

The Economics of Land Use



Final Report

Nonresidential Development Housing Linkage Fee Nexus Study

Prepared for:

City of Pleasanton

Prepared by:

Economic & Planning Systems, Inc.

*Economic & Planning Systems, Inc.
One Kaiser Plaza, Suite 1410
Oakland, CA 94612-3604
510.841.9190 tel
510.740.2080 fax*

*Oakland
Sacramento
Denver
Los Angeles*

www.epsys.com

September 24, 2018

EPS #151111

Table of Contents

1.	INTRODUCTION AND EXECUTIVE SUMMARY	1
	Background.....	1
	Purpose	1
	Authority	1
	Summary.....	2
	Sources	3
	Organization of Report.....	3
2.	FINDINGS FOR FEE PROGRAM	4
	Purpose of Fee.....	4
	Use of Fee.....	4
	Relationship between Use of Fee and Type of Development	4
	Relationship between Demand for Affordable Housing and Type of Project	4
	Relationship between Amount of Fee and Cost of Public Benefit Attributed to New Development.....	4
3.	EMPLOYMENT AND HOUSING TRENDS.....	5
	Recent Development Trends.....	5
	Employment and Income Composition.....	6
4.	METHODOLOGY AND FEE CALCULATION	9
	Employment Categories	9
	Occupational Category and Wage Distribution.....	9
	Distribution of Workers by Land Use Type	12
	Employment Densities	12
	Household Formation.....	12
	Housing Development Costs and Affordability Gap	15
	Fee Calculation	17

Appendices:

- APPENDIX A: Assumptions and Sources
 - APPENDIX B: Occupation Distribution by Employment
-

List of Tables

Table 1	Summary of Maximum Allowable Fees and Adopted Fee Levels	3
Table 2	Pleasanton Demographic Factors (2000-2016)	5
Table 3	Residential Permit Activity Trends in Pleasanton.....	6
Table 4	Alameda County Income Category Definitions (2015)	7
Table 5	Pleasanton Top Employers (2017)	8
Table 6	Employment Category Descriptions	10
Table 7	Adjustment Factors for Converting National Wages to Oakland-Fremont-Hayward Metropolitan Division Wages.....	10
Table 8	Illustration of Employees' Household Income Calculation.....	11
Table 9	Income Distribution of Worker Households by Employment Category.....	13
Table 10	Household Generation Rates by Employment Category	14
Table 11	Housing Affordability Gap.....	16
Table 12	Fee Calculation - Hotels/Lodging	18
Table 13	Fee Calculation – Retail.....	19
Table 14	Fee Calculation – Office/Light Industrial/R&D.....	20

1. INTRODUCTION AND EXECUTIVE SUMMARY

Background

Incorporated in 1894, the City of Pleasanton (City) adopted its first low income housing fee in the late 1970s. The fee was amended in 1989 to apply to all residential and commercial development. Consistent with Assembly Bill (AB) 1600, the fee has been updated in 1998 and 2003 with the current schedule based on annual CPI adjustments made since the last adoption. While the nexus fee was updated in 2012 along with a new Housing Element, the City decided to update the fee simultaneously with other development impact fees. The current report is an update to the 2012 Nonresidential Development Housing Linkage Fee Nexus Study. It has been updated along with the Affordable Housing Impact Fee Reports for for-sale and rental housing as well as the Capital Facilities Development Impact Nexus Fee report, all produced under separate covers. The technical analysis presented in this report was completed in 2016 and is largely based on the 2015 numbers.

This report is designed to update and re-affirm an affordable housing impact fee for new nonresidential development in Pleasanton.

Purpose

Economic & Planning Systems, Inc. (EPS) was retained by the City of Pleasanton to conduct a nexus study that quantifies the relationship between the growth in nonresidential land uses and the demand for and cost of affordable housing for the local workforce. As a development impact fee, the nonresidential linkage fee (fee) can only be charged to new development and must be based on the impact of new development on the need for resources to subsidize the development of new affordable housing. The purpose of this report is to provide the nexus (or reasonable relationship) between new nonresidential development that occurs in the City and the need for additional affordable housing as a result of this new development.

The fee generated by this program will be deposited in the City's Lower Income Housing Fund, to provide assistance for production, acquisition of at-risk units, or rehabilitation of affordable housing.

Authority

This study serves as the basis for requiring development impact fees under AB 1600 legislation, as codified by the Mitigation Fee Act (California Government Code sections 66000 *et seq.*). This section of the Mitigation Fee Act sets forth the procedural requirements for establishing and collecting development impact fees. These procedures require that a reasonable relationship, or nexus, must exist between a governmental exaction and the purpose of the condition.

Required Nexus Findings

- Identify the purpose of the fee.
- Identify how the fee is to be used.
- Determine how a reasonable relationship exists between the fee's use and the type of development project on which the fee is imposed.
- Determine how a reasonable relationship exists between the demand for the affordable housing and the type of development project on which the fee is imposed.
- Demonstrate a reasonable relationship between the amount of the fee and the cost of the public benefit attributable to the development on which the fee is imposed.

In 1991, the Ninth Circuit U.S. Court of Appeals upheld the City of Sacramento's nonresidential linkage fee.¹ In that case, the court found that the City's fee program "substantially advanced a legitimate interest." EPS is using a similar methodology to the nexus study reviewed in that case to develop the City's fee program.

Summary

As new employment-generating development continues to occur in the City, additional affordable housing will be required to house a portion of the new lower wage workforce. The cost to construct new housing units is higher than can be supported by the rents that many workers will be able to pay. The difference between costs and affordable rent levels is considered an "affordability gap." The costs allocated to new nonresidential development through this fee reflect this affordability gap that would need to be filled in order to provide housing for additional workforce demanded by nonresidential development.

