38
1 BD/ 1 BA	1,013	\$2,310	\$2,310	\$2.28	\$2.28
2 BD/ 2 BA	982	\$2,585	\$2,660	\$2.63	\$2.71
2 BD/ 2 BA	1,039	\$2,600	\$2,655	\$2.50	\$2.56
2 BD/ 2 BA	1,147	\$2,630	\$2,630	\$2.29	\$2.29
Average	945	\$2,315	\$2,359	\$2.45	\$2.50
Creekside Village <i>2999 Sequoia Avenue, Fremont (Built 1986)</i>					
1 BD/ 1 BA	640	\$1,911	\$2,214	\$2.99	\$3.46
1 BD/ 1 BA	720	\$1,925	\$2,227	\$2.67	\$3.09
2 BD/ 2 BA	870	\$2,089	\$2,624	\$2.40	\$3.02
2 BD/ 2 BA	910	\$2,340	\$2,945	\$2.57	\$3.24
Average	785	\$2,066	\$2,503	\$2.63	\$3.19
Avalon Fremont <i>39939 Stevenson Common, Fremont (Built 1992)</i>					
1 BD/ 1 BA	761	\$1,895	\$1,950	\$2.49	\$2.56
1 BD/ 1 BA	1,036	\$2,350	\$2,375	\$2.27	\$2.29
2 BD/ 2 BA	1,056	\$2,395	\$2,395	\$2.27	\$2.27
2 BD/ 2 BA	1,120	\$2,380	\$2,380	\$2.13	\$2.13
3 BD/ 2 BA	1,369	\$2,785	\$2,835	\$2.03	\$2.07
Average	1,068	\$2,361	\$2,387	\$2.21	\$2.23
Leaves Fremont <i>231 Woodcreek Common, Fremont</i>					
1 BD/ 1 BA	701	\$1,810	\$1,975	\$2.58	\$2.82
2 BD/ 2 BA	901	\$2,205	\$2,905	\$2.45	\$3.22
Average	801	\$2,008	\$2,440	\$2.51	\$3.05
Watermark Place <i>38680 Waterside Circle, Fremont (Remodeled 2007)</i>					
1 BD/ 1 BA	854	\$2,180	\$2,180	\$2.55	\$2.55
1 BD/ 1 BA	963	\$2,307	\$2,307	\$2.40	\$2.40
2 BD/ 2 BA	1,126	\$2,894	\$2,894	\$2.57	\$2.57
Average	981	\$2,460	\$2,460	\$2.51	\$2.51

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APPENDIX 2: SUPPORTING TECHNICAL TABLES

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**APPENDIX 2, TABLE 1
 WORKER OCCUPATION DISTRIBUTION, 2012
 SERVICES TO HOUSEHOLDS EARNING \$75-\$100,000, RESIDENT SERVICES
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

Major Occupations (2% or more)	Worker Occupation Distribution ¹ Services to Households Earning \$75-\$100,000
Management Occupations	4.1%
Business and Financial Operations Occupations	3.4%
Education, Training, and Library Occupations	2.7%
Healthcare Practitioners and Technical Occupations	8.4%
Healthcare Support Occupations	4.8%
Food Preparation and Serving Related Occupations	14.8%
Building and Grounds Cleaning and Maintenance Occupations	5.6%
Personal Care and Service Occupations	5.4%
Sales and Related Occupations	14.3%
Office and Administrative Support Occupations	15.3%
Installation, Maintenance, and Repair Occupations	3.7%
Transportation and Material Moving Occupations	5.3%
All Other Worker Occupations - Services to Households Earning \$75-\$100,000	<u>12.1%</u>
INDUSTRY TOTAL	100.0%

