Report

Jobs Housing Nexus Analysis
Commercial Linkage Fee Program

Prepared for:
City of Walnut Creek

Prepared by:
Keyser Marston Associates, Inc.

December 2004

TABLE OF CONTENTS

List of Tables

INTRODUCTION

The following report summarizes an analysis of the relationship between commercial development and housing demand in the City of Walnut Creek. The report has been prepared by Keyser Marston Associates, Inc. for the City of Walnut Creek, pursuant to a contract to prepare a nexus analysis and assist in developing a linkage fee program to mitigate impacts of non-residential development on affordable housing demand.

Background

The concept of a commercial linkage fee for Walnut Creek was proposed in the Housing Element adopted in October 2002. Specifically Program 13.19 of the Housing Element calls for study of the feasibility of a jobs/housing linkage fee for significant employment-generating non-residential development. Fees collected would be placed in a Housing Trust Fund to provide affordable housing for the Walnut Creek workforce.

Keyser Marston Associates was retained by the City to prepare a nexus analysis in support of a commercial linkage fee and to assist the City in the formulation of a program to meet the City's many policy objectives with respect to affordable housing and with respect to commercial development that will bear the fee burden.

Purpose

The purpose of the nexus analysis is to document the linkages among construction of new workplace buildings (such as office buildings, retail stores, and hotels), the employees that work in them, employee households, and the housing demands of these households. Since workers in all buildings represent a range of income levels, and a range of household sizes, their housing demands cover a range of affordability levels.

Different types of buildings have different employee composition, both due to the density of jobs, and different occupations, which are, tied to different income structures. This analysis examines three types of buildings: office/high tech, retail/entertainment, and hotel.

The conclusion of the nexus analysis is the number of households, or housing units in demand, by affordability level, associated with the workers in each type of building. The nexus cost is the cost to mitigate the demand for housing, or the affordability gap for worker households at each income level.

The analysis has been conducted in a manner to meet the requirements of AB 1600, as contained in the California Government Code Section 66000 and following. Such analyses are called linkage or nexus analyses.

Consistency with the Inclusionary Program

The City of Walnut Creek has also been in the process of formulating an Inclusionary Zoning Program to require residential projects to deliver a share of units at affordable rent levels or sales prices. The commercial linkage fee is a parallel program to require non-residential projects to contribute to an affordable housing fund by either paying a fee or building units.

The inclusionary zoning and the linkage fee program address the same income affordability levels as follows:

Very low income or under 50% of median income
Low income or 50% to 80% of median income
Moderate income or 80% to 120% of median income

The affordability gap information developed by Keyser Marston Associates as a foundation for the inclusionary program is also utilized in this analysis.

Report Organization

The report is organized into five sections as follows:

- Section I – presents a summary of the linkage or nexus concept and some of the key issues surrounding nexus analyses for jobs and housing.
- Section II – is an overview of the historical and projected growth of jobs and housing in the City. It is a "macro economic" overview of the relationships.
- Section III – is an analysis of jobs and housing relationships associated with individual prototype buildings. It is a "micro economic" analysis that concludes with a determination of the number of households at each income level associated with each type of building.
- Section IV – summarizes the cost of delivering housing units affordable to households at the various income levels that are the subject of the analysis.
- Section V – provides information to assist in evaluating appropriate fee levels and other aspects of a program for Walnut Creek.
- Appendices – provide additional support information and more documentation on data sources and analysis assumptions.

Data Sources and Qualifications

The analyses in this report have been prepared using the best and most recent data available. Local data was used wherever possible. Other sources such as the 2000 U.S. Census and the California Employment Development Department were used extensively. While we believe all sources utilized are sufficiently accurate for the purposes of the analysis, we cannot guarantee their accuracy. Keyser Marston Associates, Inc. assumes no liability for information from these other sources.

SECTION I – THE NEXUS CONCEPT AND MAJOR ISSUES

Introduction

This section outlines the nexus concept and some of the key issues surrounding linking new office, industrial, retail/entertainment and hotel/motel development to the demand for new residential units.

The nexus analysis and discussion focus on the relationships among development, growth, employment, income and demand for housing. The analysis yields a connection between new construction of office, industrial, retail/entertainment and hotel/motel buildings and the need for additional affordable housing, a connection that is quantified both in terms of number of units and in terms of subsidy assistance needs to make units affordable.