Table 1 summarizes the maximum justifiable fee by employment category and a recommended fee range for adoption. EPS recommends a fee that is less than the maximum justifiable fee and, therefore, presents fees that range from 10 percent to 20 percent of the maximum fee (plus a nominal administrative charge). The lower fee reflects the fact that affordable housing development is not the sole responsibility of nonresidential developers.

¹ *Commercial Builders of Northern California v. City of Sacramento*, 941 F2d 872 (1991).

Table 1 Summary of Maximum Allowable Fees and Adopted Fee Levels

Land Use	Maximum Fee	Adopted Fee (1)
	<i>per sq. ft.</i>	<i>per sq. ft.</i>
Hotels/Motel	\$49.69	\$3.15
Retail	\$211.08	\$4.56
Office/Light Industrial/R&D		
Office	\$82.56	\$7.61
Industrial	\$82.56	\$12.64

(1) Unanimously adopted by City Council on 09.18.18 based on the recommendations by City Staff (Alternative 3).

Source: Economic & Planning Systems, Inc.

Sources

To estimate the fee, EPS relied on numerous sources of data, including the following:

- U.S. Bureau of Labor Statistics (BLS) "July 2011 National Industry-Specific Occupational Employment and Wage Estimates".
- State Department of Housing and Community Development (HCD) annual income limits for 2013.
- U.S. Census Bureau American Community Survey (ACS) 2011 estimate.
- Input from City of Pleasanton's staff.

These and other data sources are identified on the tables provided throughout this report. In addition, EPS generated development and operating cost assumptions by reviewing pro forma materials provided for this and other EPS assignments by various affordable housing developers active in the Bay Area, as well as documents such as the City of Pleasanton's Housing Element.

Organization of Report

Following this **Introduction and Executive Summary**, this study includes the following chapters:

- **Chapter 2** presents the nexus findings based on the methodology.
- **Chapter 3** provides a general discussion of the City's development trends and employment composition.
- **Chapter 4** describes the methodology used to calculate the fee.

2. FINDINGS FOR FEE PROGRAM

Purpose of Fee

The fee program developed through this Nexus Study would fund the development and preservation of affordable housing projects in the City as required by the increase in local lower wage workers employed by new nonresidential construction projects. The businesses that occupy new nonresidential buildings will demand employees, many of whom will have difficulty finding suitable local housing they can afford.

Use of Fee

The fee will be deposited in the City's Lower Income Housing Fund. The funds are used to provide assistance for production, acquisition of at-risk units, or rehabilitation of affordable housing. The fee also will fund the studies and administration to support the fee program.

Relationship between Use of Fee and Type of Development

The development of new nonresidential land uses in the City will generate need for additional workers. The wages of a significant portion of the new employees will be inadequate to support sufficient rent prices to attract residential developers to provide housing opportunities without further subsidy. The fee will be used to help to fill the "affordability gap" for housing development and increase the number of homes available for the local workforce.

Relationship between Demand for Affordable Housing and Type of Project

The City and EPS have identified three employment categories for which a separate fee has been calculated. The proportion of lower wage workers and the number of square feet per employee for each employment category has been assessed to ensure a proper nexus has been established.

Relationship between Amount of Fee and Cost of Public Benefit Attributed to New Development

EPS estimated the gap between the cost of developing new rental housing and the achievable value of the new rental units based on different income levels. To estimate the maximum fee, this gap was then multiplied by the number of lower wage workers anticipated by the new development projects and the number of households of various income categories those workers are likely to form. As the fee is one of several mechanisms for generating resources for or reducing the cost of housing development, the EPS-recommended fee is 10 to 20 percent of the maximum calculated fee.

3. EMPLOYMENT AND HOUSING TRENDS

Recent Development Trends

Pleasanton is located in the Tri-Valley region of the San Francisco Bay Area at the crossing of two major freeways, I-680 and I-580. Its 2016 population was about 77,000 residents and roughly 63,000 jobs. The City's evolution into a regional hub for single-family ownership housing, office, and retail space has been driven by its strategic location, high quality of life, BART expansion, and effective land use policies.

Pleasanton experienced significant job growth during the 1980s with the creation of Hacienda and Bernal Corporate Park, among others, while maintaining an active downtown. Since 2000, the City's population grew by 18 percent, as shown in **Table 2**. Average annual population growth has been consistent at about 1.0 percent a year. The City's incomes, however, have continued to increase, partially due to continuous attraction of higher income households attracted to the area by its high quality of life. The vast majority of new housing construction in the City has remained as single-family development during the early 2000s, reinforcing the lower density orientation of Pleasanton's housing stock. However, as shown in **Table 3**, permitting data suggests a notable shift to higher density multifamily units in recent years.

Table 2 Pleasanton Demographic Factors (2000-2016)

Item	Year			Change					
	2000	2010	2016	2000-2010		2010-2016		2000-2016	
				Total	Avg. Annual Rate	Total	Avg. Annual Rate	Total	Avg. Annual Rate
Population	63,654	70,285	75,916	6,631	1.0%	5,631	1.3%	12,262	1.1%
Median Household Income (\$2018)	\$90,859	\$115,188	\$130,170	\$24,329	2.4%	\$14,982	2.1%	\$39,311	2.3%

Sources: DOF; ACS; EPS

Table 3 Residential Permit Activity Trends in Pleasanton

Year	Single-Family	Multifamily	Total
2003	253	0	253
2004	237	108	345
2005	210	0	210
2006	136	41	177
2007	47	5	52
2008	32	3	35
2009	14	0	14
2010	42	0	42
2011	41	0	41
2012	89	293	382
2013	180	727	907
2014	78	255	333
2015	94	958	1052
2016	<u>72</u>	<u>259</u>	<u>331</u>
Total	1,525	2,649	4,174

Sources: SOCDs Database from the U.S. Department of Housing and Urban Development; EPS.

Employment and Income Composition

This report provides information regarding income categories as commonly defined by State and federal agencies that administer affordable housing programs. **Table 4** presents the income categories that are relevant for this fee program. EPS uses acronyms in several of the tables provided and those acronyms are also included in **Table 4** for reference.