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

**APPENDIX 2, TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$75-\$100,000
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
Page 1 of 4			
<i>Management Occupations</i>			
Chief Executives	\$199,700	3.6%	0.1%
General and Operations Managers	\$132,900	33.5%	1.4%
Sales Managers	\$141,700	5.2%	0.2%
Administrative Services Managers	\$101,200	3.8%	0.2%
Financial Managers	\$144,800	6.9%	0.3%
Food Service Managers	\$51,200	5.5%	0.2%
Medical and Health Services Managers	\$113,500	7.4%	0.3%
Property, Real Estate, and Community Association Managers	\$85,600	11.0%	0.4%
Social and Community Service Managers	\$74,600	3.5%	0.1%
All other Management Occupations (Avg. All Categories)	<u>\$119,500</u>	<u>19.6%</u>	<u>0.8%</u>
	Weighted Mean Annual Wage	100.0%	4.1%
<i>Business and Financial Operations Occupations</i>			
Human Resources Specialists	\$74,600	6.1%	0.2%
Labor Relations Specialists	\$81,200	3.8%	0.1%
Management Analysts	\$103,200	6.3%	0.2%
Training and Development Specialists	\$86,500	4.1%	0.1%
Market Research Analysts and Marketing Specialists	\$86,100	7.6%	0.3%
Business Operations Specialists, All Other	\$89,300	12.7%	0.4%
Accountants and Auditors	\$80,100	17.6%	0.6%
Financial Analysts	\$98,300	4.8%	0.2%
Personal Financial Advisors	\$81,000	5.3%	0.2%
Loan Officers	\$83,100	4.9%	0.2%
All Other Business and Financial Operations Occupations (Avg. All Categories)	<u>\$85,700</u>	<u>26.8%</u>	<u>0.9%</u>
	Weighted Mean Annual Wage	100.0%	3.4%
<i>Education, Training, and Library Occupations</i>			
Vocational Education Teachers, Postsecondary	\$57,600	4.5%	0.1%
Preschool Teachers, Except Special Education	\$33,900	12.8%	0.3%
Elementary School Teachers, Except Special Education	\$71,200	9.1%	0.2%
Middle School Teachers, Except Special and Career/Technical Education	\$71,000	4.1%	0.1%
Secondary School Teachers, Except Special and Career/Technical Education	\$71,600	6.3%	0.2%
Self-Enrichment Education Teachers	\$51,100	11.1%	0.3%
Substitute Teachers	\$41,500	4.7%	0.1%
Teachers and Instructors, All Other, Except Substitute Teachers	\$60,400	7.6%	0.2%
Teacher Assistants	\$32,000	15.6%	0.4%
All Other Education, Training, and Library Occupations (Avg. All Categories)	<u>\$50,100</u>	<u>24.2%</u>	<u>0.7%</u>
	Weighted Mean Annual Wage	100.0%	2.7%

**APPENDIX 2, TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$75-\$100,000
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 2 of 4</i>			
<i>Healthcare Practitioners and Technical Occupations</i>			
Pharmacists	\$131,300	3.8%	0.3%
Physicians and Surgeons, All Other	\$190,500	4.3%	0.4%
Registered Nurses	\$115,100	31.2%	2.6%
Dental Hygienists	\$98,900	3.7%	0.3%
Pharmacy Technicians	\$47,100	5.0%	0.4%
Licensed Practical and Licensed Vocational Nurses	\$60,400	9.3%	0.8%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	<u>\$106,000</u>	<u>42.7%</u>	<u>3.6%</u>
Weighted Mean Annual Wage	\$106,000	100.0%	8.4%
<i>Healthcare Support Occupations</i>			
Home Health Aides	\$29,100	20.0%	1.0%
Nursing Assistants	\$35,300	33.3%	1.6%
Dental Assistants	\$40,300	10.3%	0.5%
Medical Assistants	\$37,700	17.4%	0.8%
All Other Healthcare Support Occupations (Avg. All Categories)	<u>\$34,900</u>	<u>19.0%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$34,900	100.0%	4.8%
<i>Food Preparation and Serving Related Occupations</i>			
First-Line Supervisors of Food Preparation and Serving Workers	\$31,700	7.0%	1.0%
Cooks, Fast Food	\$19,900	4.6%	0.7%
Cooks, Restaurant	\$26,200	9.1%	1.3%
Food Preparation Workers	\$22,800	6.5%	1.0%
Bartenders	\$22,600	5.0%	0.7%
Combined Food Preparation and Serving Workers, Including Fast Food	\$21,500	25.9%	3.8%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$20,600	3.6%	0.5%
Waiters and Waitresses	\$21,600	20.9%	3.1%
Dining Room and Cafeteria Attendants and Bartender Helpers	\$19,400	3.2%	0.5%
Dishwashers	\$21,600	4.2%	0.6%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$20,900	3.1%	0.5%
All Other Food Preparation and Serving Related Occupations (Avg. All Categories)	<u>\$22,700</u>	<u>6.9%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$22,700	100.0%	14.8%
<i>Building and Grounds Cleaning and Maintenance Occupations</i>			
First-Line Supervisors of Housekeeping and Janitorial Workers	\$47,200	3.4%	0.2%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$31,800	50.5%	2.8%
Maids and Housekeeping Cleaners	\$29,600	12.7%	0.7%
Landscaping and Groundskeeping Workers	\$31,600	25.0%	1.4%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. All Cat)	<u>\$32,000</u>	<u>8.4%</u>	<u>0.5%</u>
Weighted Mean Annual Wage	\$32,000	100.0%	5.6%