The Legal Basis and Context

The first housing linkage programs were adopted in the cities of San Francisco and Boston in the mid-1980's. To support the linkage, the City of San Francisco commissioned a short analysis to show the relationships, or what might now be characterized as an early version of a nexus analysis. Since that time there have been several court cases and California statutes that affect what local jurisdictions must demonstrate when imposing impact fees on development projects. The most important U.S. Supreme Court cases are *Nollan v. California Coastal Commission* and *Dolan v. City of Tigard* (Oregon). The rulings on these cases, and others, help clarify what governments must find in the way of the nature of the relationship between the problem to be mitigated and the action contributing to the problem.

Following the *Nollan* decision in 1987, the California legislature enacted AB 1600 which requires local agencies proposing an impact fee on a development project to identify the purpose of the fee, the use of the fee, and to determine that there is a reasonable relationship between the fee's use and the development project on which the fee is imposed. The local agency must also insure that there is a reasonable relationship between the fee amount and the cost of mitigating the problem that the fee addresses. Studies by local governments designed to fulfill the requirements of AB 1600 are often referred to as AB 1600 or "nexus" studies.

One court case that involved housing linkage fees was *Commercial Builders of Northern California v. City of Sacramento.* The commercial builders of Sacramento sued the City following the City's adoption of a housing linkage fee. Both the U.S. District Court and the Ninth Circuit of Appeals upheld the City of Sacramento and rejected the builders' petition. The U.S. Supreme Court denied a petition to hear the case, letting stand the lower court's opinion. The authors of this nexus study were the authors of the Sacramento study.

The Nexus Methodology

An overview of the basic nexus concept and methodology is helpful to understanding the discussion and concepts presented in this section. This overview consists of a quick "walk through" of the major steps of the analysis. The nexus analysis links new commercial buildings (or other workplaces) with new workers in the City; these workers demand additional housing in proximity to the jobs, a portion of which needs to be affordable to the workers in lower income households.

This report contains a Macro Economic Analysis that reviews past and projected relationships among construction, employment and housing in Walnut Creek and also a Micro Economic Analysis, which demonstrates the linkages associated with single buildings. The micro nexus readily lends itself to quantification that serves as a basis for quantifying the nexus cost, or basis for the fee amount.

To illustrate the micro nexus, very simply, we can walk through the major calculations of a building. We begin by assuming a prototypical 100,000 sq.ft. building and then make the calculations as follows:

- We estimate the total number of employees working in the building based on average employment density experience.
- We use occupation and income information for typical job types in the building to calculate how many of those jobs pay compensation at the levels addressed in the analysis.
- We know from the Census that most employees are members of households where more than one person is employed; we use various factors to calculate the number of households represented in each income category.
- Finally, we conclude how many of the households (divided into several subsets by income level) are associated with the building and divide by 100,000 square feet to arrive at coefficients of housing units per square foot of building area.
- In the last step, we multiply the number of households per square foot by the costs of delivering housing units affordable to these income groups.

The factors and relationships utilized in the analysis reflect long-term average conditions. Short-term conditions, such as a recession or a vigorous boom period, are not an appropriate basis for estimating impacts over the life of the building.

The Relationship Between Job Growth and Population Growth

The social issue driving this analysis is growth in mid to lower income households. New population growth in most U.S. regions occurs primarily as a result of job growth. Over the long

term, the vast majority of growth in the State of California and its sub-regions is job driven. The arrival of new population creates "secondary" demand for jobs in retail outlets and services that follow. Growth in the greater Bay Area, and in Walnut Creek as a subarea, is predominantly job driven. Most people coming to the region would not come if they could not expect to find a job. People born in the local area would not stay without jobs. This is the long-term pattern. In the short-term, economic cycles and other factors can result in population growth without jobs to support the growth. If an economic region in the U.S. does not maintain job growth, there is an out-migration to regions where job growth is occurring. Many cities in the Midwest during the 70's and 80's are examples.

The Relationship Between Construction and Job Growth

If population growth, especially lower income population, is predominantly job driven in the greater Bay Area, the question arises as to the source or "cause" of employment growth itself.