Table 4 Alameda County Income Category Definitions (2015)

Affordability Category	Acronym	Percentage of County Median	Maximum Income Threshold 3-person household
Very Low Income [1]	VLI	0% - 50%	\$42,100
Low Income	LI - 60	51% - 60%	\$49,550
Low Income	LI - 80	61% - 80%	\$64,450
Median Income	Median	80% - 100%	\$84,150
Moderate Income	Moderate	101% - 120%	\$101,000

[1] The "Very Low Income" category also captures a combination of extremely low (0% to 30% of median incomes) and very low income (31% to 50% of median incomes) in Alameda County.

Source: California HCD and EPS.

Many of the jobs in Pleasanton generate higher-end incomes relative to the broader region. Kaiser Permanente is the largest employer in the City with nearly 3,300 jobs, followed by Safeway and Oracle (see **Table 5**). A large portion of Safeway jobs are office activities rather than retail stores because of its Pleasanton corporate headquarters location. The City has also recently attracted Workday to the City, which has been expanding its operation over the last few years. Even with many jobs for higher income workers, the City still has many jobs for more modest wages in its diverse employment base. According to the U.S. Census Bureau's "On The Map", about 36 percent of all jobs located in the City of Pleasanton in 2015 paid less than \$40,000 per year, which equates to the "very low income" level for the County.

Table 5 Pleasanton Top Employers (2017)

Rank	Employer	Employees	Year Established
1	Kaiser Permanente	3,271	1983
2	Safeway	2,600	1996
3	Oracle	1,650	2005
4	Workday Incorporated	1,456	2009
5	Pleasanton Unfired School District	1,290	na
6	Macy's	949	1980
7	Valley Care Medical Center	942	1991
8	Clorox Service Company	694	1973
9	State Fund - Compensation Insurance	650	2007
10	E M C Corporation	549	2004
11	Thoratec Corporation	510	1999
12	Roche Molecular Systems Inc.	510	1998
13	City of Pleasanton	460	na
14	Blackhawk Network	414	2005
15	Ellie Mae	385	2000
16	Wal-Mart	380	1995

Source: City of Pleasanton; EPS.

Pleasanton's desirability can be attributed to a variety of community attributes, including good schools, low crime rate, recreational amenities, and an attractive, pedestrian-friendly Downtown. Pleasanton's evolution as a higher-end community with a strong market orientation toward single-family, ownership, and in many cases "executive" housing, combined with its robust job market offering a diverse mix of professions and pay levels, contribute to high housing costs. In these types of communities, local workers compete for a limited housing supply with retirees who may have built substantial equity in their prior homes or higher income households who have more flexibility regarding where they choose to live. As a result of this type of demand on the City's housing supply, it will be difficult for new lower wage workers to find suitable housing in the City without a program designed to bring the cost of housing down to an affordable range.

4. METHODOLOGY AND FEE CALCULATION

Employment Categories

Employment categories utilized in this analysis are displayed in **Table 6** along with a description of the types of businesses that are included in each category. In general, each employment category is intended to be associated with a particular type of building or land use, to which the fees can be applied. EPS recommends consolidation of office, light industrial and R&D into one category, resulting in three employment categories. Consolidation of these land uses reflects the notion that their tenant types are generally interchangeable and might occupy the same general type of building space. For example, an R&D business may occupy office space or light industrial space, and a single “flex” commercial building may house businesses of each of these three types. Other employment categories are more discretely associated with a particular type of building, and thus the appropriate fees for such buildings are easier to determine when a building is proposed and constructed.

Occupational Category and Wage Distribution

EPS used U.S. Bureau of Labor Statistics (BLS) *National Industry-Specific Occupational Employment and Wage Estimates* for 2014 to estimate the wages earned by employees in industry sectors related to the employment categories. This BLS data set includes wage data at both the national and Metropolitan Division (MD). The Oakland-Fremont-Hayward MD is the geography of the East Bay. Wage data for the MD are provided for occupations for all industries in aggregate, while national-level wage data are provided by industry sector. To account for regional wage disparities, EPS calculated wage adjustment factors as displayed in **Table 7**. EPS applied these adjustment factors to the nationwide income level data by industry sector to estimate the wages for the East Bay.

EPS used BLS nationwide data regarding industries and occupation categories to estimate the proportion of occupations likely to be represented under each employment category. For example, EPS evaluated the occupation categories for the lodging industry to determine the proportional distribution of occupations for the employment category “Hotels/Lodging.” North American Industry Classification System (NAICS) sector 721000 (“Accommodation”) shows that nationwide 4.2 percent of the jobs in the lodging industry are taken by managers while 28.6 percent are in the category of buildings and grounds cleaning and maintenance (see **Table 8** and **B-1**). The occupational distribution for all designated employment categories are provided in **Appendix B**.

The wages of each occupation were multiplied by 1.67, the average number of workers per working household in the City according to Census Bureau’s American Community Survey data. The resulting figure is assumed to represent the annual household wage. Also according to the American Community Survey, the average household size in Pleasanton is 2.89 and the average family size is 3.25 people. Rounding these average household and family sizes, EPS compared

Table 6 Employment Category Descriptions

Employment Category	Description and Examples
Hotels/Motel	Temporary housing for non-residents. Examples include resorts, hotels, motels, and bed and breakfast inns.
Retail	Businesses selling merchandise, entertainment, or personal services to the general public. Examples include grocery stores, drug stores, clothing stores, general merchandise stores, restaurants and bars, beauty salons, movie theaters, auto sales and rentals, and gas stations.
Office/Light Industrial/R&D	Employers engaged in business activity with limited direct access from the general public, businesses focused on assembling, distributing, or repairing products, and businesses focused on the testing and invention of new materials, products, or processes. Examples include finance, insurance, real estate, law, engineering; and warehouses, auto repair, and self-storage facilities.