**APPENDIX 2, TABLE 2
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$75-\$100,000
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 3 of 4</i>			
<i>Personal Care and Service Occupations</i>			
First-Line Supervisors of Personal Service Workers	\$42,900	3.7%	0.2%
Nonfarm Animal Caretakers	\$25,500	5.0%	0.3%
Ushers, Lobby Attendants, and Ticket Takers	\$22,300	3.8%	0.2%
Amusement and Recreation Attendants	\$22,700	5.6%	0.3%
Hairdressers, Hairstylists, and Cosmetologists	\$29,500	15.5%	0.8%
Manicurists and Pedicurists	\$18,900	3.3%	0.2%
Childcare Workers	\$23,600	11.1%	0.6%
Personal Care Aides	\$22,600	28.0%	1.5%
Fitness Trainers and Aerobics Instructors	\$50,600	5.4%	0.3%
Recreation Workers	\$28,200	5.1%	0.3%
All Other Personal Care and Service Occupations (Avg. All Categories)	<u>\$26,900</u>	<u>13.7%</u>	<u>0.7%</u>
Weighted Mean Annual Wage	\$26,900	100.0%	5.4%
<i>Sales and Related Occupations</i>			
First-Line Supervisors of Retail Sales Workers	\$49,500	9.6%	1.4%
Cashiers	\$26,400	25.2%	3.6%
Counter and Rental Clerks	\$33,900	4.5%	0.6%
Retail Salespersons	\$28,700	37.7%	5.4%
Sales Representatives, Services, All Other	\$71,400	3.5%	0.5%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	\$73,800	5.2%	0.7%
Real Estate Sales Agents	\$36,700	3.2%	0.5%
All Other Sales and Related Occupations (Avg. All Categories)	<u>\$35,200</u>	<u>11.2%</u>	<u>1.6%</u>
Weighted Mean Annual Wage	\$35,200	100.0%	14.3%
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors of Office and Administrative Support Workers	\$62,400	6.5%	1.0%
Bookkeeping, Accounting, and Auditing Clerks	\$45,900	7.4%	1.1%
Customer Service Representatives	\$43,200	9.7%	1.5%
Receptionists and Information Clerks	\$34,600	7.9%	1.2%
Stock Clerks and Order Fillers	\$29,100	10.8%	1.7%
Executive Secretaries and Executive Administrative Assistants	\$60,100	3.1%	0.5%
Medical Secretaries	\$41,800	4.7%	0.7%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$43,500	10.5%	1.6%
Office Clerks, General	\$37,400	13.9%	2.1%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$41,800</u>	<u>25.5%</u>	<u>3.9%</u>
Weighted Mean Annual Wage	\$41,800	100.0%	15.3%
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors of Mechanics, Installers, and Repairers	\$80,500	7.9%	0.3%
Automotive Body and Related Repairers	\$51,400	5.4%	0.2%
Automotive Service Technicians and Mechanics	\$50,300	19.9%	0.7%
Bus and Truck Mechanics and Diesel Engine Specialists	\$58,500	3.3%	0.1%
Maintenance and Repair Workers, General	\$45,800	35.4%	1.3%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	<u>\$51,900</u>	<u>28.2%</u>	<u>1.1%</u>
Weighted Mean Annual Wage	\$51,900	100.0%	3.7%

**APPENDIX 2, TABLE 2
 AVERAGE ANNUAL WORKER COMPENSATION, 2013
 SERVICES TO HOUSEHOLDS EARNING \$75-\$100,000
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Transportation and Material Moving Occupations</i>			
Bus Drivers, School or Special Client	\$35,600	6.4%	0.3%
Driver/Sales Workers	\$34,100	7.6%	0.4%
Heavy and Tractor-Trailer Truck Drivers	\$44,800	12.9%	0.7%
Light Truck or Delivery Services Drivers	\$37,300	11.3%	0.6%
Taxi Drivers and Chauffeurs	\$29,100	3.5%	0.2%
Parking Lot Attendants	\$27,400	4.0%	0.2%
Industrial Truck and Tractor Operators	\$43,400	3.4%	0.2%
Cleaners of Vehicles and Equipment	\$24,500	6.4%	0.3%
Laborers and Freight, Stock, and Material Movers, Hand	\$31,400	22.2%	1.2%
Packers and Packagers, Hand	\$23,700	6.9%	0.4%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	<u>\$33,800</u>	<u>15.3%</u>	<u>0.8%</u>
Weighted Mean Annual Wage	\$33,800	100.0%	5.3%
			<hr/> <hr/> 87.9%

¹ 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.

² Occupation percentages are based on the 2013 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2012 Occupational Employment Survey data for Alameda County, updated by the California Employment Development Department to 2013 wage levels.