Simplistically we can say that employment growth does not have "one cause". Many factors underlie the reasons for growth in employment in a given region; these factors are complex, interrelated, and often associated with forces at the national or even international level. One of the factors is the delivery of new workspace buildings. The nexus argument does not make the case that the construction of new buildings is solely responsible for growth. However, especially in the Bay Area, new construction is uniquely important, first, as one of a number of parallel factors contributing to growth, and second, as a unique and essential condition precedent to growth.

As to the first, construction itself encourages growth. When the state economy is growing, the most rapidly growing areas in the state are those where new construction is vigorous as a vital industry. In regions such as the Bay Area where multiple forces of growth exist, the political and regulatory environment join forces with the development industry to attract growth by providing new work spaces, particularly those of a speculative nature. The development industry frequently serves as a proactive force inducing growth to occur or be attracted to specific geographic areas or locations.

Second, workplace buildings bear a special relationship to growth, different from other parallel causes, in that buildings are a *condition precedent* to growth. Job growth does not occur in modern service economies without buildings to house new workers. Unlike other factors that are responsible for growth, buildings play the additional unique role that growth cannot occur without them. Conversely, it is well established that the inability to construct new workplace buildings will constrain or even halt job growth.

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

The City of Walnut Creek in its Housing Element and other reports has clearly documented that the housing needs of the existing lower and moderate-income households are not being met.

This existing housing shortage, especially at the lowest income levels, is manifested in numerous ways such as payment of far more than the percentage of income for housing set forth in federal and state guidelines, overcrowding and other factors which are extensively documented by the Census and City reports.

This nexus study does not address the housing needs of the existing population. Rather, the study focuses exclusively on documenting and quantifying the housing needs of new households where an employee works in a new workplace building, such as an office building.

This analysis finds that new housing affordable to lower income households is not being added to the supply in sufficient quantity to meet the needs of new employee households associated with new buildings. If this were not the case and significant numbers of units were being added to the supply to accommodate the low to moderate income groups, or if residential units in Walnut Creek were experiencing significant vacancy levels, particularly in affordable units, then the need for new units would be questionable.

Substitution Factor

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

Indirect Employment and Multipliers

The Micro Economic Nexus Analysis, which examines prototype buildings, addresses direct "inside" employment only. In the case of the office building, for example, direct employment covers the various managerial, professional and clerical people that work in the building; it does not include the janitorial workers, the window washers, the security guards, the delivery services, the landscape maintenance workers, and many others that are associated with the normal functioning of an office building. These indirect employees tend to be the many service workers at the lower end of the pay scale. No good data sources were located that deal with indirect employees in various type buildings. If one thinks about who the lowest income workers are, one can observe that lower income workers include a whole host of service workers who do not work in any type of building as regular employees but whose jobs are associated with such structures. In other words, any analysis that ties lower income housing to the number of workers inside buildings will continue to understate the demand. Thus, confining the analysis to the direct employees does not address all the low to moderate income workers associated with each type of building and significantly understates the impacts.

If the door were open to the indirect employees, one could take the analysis further and deal with the question of multipliers. Multipliers refer to the concept that the income generated by certain types of jobs recycles through the economy resulting in additional jobs. This study omits such multiplier effects.

It should also be noted that the analysis excludes all consideration of construction employment.

Special Adjustments in Walnut Creek Analysis

There are several special adjustments in the analysis specific to Walnut Creek and the time at which the analysis has been prepared.

Changes in Labor Force Participation

In the 1960's through the 1980's there were significant increases in labor force participation, primarily among women. As a result, some of the new workers were reentering the labor force and already had local housing, thus reducing demand for housing associated with job growth. Since the 1990's, however, labor force participation rates have slowed to the point they are nearly stabilized. As such, an adjustment for increase in labor force participation is no longer warranted in a nexus analysis.

Discount for Changing Industries

It is general practice in the preparation of a nexus analysis to examine the major sectors of the local economy and determine if there are long term trends in employment suggesting either decline or restructuring. In the case of long-term decline of one or more industries or sectors, it is appropriate to recognize that all new jobs may not be net new jobs. In some regions, for example, there were periods when aerospace and defense spending were in decline. In San Francisco, by way of another example, there has been major long-term economic decline in the industrial land use activity sectors, as evidenced by the decline of the Port and its related activities. During the 1980's in that city, for every job gained in an office building, there was 0.6 of a job lost in the industrial sector. Short-term upheavals such as the closing of a military base or single large manufacturing plant may also warrant an adjustment in the analysis.