Table 7 Adjustment Factors for Converting National Wages to Oakland-Fremont-Hayward Metropolitan Division Wages

Occupation Category	US Average Wage	East Bay Metro Division Avg. Wage	East Bay as % of US Average
Management	\$112,490	\$131,090	116.5%
Business and Financial Operations	\$72,410	\$83,830	115.8%
Computer and Mathematical Science	\$83,970	\$100,990	120.3%
Architecture and Engineering	\$81,520	\$98,440	120.8%
Life, Physical, and Social Science	\$70,070	\$86,880	124.0%
Community and Social Services	\$45,310	\$55,180	121.8%
Legal Occupations	\$101,110	\$110,790	109.6%
Education, Training and Library	\$52,210	\$59,830	114.6%
Arts, Design, Entertainment, Sports, and Media	\$55,790	\$58,850	105.5%
Healthcare Practitioner and Technical	\$76,010	\$105,920	139.4%
Healthcare Support	\$28,820	\$39,090	135.6%
Protective Services	\$43,980	\$56,560	128.6%
Food Preparation and Serving	\$21,980	\$23,270	105.9%
Buildings and Grounds Cleaning and Maintenance	\$26,370	\$32,410	122.9%
Personal Care and Service	\$24,980	\$27,320	109.4%
Sales and Related Occupations	\$38,660	\$44,540	115.2%
Office and Administrative Support	\$35,530	\$43,490	122.4%
Farming, Fishing and Forestry	\$25,160	\$28,020	111.4%
Construction and Extraction	\$46,600	\$61,490	132.0%
Installation, Maintenance, and Repair	\$45,220	\$55,260	122.2%
Production	\$35,490	\$40,900	115.2%
Transportation and Material Moving	\$34,460	\$41,870	121.5%

Sources: BLS *National Industry-Specific Occupational Employment and Wage Estimates*, May 2014.

Table 8
Illustration of Employees' Household Income Calculation
Pleasanton Housing Impact Fee, EPS #151111

Item	Source	Example
Employment Category	City of Pleasanton and EPS	Hotels/Lodging
Industry	Bureau of Labor Statistics (BLS)	Accommodation (NAICS Code 721000)
Occupation Category	BLS	Buildings and Grounds Cleaning and Maintenance
Nationwide Median Income for Occupation	BLS (2014)	\$23,530
Regional Wage Adjustment Factor for Occupation	BLS and EPS	122.9%
Median Wage Estimate for East Bay Metro	BLS and EPS	\$28,920
Workers per Household	American Community Survey 2014 est.	1.67
Median Income per Household	Workers per HH Multiplied by Med. Annual Wage	\$48,180
Income Category for 3-person Family	Dept. of Housing and Community Development (HCD)	Low Income - (LI-60)

Source: EPS.

the estimated household wage with the income thresholds for a 3-person household to identify the income category into which each occupation would fall. An example of this calculation is illustrated in **Table 8**. Key assumptions and their sources are summarized in **Appendix A**.

Distribution of Workers by Land Use Type

After identifying income ranges for each occupation and employment category, EPS summed the percentages of occupations by income bracket. These proportions of anticipated household income brackets by employment category are presented in **Table 9**.

As shown, Retail and Hotels/Lodging are expected to generate significant numbers of households at the low- and very-low-income levels, while nearly all jobs in the Office/Light Industrial/R&D uses are expected to yield household incomes at or above Median income levels.

Employment Densities

Commercial operations have varying levels of employment requirements. Retail space, for example, does not require a significant number of employees but do require a significant amount of building square feet. Office space, on the other hand, may not require a significant amount of square footage, but often require a significant number of employees. The number of building square feet or acres of property anticipated for a certain number of employees is termed the “employment density” of each employment category.

Based on its prior assumptions generated with input from City staff for the Pleasanton General Plan Update Fiscal Impact Analysis study, EPS estimated the employment density for each of the employment categories as shown in **Table 10**. Using those employment density assumptions, EPS estimated the number of employees that would be demanded for a 100,000-square foot building.

Household Formation

EPS then estimated the number of households those employees would represent. First, EPS adjusted for the fact that younger workers may not be at the age to form their own households. Data from the Bureau of Labor Statistics indicate that young workers age 16 to 19 represent only about 3.2 percent of the overall workforce. However, the majority of these young workers are in the retail/restaurant industries, where they represent 10.1 percent of the overall industry employment. EPS has assumed that these young workers age 16 to 19 would not form their own households. Second, EPS has assumed that, on average, new households formed in response to growing employment opportunities would have 1.67 wage-earning workers. This assumption is based on the Census Bureau’s American Community Survey 2014 data regarding the number of Pleasanton residents who are “workers” in households that have workers. The combination of these adjustments results in the assumption that nearly six households are formed for every ten new employees.

Table 9
Income Distribution of Worker Households by Employment Category [1]
Pleasanton Housing Impact Fee, EPS #151111

Employment Category	VLI	LI - 60	LI - 80	Median	Moderate	Above Mod
Hotels/Motel	0.0%	63.2%	22.1%	7.7%	2.3%	4.7%
Retail	36.1%	0.9%	54.5%	3.3%	0.2%	5.0%
Office/Light Industrial/R&D	0.4%	0.4%	5.5%	44.5%	5.9%	43.3%

[1] Designation of household income is based on a 3-person household and 1.67 workers per household, both based on American Community Survey data.

Source: BLS, HCD, EPS, and American Community Survey 2011.

Table 10
Household Generation Rates by Employment Category
Pleasanton Housing Impact Fee, EPS #151111

Employment Category	Sq.Ft. per Worker [1]	Total Workers per 100k Sq.Ft.	% of Workers Forming Households [2]	Total Households per 100k Sq.Ft. [3,4]	Households by Income Level [4]					
					VLI	LI - 60	LI - 80	Median	Moderate	Above Mod
Hotels/Motel	2,000	50	96.8%	29	0	18	6	2	1	1
Retail	440	227	89.9%	122	44	1	67	4	0	6
Office/Light Industrial/R&D	400	250	96.8%	145	1	1	8	65	9	63

[1] See **Appendix Table A-1** for sources on employment densities in different land uses.