³ Including occupations representing 3% or more of the major occupation group

**APPENDIX 2, TABLE 3
 WORKER OCCUPATION DISTRIBUTION, 2012
 SERVICES TO HOUSEHOLDS EARNING \$100,000 TO \$150,000
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

Major Occupations (2% or more)	Worker Occupation Distribution ¹ Services to Households Earning \$100,000 to \$150,000
Management Occupations	4.0%
Business and Financial Operations Occupations	3.4%
Education, Training, and Library Occupations	3.2%
Healthcare Practitioners and Technical Occupations	8.1%
Healthcare Support Occupations	4.6%
Food Preparation and Serving Related Occupations	14.7%
Building and Grounds Cleaning and Maintenance Occupations	5.6%
Personal Care and Service Occupations	5.5%
Sales and Related Occupations	14.8%
Office and Administrative Support Occupations	15.2%
Installation, Maintenance, and Repair Occupations	3.5%
Transportation and Material Moving Occupations	5.3%
All Other Worker Occupations - Services to Households Earning \$100,000 to \$150,000	<u>12.1%</u>
INDUSTRY TOTAL	100.0%

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

**APPENDIX 2, TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$100,000 TO \$150,000
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
Page 1 of 4			
<i>Management Occupations</i>			
Chief Executives	\$199,700	3.6%	0.1%
General and Operations Managers	\$132,900	34.2%	1.4%
Sales Managers	\$141,700	5.2%	0.2%
Administrative Services Managers	\$101,200	3.9%	0.2%
Financial Managers	\$144,800	7.0%	0.3%
Food Service Managers	\$51,200	5.6%	0.2%
Medical and Health Services Managers	\$113,500	7.2%	0.3%
Property, Real Estate, and Community Association Managers	\$85,600	8.7%	0.3%
Social and Community Service Managers	\$74,600	3.8%	0.2%
Managers, All Other	\$134,300	3.1%	0.1%
All other Management Occupations (Avg. All Categories)	<u>\$121,000</u>	<u>17.6%</u>	<u>0.7%</u>
	Weighted Mean Annual Wage	100.0%	4.0%
<i>Business and Financial Operations Occupations</i>			
Human Resources Specialists	\$74,600	6.1%	0.2%
Labor Relations Specialists	\$81,200	4.0%	0.1%
Management Analysts	\$103,200	6.3%	0.2%
Training and Development Specialists	\$86,500	4.3%	0.1%
Market Research Analysts and Marketing Specialists	\$86,100	7.4%	0.3%
Business Operations Specialists, All Other	\$89,300	12.8%	0.4%
Accountants and Auditors	\$80,100	17.2%	0.6%
Financial Analysts	\$98,300	4.9%	0.2%
Personal Financial Advisors	\$81,000	5.7%	0.2%
Loan Officers	\$83,100	5.1%	0.2%
All Other Business and Financial Operations Occupations (Avg. All Categories)	<u>\$85,700</u>	<u>26.4%</u>	<u>0.9%</u>
	Weighted Mean Annual Wage	100.0%	3.4%
<i>Education, Training, and Library Occupations</i>			
Vocational Education Teachers, Postsecondary	\$57,600	4.6%	0.1%
Preschool Teachers, Except Special Education	\$33,900	13.1%	0.4%
Elementary School Teachers, Except Special Education	\$71,200	8.9%	0.3%
Middle School Teachers, Except Special and Career/Technical Education	\$71,000	4.0%	0.1%
Secondary School Teachers, Except Special and Career/Technical Education	\$71,600	6.1%	0.2%
Self-Enrichment Education Teachers	\$51,100	10.9%	0.4%
Substitute Teachers	\$41,500	4.6%	0.1%
Teachers and Instructors, All Other, Except Substitute Teachers	\$60,400	7.7%	0.2%
Teacher Assistants	\$32,000	15.6%	0.5%
All Other Education, Training, and Library Occupations (Avg. All Categories)	<u>\$50,000</u>	<u>24.6%</u>	<u>0.8%</u>
	Weighted Mean Annual Wage	100.0%	3.2%