An adjustment to recognize declining industries is important in a nexus analysis because new jobs added in office, retail/entertainment and other type spaces are, to some extent, replacement of jobs lost in other categories. If an underlying premise of a jobs housing nexus is labor force mobility — i.e., workers are attracted to areas where jobs are made available, in part through the delivery of work spaces, then it must also be recognized that loss of jobs means workers either leave the area or become employed in another activity.

In Walnut Creek, the analysis of employment growth during the 1990's decade found employment increases mostly in the retail or services sectors, with agriculture/mining and manufacturing either stable or declining slightly.

Other Walnut Creek Affordable Housing Programs

The City of Walnut Creek is committed to creating new opportunities for affordable housing as well as preserving the existing affordable housing stock. This is evidenced by the Housing Element adopted by the City in October 2002. The Housing Element identifies policies and programs intended to ensure provision of adequate housing for all income segments within the City.

Specifically the City has adopted various the following programs and policies to meet its affordable housing goals: the Consolidated Plan 2000-05, the Affordable Housing Implementation Plan (AHIP) and the First-Time Homebuyer Program. The City has adopted an Inclusionary Zoning Ordinance, which will require developers of residential developments to provide affordable housing. It is important to recognize that a linkage program would be but one of many programs to assist lower income households and increase the supply of affordable housing.

A summary of the City's existing housing initiatives and programs are listed below:

1. The Consolidated Plan, 2000-05

The Consolidated Plan is a comprehensive planning document that identifies the City's overall needs for affordable housing as well as presents strategies to meet these needs. The Consolidated Plan serves as both a long and short term planning tool for housing and community development activities. A major barrier to carry out the strategy is the lack of sufficient funds. The housing nexus concept is one way to help raise funds.

2. Affordable Housing Implementation Plan (AHIP), FY 1999-2004

In 2000, the City Council adopted a five-year Affordable Housing Implementation Plan (AHIP) covering FY 1999/00 to FY 2003/04 to identify actions to address impediments to providing affordable housing. The AHIP recommends incentives for affordable housing such as financing, reduced parking, flexible design standards and/or development fee reduction.

3. Fair Housing

The City, along with the Contra Costa Consortium, recently completed an Analysis of Impediments (AI) to Fair Housing aimed to uncover how the delivery of fair housing services can be improved and to better understand the overall fair housing needs of the City and the County. The Analysis has been recognized with an award for its high quality and comprehensiveness.

The analysis found several barriers to fair housing. To reduce these impediments, the City grants funding to nonprofit organizations that provide tenant/landlord counseling, outreach, as well as emergency rental assistance. In addition, the City works with the private market to reduce lending barriers. Finally, the City directly provides information to its residents about its housing programs and all major apartment complexes within Walnut Creek through both its Internet Web site, the local cable TV Community Bulletin Reader Board, staff responsiveness as well as through the City's bi-monthly newspaper: the Nutshell. Finally, the City is also working with the other jurisdictions to produce a countywide fair housing brochure.

4. Funding

The production of affordable housing, both homeownership and rental, requires the use of many resources provided through federal, state, local and private. The City takes advantage of funding programs available to municipal jurisdictions, such as federal Community Development Block Grant (CDBG) funds, City Redevelopment Agency Housing Set-Aside (RDA) funds and the City Revolving Bond funds to assist in the financing of affordable housing units.

These City controlled funds have been used to leverage additional monies in partnership with housing providers. Major sources of funding for these activities include federal McKinney funds, other local CDBG funds, private lender bank loans and owner equity. These funds have been used to implement the City's First-Time Home Buyer Program, to deposit funds toward the purchase of a site for family rental housing and to assist in acquiring a site for a permanent affordable housing development.

Finally, Program 13.19 of the Housing Element calls for study of the feasibility of a commercial linkage fee for significant employment-generating non-residential development. Fees collected would be placed in a Housing Trust Fund to assist in increasing the supply of affordable housing for the Walnut Creek workforce associated with non-residential development.