[2] BLS data indicates that 3.2% of workers are age 16-19 in the U.S., however, the average is higher in the retail and restaurants industry. EPS assumes that 10.1% of workers are age 16-19 based on the National Retail Federation data. This age group is assumed to not form their own households due to a young age.

[3] Assumes 1.67 employees per household based on the Census data for Pleasanton.

[4] Figures are rounded to nearest whole number.

Sources: BLS, National Retail Federation, US Census, and EPS.

Housing Development Costs and Affordability Gap

EPS has assumed that the average type of housing for Pleasanton's lower-income workers would be a 2-bedroom apartment unit in a three-story walk-up building. This prototype was selected for several reasons. First, the average size of a Pleasanton household is roughly three people, and households of this size are appropriately housed in 2-bedroom units, according to State law (California Health and Safety Code Section 50025.5). Second, the density of walk-up apartments is typically around 30 units per acre, and Pleasanton staff indicated that this density would be generally appropriate and acceptable in the City. Third, this building prototype is also generally cost-effective to construct, as it makes efficient use of land and does not involve expensive construction materials or techniques. Finally, EPS assumed the units would be rented rather than for-sale because the financing gap for rental units is lower than for for-sale units.

Development Cost Assumptions

Affordable housing development costs include land costs, direct costs (e.g., labor and materials), and indirect or "soft" costs (e.g., architecture, entitlement, marketing, etc.). For rental projects, operating costs also must be incorporated into the analysis. Data from recent East Bay developments and recent Pleasanton land transactions have been combined with EPS's information from various market-rate and affordable housing developers to estimate appropriate development cost assumptions for use in Pleasanton. These assumptions are shown on **Table 11**.

Revenue Assumptions

To calculate the values of the affordable units, assumptions must be made regarding the applicable income level (moderate, median, and low) and the percentage of income spent on housing costs. In addition, translating these assumptions into unit prices and values requires estimates of operating expenses, capital reserves, and capitalization rates. The following assumptions were used in these calculations:

- *Income Levels*—This analysis estimates the subsidy required to produce units for households earning 50, 60, 80, 100, and 120 percent of Area Median Income for a three-person household. In 2015, AMI in Alameda County for these households was \$84,150, as shown in the California Department of Housing and Community Development's (HCD's) income limits chart.
- *Percentage of Gross Household Income Available for Housing Costs*—HCD standards on overpaying for rent indicate that households earning less than 80 percent of AMI should pay no more than 30 percent of their gross income on housing costs. For this analysis, EPS has assumed that all households shall spend 30 percent of their gross income on housing costs.
- *Operating Costs for Rental Units*—The analysis assumes that apartment operators incur annual operating costs of \$6,200 per unit, which include the cost of utilities, for units affordable at 80 percent of AMI or below. EPS has assumed the units for median income households and above would have similar operating costs but would be potentially operated by for-profit building managers and owners and thus also subject to property taxes.

Table 11
Housing Affordability Gap
Pleasanton Housing Impact Fee, EPS #151111

Item	2-Story Multifamily With Surface Parking				
	Very Low Income (50% AMI)	Low Income (60% AMI)	Low Income (80% AMI)	Median Income (100% AMI)	Moderate Income (120% AMI)
Development Program Assumptions					
Density/Acre	30	30	30	30	30
Average Gross Unit Size	1,100	1,100	1,100	1,100	1,100
Average Net Unit Size	950	950	950	950	950
Average Number of Bedrooms	2	2	2	2	2
Average Number of Persons per Household	3	3	3	3	3
Parking Spaces/Unit [1]	2.00	2.00	2.00	2.00	2.00
Cost Assumptions					
Land/Acre [2]	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Land/Unit	\$66,667	\$66,667	\$66,667	\$66,667	\$66,667
Direct Construction Costs/Gross SF [3]	\$215	\$215	\$215	\$215	\$215
Direct Construction Costs/Unit	\$236,500	\$236,500	\$236,500	\$236,500	\$236,500
Parking Construction Costs/Space	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Parking Construction Costs/Unit	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Subtotal, Direct Costs/Unit	\$242,500	\$242,500	\$242,500	\$242,500	\$242,500
Indirect Costs as a % of Direct Costs [4]	35%	35%	35%	35%	35%
Indirect Costs/Unit	\$84,875	\$84,875	\$84,875	\$84,875	\$84,875
Total Cost/Unit (rounded)	\$394,000	\$394,000	\$394,000	\$394,000	\$394,000
Maximum Supported Unit Value					
Household Income [5]	\$42,100	\$49,550	\$64,450	\$84,150	\$101,000
Income Available for Housing Costs/Year [6]	\$12,630	\$14,865	\$19,335	\$25,245	\$30,300
Operating Expenses per Unit/Year [7]	\$6,200	\$6,200	\$6,200	\$10,700	\$10,700
Net Operating Income	\$6,430	\$8,665	\$13,135	\$14,545	\$19,600
Capitalization Rate	5.0%	5.0%	5.0%	5.0%	5.0%
Total Supportable Unit Value	\$128,600	\$173,300	\$262,700	\$290,900	\$392,000
Financing Gap	\$265,400	\$220,700	\$131,300	\$103,100	\$2,000

[1] Reflects an average as apartments with up to 2 bedrooms are required to provide a minimum of 2 spaces for the first 4 units and 1.5 spaces for each additional unit. In addition, visitor parking ratio of 1 space for each 7 units is also required.

[2] The land costs rate based on recent residential land transactions in Pleasanton.

[3] Direct construction costs based upon EPS findings in Pleasanton. Includes costs for labor and materials. Assumes Direct Construction Costs for rentals are \$10/SF less than for-sale developments.