**APPENDIX 2, TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$100,000 TO \$150,000
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 2 of 4</i>			
<i>Healthcare Practitioners and Technical Occupations</i>			
Pharmacists	\$131,300	4.1%	0.3%
Physicians and Surgeons, All Other	\$190,500	4.2%	0.3%
Registered Nurses	\$115,100	30.8%	2.5%
Dental Hygienists	\$98,900	3.7%	0.3%
Pharmacy Technicians	\$47,100	5.5%	0.4%
Licensed Practical and Licensed Vocational Nurses	\$60,400	9.2%	0.7%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	<u>\$105,600</u>	<u>42.5%</u>	<u>3.4%</u>
Weighted Mean Annual Wage	\$105,600	100.0%	8.1%
<i>Healthcare Support Occupations</i>			
Home Health Aides	\$29,100	20.6%	0.9%
Nursing Assistants	\$35,300	33.0%	1.5%
Dental Assistants	\$40,300	10.1%	0.5%
Medical Assistants	\$37,700	17.2%	0.8%
All Other Healthcare Support Occupations (Avg. All Categories)	<u>\$34,900</u>	<u>19.1%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$34,900	100.0%	4.6%
<i>Food Preparation and Serving Related Occupations</i>			
First-Line Supervisors of Food Preparation and Serving Workers	\$31,700	7.0%	1.0%
Cooks, Fast Food	\$19,900	4.6%	0.7%
Cooks, Restaurant	\$26,200	9.0%	1.3%
Food Preparation Workers	\$22,800	6.6%	1.0%
Bartenders	\$22,600	5.0%	0.7%
Combined Food Preparation and Serving Workers, Including Fast Food	\$21,500	26.0%	3.8%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$20,600	3.6%	0.5%
Waiters and Waitresses	\$21,600	20.8%	3.1%
Dining Room and Cafeteria Attendants and Bartender Helpers	\$19,400	3.2%	0.5%
Dishwashers	\$21,600	4.2%	0.6%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$20,900	3.1%	0.5%
All Other Food Preparation and Serving Related Occupations (Avg. All Categories)	<u>\$22,700</u>	<u>6.9%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$22,700	100.0%	14.7%
<i>Building and Grounds Cleaning and Maintenance Occupations</i>			
First-Line Supervisors of Housekeeping and Janitorial Workers	\$47,200	3.4%	0.2%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$31,800	50.7%	2.8%
Maids and Housekeeping Cleaners	\$29,600	12.3%	0.7%
Landscaping and Groundskeeping Workers	\$31,600	25.1%	1.4%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. All Cat)	<u>\$32,000</u>	<u>8.6%</u>	<u>0.5%</u>
Weighted Mean Annual Wage	\$32,000	100.0%	5.6%

**APPENDIX 2, TABLE 4
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$100,000 TO \$150,000
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Personal Care and Service Occupations</i>			
First-Line Supervisors of Personal Service Workers	\$42,900	3.7%	0.2%
Nonfarm Animal Caretakers	\$25,500	5.1%	0.3%
Ushers, Lobby Attendants, and Ticket Takers	\$22,300	3.7%	0.2%
Amusement and Recreation Attendants	\$22,700	5.5%	0.3%
Hairdressers, Hairstylists, and Cosmetologists	\$29,500	14.6%	0.8%
Manicurists and Pedicurists	\$18,900	3.1%	0.2%
Childcare Workers	\$23,600	12.5%	0.7%
Personal Care Aides	\$22,600	27.9%	1.5%
Fitness Trainers and Aerobics Instructors	\$50,600	5.5%	0.3%
Recreation Workers	\$28,200	5.1%	0.3%
All Other Personal Care and Service Occupations (Avg. All Categories)	<u>\$26,900</u>	<u>13.3%</u>	<u>0.7%</u>
Weighted Mean Annual Wage	\$26,900	100.0%	5.5%
<i>Sales and Related Occupations</i>			
First-Line Supervisors of Retail Sales Workers	\$49,500	10.1%	1.5%
Cashiers	\$26,400	26.1%	3.9%
Counter and Rental Clerks	\$33,900	3.8%	0.6%
Retail Salespersons	\$28,700	39.6%	5.9%
Sales Representatives, Services, All Other	\$71,400	3.4%	0.5%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	\$73,800	4.1%	0.6%
All Other Sales and Related Occupations (Avg. All Categories)	<u>\$34,400</u>	<u>12.9%</u>	<u>1.9%</u>
Weighted Mean Annual Wage	\$34,400	100.0%	14.8%
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors of Office and Administrative Support Workers	\$62,400	6.6%	1.0%
Bookkeeping, Accounting, and Auditing Clerks	\$45,900	7.3%	1.1%
Customer Service Representatives	\$43,200	9.7%	1.5%
Receptionists and Information Clerks	\$34,600	7.7%	1.2%
Stock Clerks and Order Fillers	\$29,100	11.6%	1.8%
Executive Secretaries and Executive Administrative Assistants	\$60,100	3.1%	0.5%
Medical Secretaries	\$41,800	4.4%	0.7%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$43,500	10.3%	1.6%
Office Clerks, General	\$37,400	13.6%	2.1%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$41,700</u>	<u>25.7%</u>	<u>3.9%</u>
Weighted Mean Annual Wage	\$41,700	100.0%	15.2%
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors of Mechanics, Installers, and Repairers	\$80,500	7.9%	0.3%
Automotive Body and Related Repairers	\$51,400	5.7%	0.2%
Automotive Service Technicians and Mechanics	\$50,300	21.7%	0.8%
Bus and Truck Mechanics and Diesel Engine Specialists	\$58,500	3.5%	0.1%
Tire Repairers and Changers	\$31,000	3.3%	0.1%
Maintenance and Repair Workers, General	\$45,800	32.0%	1.1%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	<u>\$51,200</u>	<u>25.9%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$51,200	100.0%	3.5%