SECTION II - MACRO ECONOMIC JOBS HOUSING ANALYSIS

This section examines the relationships in Walnut Creek that underlie the jobs housing linkage. In particular, the history of building construction, employment growth, and affordable housing production are reviewed. The overall relationship between construction and employment growth is analyzed to help establish the nexus. The history of housing production, particularly affordable housing production, compared with the demand generated by new workers is also examined.

In addition to historical data, this section contains a projection of jobs and dwelling units, as indicated by local and statewide planning agencies, such as the Association of Bay Area Governments (ABAG). It must be emphasized, however, that the nexus relationships as established in this analysis are not contingent upon a specific projected level of employment growth being realized. The relationships linking construction, employment, and affordable housing are critical to the nexus, but the specific projected levels of growth are not. If employment growth occurs more slowly than projected, construction and housing demand will also be less than projected. In addition, in this analysis linkages are established on a per square foot basis (Section III).

Employment History and Trends

Employment Growth in Walnut Creek

Employment data is collected primarily by the California Employment Development Department (EDD) and also by the U.S. Department of Commerce. ABAG utilizes both these sources to develop total figures for the decade and mid decade and prepares projections for approximately 20 years in the future. ABAG is the most widely used data source by local planning agencies in the Bay Area.

ABAG presents data according to a city's current boundaries (Jurisdictional Boundary) as well as to a planning area or Sphere of Influence (SOI). Each county's Local Agency Formation Commission (LAFCO) assigns a SOI, which typically indicates the ultimate final boundaries of a city including areas that may eventually be annexed.

For SOI areas, ABAG shows job data broken down by major employment industries. Job data is provided in the aggregate only for Jurisdictional Boundary areas.

According to ABAG, employment growth in the Walnut Creek SOI during the 1990's decade registered a net increase of 5,750 total jobs, an increase of 10%. However, within the Walnut Creek's jurisdiction boundary, ABAG estimates that 1,200 new jobs were created during the

same time period. Between 1990 and 2000, ABAG's estimates for job growth in Walnut Creek are:

Year	Jurisdiction Boundary Jobs
1990[1]	55,080
2000[2]	56,280

In addition to total job growth, it is also useful to examine job growth by industry, as total employment figures sometimes obscure the dynamics and shifts that have occurred within individual sectors of an economy. ABAG data for 1990 and 2000 was used to examine general employment change across industries in Walnut Creek. Again, ABAG job estimates for major employment industries are broken down for the SOI area only.

Major Industry	Jobs		
	1990	2000	Change
Agriculture and Mining	510	500	-10
Manufacturing	4,850	4,930	80
Retail	9,260	9,830	570
Service	22,220	27,040	4,820
Other jobs[3]	18,640	18,940	300
Total	55,480	61,240	5,760

Employees in these industries are occupants of the building types subject to this analysis — retail, office and hotel. Retail buildings basically add jobs in the retail category, hotels in the service category. Office buildings house workers in service and other subcategories.

According to ABAG, jobs in the service industry in the Walnut Creek SOI grew by 4,820 jobs, a 22% during the 1990's decade. Following the service industry, retail jobs registered a growth of 6%. During the same period, manufacturing and "other" jobs remaining relatively flat, with a gain of 2% each. The agriculture and mining industries in Walnut Creek lost 2% of its jobs during this time period. This information is presented in Table II-1 found at the end of this section.

Employment Growth and Building Construction

An underlying premise of the jobs housing linkage and the specific focus on construction of workplaces is that there is a direct relationship between the new workplaces and new

[1] ABAG Projections 2002. While Projections 2003 is ABAG's most recent data series, it does not include data for 1990.
[2] ABAG Projections 2003
[3] Other jobs include construction, transportation, communications, utilities; finance, insurance, real estate; and government.

employees. In this section some of these historic relationships between 1990 and 2000 are examined.

New construction activity within Walnut Creek is recorded in building permits and is monitored by the City's Building and Planning Department, which tracks building type, value and size. Building activity in Walnut Creek is regulated by a Growth Limitation Plan (GLP). Adopted in 1993, the GLP limits commercial and residential development.

KMA utilized two data sources to capture building activity for the past decade. The City provided information for construction activity that occurred after 1992, when the City began to electronically track building activity to implement its GLP. The estimate for pre-1993 commercial development is based on permit reports published by the Construction Industry Realty Board (CIRB).