[4] Includes costs for architecture and engineering; entitlement and fees; project management, marketing, commissions, and general administration; financing and charges; insurance; and contingency.

[5] Based on HCD 2015 income limits for Alameda County.

[6] Assumes housing costs to be 30% of gross household income.

[7] Operating expenses based upon previous findings in other Bay Area jurisdictions, and include costs of tenants' utilities. Units for median- and moderate-income households are assumed to be built as for-profit projects and thus subject to property tax; rounded.

Sources: Alameda County housing developers; Department of Housing and Urban Development; Economic & Planning Systems, Inc.

Affordability Gap Results

Table 11 shows the subsidies for construction of for-rent apartments for households at various income levels. For all income categories, the cost of constructing the unit is higher than the value of the unit. This is considered the “affordability gap,” and serves as the basis for calculating the subsidies required to provide housing for the employees who will be working in new nonresidential development in Pleasanton. The funding gap for units affordable to median and moderate income households are lower, suggesting that a higher share of the new construct cost could be supported without subsidy.

Fee Calculation

Tables 12 through **14** provide the maximum nonresidential housing fee calculations for each of the three employment categories. Assuming a 100,000-square foot nonresidential building prototype for each employment category, the number of new households by income category is multiplied by the per-unit affordability gap to determine the level of subsidy required to provide housing for the new worker households. The adjusted affordability gap is then divided by the size of the assumed building or land to determine a maximum fee per building square foot.

While the City has the option of adopting fees up to the maximum levels calculated, EPS does not recommend the City adopt the entire maximum fee. There are several factors compounding the issue of housing affordability; insufficient wages relative to development costs constitutes just one factor. Market forces, land use regulations, construction costs, and entitlement costs also impact housing affordability. In addition, revenue generated through this fee program is just one source of potential subsidy funds to help finance affordable housing projects. Finally, adoption of the maximum fees for certain employment categories would represent a very large addition to the costs of development, and could hamper the City's economic development objectives. EPS, therefore, recommends that the linkage fee adopted be 10 to 20 percent of the maximum calculated fee. Other California communities—including Sacramento, Rohnert Park, Walnut Creek, Sunnyvale, and the County of Sonoma, among others—have made similar reductions to the maximum allowable fee when adopting their fee program, for reasons such as those cited above.

Table 12
Fee Calculation - Hotels/Lodging
Pleasanton Housing Impact Fee, EPS #151111

Item	Worker Households per 100k sq. ft.	Affordability Gap per household	Total Gap
<i>Table references:</i>	<i>Table 10</i>	<i>Table 11</i>	
Aggregate Financing Gap per 100K Sq. Ft			
Affordability Level			
VLI	0	\$265,400	\$0
LI - 60	18	\$220,700	\$3,972,600
LI - 80	6	\$131,300	\$787,800
Median	2	\$103,100	\$206,200
Moderate	1	\$2,000	\$2,000
Above Moderate	<u>1</u>	<u>\$0</u>	<u>\$0</u>
Total	28	n/a	\$4,968,600
<hr/>			
Fee Calculation		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$4,968,600
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$49.69
Potential Fee Range			
10% of Maximum		<i>d = c * 10%</i>	\$4.97
15% of Maximum		<i>e = c * 15%</i>	\$7.45
20% of Maximum		<i>f = c * 20%</i>	\$9.94
Fee Program Administration			
10% of Maximum		<i>g = d * 3%</i>	\$0.15
15% of Maximum		<i>h = e * 3%</i>	\$0.22
20% of Maximum		<i>i = f * 3%</i>	\$0.30
Potential Fee Range including Administrative Fee			
10% of Maximum		<i>j = d + g</i>	\$5.12
15% of Maximum		<i>k = e + h</i>	\$7.68
20% of Maximum		<i>l = f + i</i>	\$10.24

Table 13
Fee Calculation - Retail
Pleasanton Housing Impact Fee, EPS #151111

Item	Worker Households per 100k sq. ft.	Affordability Gap per household	Total Gap
<i>Table references:</i>	<i>Table 10</i>	<i>Table 11</i>	
Aggregate Financing Gap per 100K Sq. Ft			
Affordability Level			
VLI	44	\$265,400	\$11,677,600
LI - 60	1	\$220,700	\$220,700
LI - 80	67	\$131,300	\$8,797,100
Median	4	\$103,100	\$412,400
Moderate	0	\$2,000	\$0
Above Moderate	<u>6</u>	<u>\$0</u>	<u>\$0</u>
Total	122	n/a	\$21,107,800
<hr/>			
Fee Calculation		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$21,107,800
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$211.08
Potential Fee Range			
10% of Maximum		<i>d = c * 10%</i>	\$21.11
15% of Maximum		<i>e = c * 15%</i>	\$31.66
20% of Maximum		<i>f = c * 20%</i>	\$42.22
Fee Program Administration			
10% of Maximum		<i>g = d * 3%</i>	\$0.63
15% of Maximum		<i>h = e * 3%</i>	\$0.95
20% of Maximum		<i>i = f * 3%</i>	\$1.27
Potential Fee Range including Administrative Fee			
10% of Maximum		<i>j = d + g</i>	\$21.74
15% of Maximum		<i>k = e + h</i>	\$32.61
20% of Maximum		<i>l = f + i</i>	\$43.48

Table 14
Fee Calculation - Office/Light Industrial/R&D
Pleasanton Housing Impact Fee, EPS #151111