**APPENDIX 2, TABLE 4
 AVERAGE ANNUAL WORKER COMPENSATION, 2013
 SERVICES TO HOUSEHOLDS EARNING \$100,000 TO \$150,000
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Transportation and Material Moving Occupations</i>			
Bus Drivers, School or Special Client	\$35,600	7.3%	0.4%
Driver/Sales Workers	\$34,100	7.4%	0.4%
Heavy and Tractor-Trailer Truck Drivers	\$44,800	12.6%	0.7%
Light Truck or Delivery Services Drivers	\$37,300	11.2%	0.6%
Taxi Drivers and Chauffeurs	\$29,100	3.9%	0.2%
Parking Lot Attendants	\$27,400	4.1%	0.2%
Industrial Truck and Tractor Operators	\$43,400	3.2%	0.2%
Cleaners of Vehicles and Equipment	\$24,500	6.5%	0.3%
Laborers and Freight, Stock, and Material Movers, Hand	\$31,400	21.7%	1.1%
Packers and Packagers, Hand	\$23,700	7.0%	0.4%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	<u>\$33,700</u>	<u>15.2%</u>	<u>0.8%</u>
Weighted Mean Annual Wage	\$33,700	100.0%	5.3%
			<hr/> <hr/> 87.9%

¹ 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.

² Occupation percentages are based on the 2013 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2012 Occupational Employment Survey data for Alameda County, updated by the California Employment Development Department to 2013 wage levels.

³ Including occupations representing 3% or more of the major occupation group

**APPENDIX 2, TABLE 5
 WORKER OCCUPATION DISTRIBUTION, 2012
 SERVICES TO HOUSEHOLDS EARNING \$150,000 AND OVER
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

Major Occupations (2% or more)	Worker Occupation Distribution ¹ Services to Households Earning \$150,000 and over
Management Occupations	4.0%
Business and Financial Operations Occupations	3.5%
Education, Training, and Library Occupations	4.5%
Healthcare Practitioners and Technical Occupations	7.2%
Healthcare Support Occupations	4.1%
Food Preparation and Serving Related Occupations	14.0%
Building and Grounds Cleaning and Maintenance Occupations	5.8%
Personal Care and Service Occupations	5.7%
Sales and Related Occupations	15.0%
Office and Administrative Support Occupations	15.0%
Installation, Maintenance, and Repair Occupations	3.4%
Transportation and Material Moving Occupations	5.4%
All Other Worker Occupations - Services to Households Earning \$150,000 and over	<u>12.4%</u>
INDUSTRY TOTAL	100.0%

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

**APPENDIX 2, TABLE 6
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$150,000 AND OVER
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
Page 1 of 4			
<i>Management Occupations</i>			
Chief Executives	\$199,700	3.7%	0.1%
General and Operations Managers	\$132,900	34.5%	1.4%
Sales Managers	\$141,700	5.0%	0.2%
Administrative Services Managers	\$101,200	3.9%	0.2%
Financial Managers	\$144,800	7.0%	0.3%
Food Service Managers	\$51,200	5.3%	0.2%
Medical and Health Services Managers	\$113,500	6.3%	0.3%
Property, Real Estate, and Community Association Managers	\$85,600	7.6%	0.3%
Social and Community Service Managers	\$74,600	4.0%	0.2%
Managers, All Other	\$134,300	3.2%	0.1%
All other Management Occupations (Avg. All Categories)	<u>\$121,900</u>	<u>19.6%</u>	<u>0.8%</u>
	Weighted Mean Annual Wage	100.0%	4.0%
<i>Business and Financial Operations Occupations</i>			
Human Resources Specialists	\$74,600	5.9%	0.2%
Labor Relations Specialists	\$81,200	4.0%	0.1%
Management Analysts	\$103,200	6.2%	0.2%
Training and Development Specialists	\$86,500	4.6%	0.2%
Market Research Analysts and Marketing Specialists	\$86,100	7.3%	0.3%
Business Operations Specialists, All Other	\$89,300	13.1%	0.5%
Accountants and Auditors	\$80,100	16.7%	0.6%
Financial Analysts	\$98,300	4.9%	0.2%
Personal Financial Advisors	\$81,000	5.7%	0.2%
Loan Officers	\$83,100	5.0%	0.2%
All Other Business and Financial Operations Occupations (Avg. All Categories)	<u>\$85,800</u>	<u>26.6%</u>	<u>0.9%</u>
	Weighted Mean Annual Wage	100.0%	3.5%
<i>Education, Training, and Library Occupations</i>			
Vocational Education Teachers, Postsecondary	\$57,600	4.8%	0.2%
Preschool Teachers, Except Special Education	\$33,900	13.0%	0.6%
Elementary School Teachers, Except Special Education	\$71,200	8.8%	0.4%
Middle School Teachers, Except Special and Career/Technical Education	\$71,000	4.0%	0.2%
Secondary School Teachers, Except Special and Career/Technical Education	\$71,600	6.1%	0.3%
Self-Enrichment Education Teachers	\$51,100	10.5%	0.5%
Substitute Teachers	\$41,500	4.4%	0.2%
Teachers and Instructors, All Other, Except Substitute Teachers	\$60,400	7.8%	0.3%
Teacher Assistants	\$32,000	15.3%	0.7%
All Other Education, Training, and Library Occupations (Avg. All Categories)	<u>\$50,100</u>	<u>25.4%</u>	<u>1.1%</u>
	Weighted Mean Annual Wage	100.0%	4.5%