According to the building records available, approximately 495,100 square feet of office, retail and "miscellaneous" spaces were built between 1990 and 2000. Examples for "miscellaneous" space include projects with less than 5,000 square feet as well as the Kaiser Medical Center expansion (127,000 square feet). To determine whether a correlation between construction and new jobs exist, spaces that are unlikely to produce new jobs, such as a storage facility expansion, are excluded.

Table II-2 provides an annual summary of square feet built by building type. In general, it appears that the 1990's was not a significant growth period within the City's limits. Excluding the Kaiser Medical Center expansion, nearly 40% of the total development during the decade occurred between 1998-2000. This is consistent with the economic boom that was occurring throughout California and particularly in the Bay Area.

With the increase in inventory, we can examine new construction compared to employment growth and confirm that a clear relationship exists.

1990-2000	
Increase in Retail, Office &"Misc." Space*	495,100 SF
Increase in Jobs	1,200 jobs
Relationship of the increases	413 SF/Employee

* City & CIRB reported construction

The calculated amount of new non-residential construction space per employee, 413 square feet, represents slightly lower density than supported by surveys and ratios frequently used in other applications such as transportation analyses. For urban areas, such as Walnut Creek, the relationship between jobs and construction activity is expected to be greater than average due to land constraints. It should be noted that density varies with economic cycles. Firms

often reduce employment during a recession but may not move to smaller spaces; they just occupy the same space but at a lower density.

Characteristics of Walnut Creek Employees and Their Households

This section examines several key characteristics of Walnut Creek employees and their households, particularly those that are relevant to the jobs affordable housing linkage. These characteristics include:

- The number of workers per worker household on average;
- Income characteristics; and
- Commute patterns.

Each of these factors impacts how many new workers in Walnut Creek buildings will seek housing within the City. These characteristics become key inputs in the micro economic analysis of the linkage between workspace buildings and affordable housing demand.

Workers per Worker Household

The workers per household characteristic provides the link between the number of employees and the number of households associated with the employees, recognizing that most households today have more than one worker. The number of workers per household in a given geographic area is a function of household size, labor force participation rate and employment availability.

Historically, the national labor force participation rate rose steadily for three decades since the early 1960s as more and more women entered the labor force. The rate appears to have leveled off in the 1990s. Nexus studies prepared in the late 1980's and early 1990's often made an adjustment for increases in labor force participation to recognize that some employment growth already was living locally and had housing. As noted earlier, we no longer make such an adjustment.

For the nexus analysis, the characteristic of most direct interest is the number of workers per worker household. Worker households are defined as those households with a wage or salary income, as reported in the 2000 U.S. Census. In other words, worker households are distinguished from total households in that the universe of worker households does not include elderly or other households in which members are retired or do not work for other reasons. Student households and unemployed households on public assistance are also excluded from worker households.

According to the 2000 U.S. Census, the number of workers per worker household in the City of Walnut Creek was 1.50. In Contra Costa County, the Census reports a ratio of 1.65. Since

the majority of people who work in Walnut Creek do not live in the City (discussed in later section) the County average is more reflective of workers in Walnut Creek.

Wages and Salaries of Walnut Creek Workers and Household Income

The average wage or salary of Walnut Creek workers and the income of households formed by the 1.65 workers determines the household's ability to afford housing. The California Employment Development Department reports information on average wages and salaries paid to Contra Costa County workers, by occupation type.

A summary of the occupations associated with each building was developed from the 2001 National Industry-Specific Occupational Employment Estimates, produced by the Bureau of Labor Statistics, which cross references occupations by industry. Appendix Tables 2, 3, and 4 present summaries for each building type.

The following is a summary table of average salary levels for major occupation groups by building type. A detailed summary of wages and salaries for occupations in each building type is provided in Appendix Tables 5, 6, and 7.