Item	Worker Households per 100k sq. ft.	Affordability Gap per household	Total Gap
<i>Table references:</i>	<i>Table 10</i>	<i>Table 11</i>	
Aggregate Financing Gap per 100K Sq. Ft			
Affordability Level			
VLI	1	\$265,400	\$265,400
LI - 60	1	\$220,700	\$220,700
LI - 80	8	\$131,300	\$1,050,400
Median	65	\$103,100	\$6,701,500
Moderate	9	\$2,000	\$18,000
Above Moderate	<u>63</u>	<u>\$0</u>	<u>\$0</u>
Total	147	n/a	\$8,256,000
<hr/>			
Fee Calculation		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$8,256,000
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$82.56
Potential Fee Range			
10% of Maximum		<i>d = c * 10%</i>	\$8.26
15% of Maximum		<i>e = c * 15%</i>	\$12.38
20% of Maximum		<i>f = c * 20%</i>	\$16.51
Fee Program Administration			
10% of Maximum		<i>g = d * 3%</i>	\$0.25
15% of Maximum		<i>h = e * 3%</i>	\$0.37
20% of Maximum		<i>i = f * 3%</i>	\$0.50
Potential Fee Range including Administrative Fee			
10% of Maximum		<i>j = d + g</i>	\$8.50
15% of Maximum		<i>k = e + h</i>	\$12.76
20% of Maximum		<i>l = f + i</i>	\$17.01



APPENDIX A:
Assumptions and Sources

Table A-1
Assumptions and Sources
Pleasanton Housing Impact Fee, EPS #151111

Item	Total	Unit	Source
Demographic Assumptions			
Workers per Household with Workers	1.67 persons		American Community Survey Estimate 2010-2014
Persons per Household	2.89 persons		American Community Survey Estimate 2014
Persons per Family	3.25 persons		American Community Survey Estimate 2014
Employment Density Assumptions			
Hotels/Motel	2,000 sq. ft. per employee		City of Pleasanton/EPS
Retail	440 sq. ft. per employee		City of Pleasanton/EPS
Office/Light Industrial/R&D [1]	400 sq. ft. per employee		City of Pleasanton/EPS

[1] Reflects an average of various employment densities with office uses likely to generate significantly higher employment densities than light industrial uses.

Sources: American Community Survey, City of Pleasanton, and EPS.



APPENDIX B:
Occupation Distribution by Employment

Table B-1
Occupation and Wage Distribution - Hotels/Lodging
Pleasanton Housing Impact Fee, EPS #151111

Hotels/Lodging

Occupation Category	Lodging [1]					
	US Total Jobs by Occ. in Industry	US Avg. Wage by Occ. in Industry	East Bay Wage Est. [2]	% of Industry Jobs in Occ. Category	HH Income at 1.67 workers/HH	Income Category
Management	81,230	\$75,000	\$87,401	4.22%	\$145,610	Above Mod
Business and Financial Operations	27,890	\$52,290	\$60,537	1.45%	\$100,854	Moderate
Computer and Mathematical Science	2,820	\$58,330	\$70,153	0.15%	\$116,875	Above Mod
Architecture and Engineering	400	\$64,870	\$78,334	0.02%	\$130,505	Above Mod
Life, Physical, and Social Science	130	\$54,650	\$67,761	0.01%	\$112,889	Above Mod
Community and Social Services	150	\$36,710	\$44,707	0.01%	\$74,481	Median
Legal Occupations	100	\$102,360	\$112,160	0.01%	\$186,858	Above Mod
Education, Training and Library	820	\$35,900	\$41,140	0.04%	\$68,539	Median
Arts, Design, Entertainment, Sports, and Media	7,960	\$48,140	\$50,780	0.41%	\$84,600	Moderate
Healthcare Practitioner and Technical	490	\$52,760	\$73,521	0.03%	\$122,486	Above Mod
Healthcare Support	8,350	\$41,030	\$55,651	0.43%	\$92,715	Moderate
Protective Services	44,340	\$29,310	\$37,694	2.30%	\$62,798	LI - 80
Food Preparation and Serving	479,760	\$26,860	\$28,436	24.94%	\$47,375	LI - 60
Buildings and Grounds Cleaning and Maintenance	549,730	\$23,530	\$28,920	28.58%	\$48,180	LI - 60
Personal Care and Service	148,690	\$26,700	\$29,201	7.73%	\$48,649	LI - 60
Sales and Related Occupations	52,700	\$36,550	\$42,109	2.74%	\$70,154	Median
Office and Administrative Support	356,770	\$26,240	\$32,119	18.54%	\$53,510	LI - 80
Farming, Fishing and Forestry	640	\$27,150	\$30,236	0.03%	\$50,374	LI - 80
Construction and Extraction	3,840	\$47,580	\$62,783	0.20%	\$104,597	Above Mod
Installation, Maintenance, and Repair	95,210	\$34,590	\$42,270	4.95%	\$70,422	Median
Production	37,610	\$25,680	\$29,595	1.95%	\$49,305	LI - 60
Transportation and Material Moving	24,180	\$25,170	\$30,582	1.26%	\$50,950	LI - 80
Total or Weighted Average	1,923,810		\$33,970	100.00%	\$56,594	

"dist_t1"

[1] Includes NAICS Sector: 721000 - Accommodation.

[2] Adjusted using factors calculated in Table 7.

Source: BLS and EPS.

Table B-2
Occupation and Wage Distribution - Retail
Pleasanton Housing Impact Fee, EPS #151111