**APPENDIX 2, TABLE 6
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$150,000 AND OVER
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 2 of 4</i>			
<i>Healthcare Practitioners and Technical Occupations</i>			
Pharmacists	\$131,300	4.6%	0.3%
Physicians and Surgeons, All Other	\$190,500	4.1%	0.3%
Registered Nurses	\$115,100	30.2%	2.2%
Dental Hygienists	\$98,900	3.5%	0.3%
Pharmacy Technicians	\$47,100	6.2%	0.4%
Licensed Practical and Licensed Vocational Nurses	\$60,400	9.0%	0.6%
All Other Healthcare Practitioners and Technical Occupations (Avg. All Categories)	<u>\$105,000</u>	<u>42.3%</u>	<u>3.0%</u>
Weighted Mean Annual Wage	\$105,000	100.0%	7.2%
<i>Healthcare Support Occupations</i>			
Home Health Aides	\$29,100	21.3%	0.9%
Nursing Assistants	\$35,300	32.6%	1.3%
Dental Assistants	\$40,300	9.9%	0.4%
Medical Assistants	\$37,700	16.8%	0.7%
All Other Healthcare Support Occupations (Avg. All Categories)	<u>\$34,800</u>	<u>19.5%</u>	<u>0.8%</u>
Weighted Mean Annual Wage	\$34,800	100.0%	4.1%
<i>Food Preparation and Serving Related Occupations</i>			
First-Line Supervisors of Food Preparation and Serving Workers	\$31,700	7.0%	1.0%
Cooks, Fast Food	\$19,900	4.6%	0.6%
Cooks, Restaurant	\$26,200	9.0%	1.3%
Food Preparation Workers	\$22,800	6.7%	0.9%
Bartenders	\$22,600	5.1%	0.7%
Combined Food Preparation and Serving Workers, Including Fast Food	\$21,500	25.9%	3.6%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$20,600	3.7%	0.5%
Waiters and Waitresses	\$21,600	20.7%	2.9%
Dining Room and Cafeteria Attendants and Bartender Helpers	\$19,400	3.2%	0.4%
Dishwashers	\$21,600	4.1%	0.6%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$20,900	3.1%	0.4%
All Other Food Preparation and Serving Related Occupations (Avg. All Categories)	<u>\$22,700</u>	<u>7.0%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$22,700	100.0%	14.0%
<i>Building and Grounds Cleaning and Maintenance Occupations</i>			
First-Line Supervisors of Housekeeping and Janitorial Workers	\$47,200	3.4%	0.2%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$53,300	3.0%	0.2%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$31,800	51.1%	3.0%
Maids and Housekeeping Cleaners	\$29,600	11.4%	0.7%
Landscaping and Groundskeeping Workers	\$31,600	25.4%	1.5%
All Other Building and Grounds Cleaning and Maintenance Occupations (Avg. All Cat)	<u>\$32,700</u>	<u>5.7%</u>	<u>0.3%</u>
Weighted Mean Annual Wage	\$32,700	100.0%	5.8%