Contra Costa County Wages by Building Type:

Building Type	Occupation	Average Annual Income
Office		
	Management	$88,100
	Business and Financial Operations	$64,900
	Computer and Mathematical	$70,800
	Architecture and Engineering	$62,300
	Legal Occupations	$81,300
	Healthcare Practitioners and Technical Occupations	$72,200
	Health Care Support	$31,900
	Sales and Related	$51,300
	Office	$34,300
	Installation, Maintenance and Repair	$42,400
Hotel		
	Management	$69,000
	Food, Preparation and Serving Related	$18,600
	Building, Grounds and Maintenance	$21,900
	Personal Care and Service	$27,500
	Sales and Related	$29,300
	Office and Administrative Support	$25,900
	Installation, Maintenance and Repair	$41,700

Retail

Management	$81,400
Food, Preparation and Serving Related	$18,800
Sales and Related	$26,100
Office and Administrative Support	$31,200
Installation, Maintenance and Repair	$37,600
Transportation and Material Moving	$26,200

Source: California Employment Development Department, 2001 Occupational Employment Statistics Survey, Wages 3rd Quarter 2002.

The current median income for a one-person household in Walnut Creek is $53,600. Thus, the reported compensation level for over half of the occupations listed above is lower than the area median. The occupations with the lowest compensation levels are in the retail and hotel industries.

Household Income

When workers in these occupations form households, their income, either alone or in combination with other workers, produce the household income. In addition, of course, there may be children and/or other household members who are not employed. According to the HUD, the annual median income of a four-person household in Contra Costa County for the year 2003 is $76,600. This analysis focuses on three classifications of household income:

2008 Honolulu Area Media Income is: $77,300

- Very Low-Income – less than 50% of Median Income
- Low-Income – 51% to 80% of Median Income
- Moderate-Income – 81% to 120% of Median Income

The income classifications for two, three and four person households in Contra Costa County for 2003 appear in the table below.

Two Person HH

50% of Median Income	$32,050
80% of Median Income	$51,250
Median Income	$61,300

Three Person HH

50% of Median Income	$36,050
80% of Median Income	$57,650
Median Income	$68,950

Four Person HH

50% of Median Income	$40,050
80% of Median Income	$64,100
Median Income	$76,600

Source: Department of Housing and Urban Development

The above income levels are the levels set and utilized by HUD and the State for most housing programs. Contra Costa County, like much of California, experienced a substantial increase in median income levels over the past few years. For instance, the median income for a four-person household was $67,600 in 2000.

Commute Relationships and Trends

This section provides a brief summary of commute trends and relationships. The major relationship of interest in a nexus analysis is the share of Walnut Creek jobs held by Walnut Creek residents. The major source of information regarding commute relationships is the U.S. Census.

Accordingly, in 2000 there were 8,507 Walnut Creek residents who also worked in Walnut Creek. For the same year, ABAG reports there were a total of 56,280 jobs. It can then be concluded that Walnut Creek residents held 15.10% of the total jobs in Walnut Creek.

It is important to recognize that the above relationship does not necessarily represent the demand for housing in Walnut Creek. Taken to the extreme, one can hypothesize a city with very few workers living in it because there is very little housing (for example, Emeryville pre-1990) or because few can afford to live there.

It should also be noted that even if housing were available and affordable, it is unlikely that 100% of people would live and work in the same city. The choice of where one lives depends on additional factors (schools, style of housing, types of amenities, and local services, etc.) as well as where one works.

Housing

At the beginning of this section, we examined employment and it was determined from ABAG historical employment data that there were 1,200 jobs gained over the decade in the industries that occupy the subject building types. This section provides a brief summary of selected characteristics of the housing market that affect the ability of worker families to find housing in Walnut Creek. This section also examines growth in housing units in Walnut Creek to meet the demand of new worker households.

Housing Stock Conditions and Characteristics

According to the 2000 Census, Walnut Creek had 31,425 housing units, an estimated 5% increase in dwelling units from the 1990 Census. According to the reported building activity throughout the last decade, the greatest increase in building activity was seen in multi-family construction, which averaged 68 units per year, or double the single family construction.

Housing Production

City building data indicates that from 1990 through1999, 1,020 new units were constructed. As shown in Table II-4 annual building activity greatly varied over the decade. The high year was 1991 when 286 new units were added and the low year was 1993 when only 19 new units were added. On average, 100 units were constructed annually during the decade. Of the gross new units, 344 were single-family dwellings and 676 were multi-family dwellings.