Retail

Occupation Category	RETAIL [1]					
	US Total Jobs by Occ. in Industry	US Avg. Wage by Occ. in Industry	East Bay Wage Est. [2]	% of Industry Jobs in Occ. Category	HH Income at 1.67 workers/HH	Income Category
Management	665,510	\$82,639	\$96,303	2.38%	\$160,441	Above Mod
Business and Financial Operations	185,220	\$60,223	\$69,721	0.66%	\$116,155	Above Mod
Computer and Mathematical Science	51,290	\$66,408	\$79,868	0.18%	\$133,061	Above Mod
Architecture and Engineering	3,870	\$67,655	\$81,697	0.01%	\$136,108	Above Mod
Life, Physical, and Social Science	690	\$62,102	\$77,000	0.00%	\$128,282	Above Mod
Community and Social Services	2,220	\$39,082	\$47,596	0.01%	\$79,294	Median
Legal Occupations	1,530	\$81,820	\$89,653	0.01%	\$149,362	Above Mod
Education, Training and Library	10,620	\$31,952	\$36,616	0.04%	\$61,002	LI - 80
Arts, Design, Entertainment, Sports, and Media	136,520	\$35,001	\$36,920	0.49%	\$61,509	LI - 80
Healthcare Practitioner and Technical	518,140	\$63,672	\$88,726	1.85%	\$147,818	Above Mod
Healthcare Support	83,770	\$31,905	\$43,275	0.30%	\$72,096	Median
Protective Services	93,170	\$28,786	\$37,021	0.33%	\$61,676	LI - 80
Food Preparation and Serving	10,111,730	\$21,419	\$22,676	36.12%	\$37,779	VLI
Buildings and Grounds Cleaning and Maintenance	219,700	\$23,673	\$29,095	0.78%	\$48,472	LI - 60
Personal Care and Service	723,410	\$27,412	\$29,980	2.58%	\$49,947	LI - 80
Sales and Related Occupations	9,240,780	\$26,717	\$30,780	33.01%	\$51,279	LI - 80
Office and Administrative Support	2,923,950	\$27,399	\$33,537	10.45%	\$55,873	LI - 80
Farming, Fishing and Forestry	19,990	\$24,248	\$27,005	0.07%	\$44,990	LI - 60
Construction and Extraction	42,530	\$41,155	\$54,305	0.15%	\$90,472	Moderate
Installation, Maintenance, and Repair	830,320	\$38,939	\$47,585	2.97%	\$79,276	Median
Production	635,610	\$27,606	\$31,815	2.27%	\$53,003	LI - 80
Transportation and Material Moving	1,491,680	\$24,968	\$30,337	5.33%	\$50,541	LI - 80
Total or Weighted Average	27,992,250		\$31,719	100.00%	\$52,844	

[1] Includes NAICS Sectors: 44 and 45 - Retail Trade; 532000 - Rental and Leasing Services; 722000 - Food Services and Drinking Places, and 812000 - Personal and Laundry Services

[2] Adjusted using factors calculated in Table 7.

Source: BLS and EPS.

Table B-3
Occupation and Wage Distribution - Office/Light Industrial/R&D
Pleasanton Housing Impact Fee, EPS #151111

Office/Light Industrial/R&D

Occupation Category	Office/Light Industrial/R&D [1]					
	US Total Jobs by Occ. in Industry	US Avg. Wage by Occ. in Industry	East Bay Wage Est. [2]	% of Industry Jobs in Occ. Category	HH Income at 1.67 workers/HH	Income Category
Management	3,995,870	\$126,257	\$147,134	6.59%	\$245,125	Above Mod
Business and Financial Operations	4,827,800	\$75,414	\$87,308	7.96%	\$145,455	Above Mod
Computer and Mathematical Science	3,236,430	\$87,089	\$104,741	5.34%	\$174,499	Above Mod
Architecture and Engineering	2,148,450	\$81,448	\$98,354	3.54%	\$163,857	Above Mod
Life, Physical, and Social Science	695,620	\$74,767	\$92,704	1.15%	\$154,446	Above Mod
Community and Social Services	50,470	\$46,380	\$56,483	0.08%	\$94,100	Moderate
Legal Occupations	769,170	\$105,744	\$115,868	1.27%	\$193,036	Above Mod
Education, Training and Library	108,450	\$43,343	\$49,669	0.18%	\$82,748	Median
Arts, Design, Entertainment, Sports, and Media	1,048,550	\$60,956	\$64,300	1.73%	\$107,124	Above Mod
Healthcare Practitioner and Technical	485,680	\$63,663	\$88,714	0.80%	\$147,797	Above Mod
Healthcare Support	183,410	\$27,981	\$37,952	0.30%	\$63,229	LI - 80
Protective Services	900,390	\$29,156	\$37,496	1.48%	\$62,469	LI - 80
Food Preparation and Serving	221,920	\$23,551	\$24,933	0.37%	\$41,539	VLI
Buildings and Grounds Cleaning and Maintenance	2,188,210	\$26,166	\$32,159	3.61%	\$53,577	LI - 80
Personal Care and Service	232,260	\$24,893	\$27,224	0.38%	\$45,356	LI - 60
Sales and Related Occupations	4,746,920	\$60,753	\$69,993	7.83%	\$116,608	Above Mod
Office and Administrative Support	12,242,040	\$37,306	\$45,664	20.19%	\$76,077	Median
Farming, Fishing and Forestry	92,120	\$27,558	\$30,690	0.15%	\$51,130	LI - 80
Construction and Extraction	4,339,630	\$46,348	\$61,158	7.16%	\$101,889	Above Mod
Installation, Maintenance, and Repair	3,511,320	\$46,006	\$56,220	5.79%	\$93,662	Moderate
Production	7,912,280	\$35,760	\$41,212	13.05%	\$68,659	Median
Transportation and Material Moving	6,704,800	\$35,385	\$42,993	11.06%	\$71,627	Median
Total or Weighted Average	60,641,790		\$64,746	100.00%	\$107,866	

[1] Includes NAICS Sectors: 51 - Information; 52 - Finance and Insurance; 53 - Real Estate and Rental and Leasing (excluding 532000 -Rental and Leasing Services); 54 - Professional, Scientific, and Technical Services (excluding 541700 - Scientific Research and Development Services); 55 - Management of Companies and Enterprises; 561000 - Admin. and Support Services; 22 - Construction; 23 - Utilities; 31, 32, and 33 - Manufacturing; 42 - Wholesale Trade; 48 and 49 - Transportation & Warehousing; 541700 - Scientific R&D Services; and 811000 - Repair and Maintenance.

[2] Adjusted using factors calculated in Table 7.

Source: BLS and EPS.