**APPENDIX 2, TABLE 6
AVERAGE ANNUAL WORKER COMPENSATION, 2013
SERVICES TO HOUSEHOLDS EARNING \$150,000 AND OVER
RESIDENTIAL NEXUS ANALYSIS
CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Personal Care and Service Occupations</i>			
First-Line Supervisors of Personal Service Workers	\$42,900	3.7%	0.2%
Nonfarm Animal Caretakers	\$25,500	5.4%	0.3%
Ushers, Lobby Attendants, and Ticket Takers	\$22,300	3.9%	0.2%
Amusement and Recreation Attendants	\$22,700	5.9%	0.3%
Hairdressers, Hairstylists, and Cosmetologists	\$29,500	12.7%	0.7%
Childcare Workers	\$23,600	15.8%	0.9%
Personal Care Aides	\$22,600	26.1%	1.5%
Fitness Trainers and Aerobics Instructors	\$50,600	5.8%	0.3%
Recreation Workers	\$28,200	5.0%	0.3%
All Other Personal Care and Service Occupations (Avg. All Categories)	<u>\$27,200</u>	<u>15.7%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$27,200	100.0%	5.7%
<i>Sales and Related Occupations</i>			
First-Line Supervisors of Retail Sales Workers	\$49,500	10.3%	1.5%
Cashiers	\$26,400	26.5%	4.0%
Counter and Rental Clerks	\$33,900	3.7%	0.5%
Retail Salespersons	\$28,700	40.5%	6.1%
Sales Representatives, Services, All Other	\$71,400	3.4%	0.5%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	\$73,800	3.3%	0.5%
All Other Sales and Related Occupations (Avg. All Categories)	<u>\$34,000</u>	<u>12.3%</u>	<u>1.8%</u>
Weighted Mean Annual Wage	\$34,000	100.0%	15.0%
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors of Office and Administrative Support Workers	\$62,400	6.5%	1.0%
Bookkeeping, Accounting, and Auditing Clerks	\$45,900	7.3%	1.1%
Customer Service Representatives	\$43,200	9.8%	1.5%
Receptionists and Information Clerks	\$34,600	7.3%	1.1%
Stock Clerks and Order Fillers	\$29,100	11.9%	1.8%
Executive Secretaries and Executive Administrative Assistants	\$60,100	3.2%	0.5%
Medical Secretaries	\$41,800	3.9%	0.6%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$43,500	10.6%	1.6%
Office Clerks, General	\$37,400	13.8%	2.1%
All Other Office and Administrative Support Occupations (Avg. All Categories)	<u>\$41,700</u>	<u>25.7%</u>	<u>3.9%</u>
Weighted Mean Annual Wage	\$41,700	100.0%	15.0%
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors of Mechanics, Installers, and Repairers	\$80,500	7.9%	0.3%
Automotive Body and Related Repairers	\$51,400	5.7%	0.2%
Automotive Service Technicians and Mechanics	\$50,300	22.3%	0.8%
Bus and Truck Mechanics and Diesel Engine Specialists	\$58,500	3.6%	0.1%
Tire Repairers and Changers	\$31,000	3.5%	0.1%
Maintenance and Repair Workers, General	\$45,800	31.0%	1.0%
All Other Installation, Maintenance, and Repair Occupations (Avg. All Categories)	<u>\$51,200</u>	<u>26.0%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$51,200	100.0%	3.4%

**APPENDIX 2, TABLE 6
 AVERAGE ANNUAL WORKER COMPENSATION, 2013
 SERVICES TO HOUSEHOLDS EARNING \$150,000 AND OVER
 RESIDENTIAL NEXUS ANALYSIS
 CITY OF FREMONT, CA**

Occupation ³	2013 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Transportation and Material Moving Occupations</i>			
Bus Drivers, School or Special Client	\$35,600	9.2%	0.5%
Driver/Sales Workers	\$34,100	7.0%	0.4%
Heavy and Tractor-Trailer Truck Drivers	\$44,800	12.3%	0.7%
Light Truck or Delivery Services Drivers	\$37,300	10.7%	0.6%
Taxi Drivers and Chauffeurs	\$29,100	4.4%	0.2%
Parking Lot Attendants	\$27,400	4.3%	0.2%
Cleaners of Vehicles and Equipment	\$24,500	6.2%	0.3%
Laborers and Freight, Stock, and Material Movers, Hand	\$31,400	20.7%	1.1%
Packers and Packagers, Hand	\$23,700	6.8%	0.4%
All Other Transportation and Material Moving Occupations (Avg. All Categories)	<u>\$33,400</u>	<u>18.3%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$33,400	100.0%	5.4%
			<hr/> <hr/> 87.6%

¹ 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.

² Occupation percentages are based on the 2013 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2012 Occupational Employment Survey data for Alameda County, updated by the California Employment Development Department to 2013 wage levels.

³ Including occupations representing 3% or more of the major occupation group