As noted earlier, during this same time frame, ABAG estimates that 1,200 new jobs were created in Walnut Creek. Also discussed earlier, there are approximately 1.65 workers per worker household, meaning that 1,200 new jobs can be equated to 727 households demanding housing somewhere within commuting distance to a job in Walnut Creek. Since Walnut Creek added 1,020 net new units over the period we can say that of the total new units in demand, the City production was sufficient to accommodate all of the new worker households, without consideration of affordability. Other ways of expressing the relationship are indicated below.

1990-1999	
Increase in Jobs (from Table II-1)	1,200
Increase in Worker Households (New Units in Demand) @ 1.65	727
Residential Construction in Walnut Creek (from Table II-4)	1,020
Relationship of New Housing Units to New Worker Households	1.4:1
Surplus for 1:1 ratio	293

In an evaluation such as the one above, it is important to note that housing demand generated by new employment is not equivalent to total housing demand. Each community experiences demand for it's housing by people who work in other jurisdictions as well.

Finally, there is a share of total demand attributable to non-working households. Every time the worker in a household leaves the labor market, such as upon retirement, if the household remains in the same housing unit, the unit is removed from the pool of units for working households, thus resulting in demand for a new unit even though there is no employment growth.

Housing Production by Affordability Level

The City's Housing Element provides information on affordable units constructed in the past decade that were available to new worker households. Toward that end, affordable units restricted to senior citizens were excluded from the count because most seniors for whom the units were targeted are no longer in the workforce. Further, the count excludes units that were not net new affordable units, for example, units purchased to preserve existing affordability restrictions. Over the decade only 38 new units were added with affordability restrictions.

Between 1990 and 2000, there were 248 affordable units built if all units including market rate rentals are counted. This represents approximately 24% of new dwelling units constructed, with the remaining new dwelling units available at market rates. See Table II-4 for more information. The total count of 248 affordable units includes market rate rental units that are usually affordable to households in the moderate income range or from 80% to 120% of median income. The market survey work conducted for the Inclusionary program found that new rentals were affordable to households at approximately 90% of median income.

The demand for affordable units related to the new worker households over the decade can be estimated by examining the household income profile associated with the three building types as analyzed in Section III. Briefly, the finding is that around 75% of the new worker households will need units affordable at 120% of median income or less (59% of the office worker households, 94% of the retail and hotel worker households). So if there were 1,200 new employees, there were 727 new worker households; we can estimate that roughly 75% or 545 new worker households needed affordable units. In comparison to the 248 affordable units produced, there was a shortfall of 297 affordable units.

The above analysis and discussion demonstrates that despite the notable accomplishments of the City of Walnut Creek over the 1990's decade in the production of affordable housing, especially relative to total new units built in the city, production of affordable units still fell short of demand associated with new worker households.

Future Projections

The jobs housing nexus relationship in support of requiring new workspaces to contribute to new housing is based on best estimates of future trends and relationships in Walnut Creek. In this context, projections of building construction, jobs, and new workers households are provided in this section. The methodology for calculating the impact does not, however, rely on any specific set of projections for employment and housing growth. (See Section III.)

Employment Projections - ABAG

ABAG provides projection series of employment for the entire Bay Area region. The most recent available is *Projections 2003*. Employment projections for the Walnut Creek jurisdictional boundary are estimated as follows:

Year	Total Jobs
2000	56,280
2010	62,350
Total Increase	6,070

The ABAG projection for the 2000 to 2010 time period envisions substantially more jobs than occurred during the 1990's decade and more than current local policy would allow, assuming no major policy changes following the expiration of the current Growth Limitation Plan which is due for renewal in 2006.

The ABAG projections for residential construction in Walnut Creek hold that 2,379 new units will be added. This may be compared to the job growth and new housing demand associated with job growth at 1.65 workers per worker household, which would be 3,679 new units (6,070 jobs divided by 1.65). At this rate Walnut Creek would produce only 0.65 new housing units for each new worker household.

City Projections 2000-2006

Walnut Creek has been experiencing substantial growth since 1998 with a number of projects in the "pipeline" expected to be built in the immediate future. Table II-6 summarizes the construction completed in the 2000 through 2003 years, the pipeline and the balance of allowable development per the Growth Limitation Plan (GLP) Summary figures are as follows,

1990-2000	495,009 square feet
2001, 02, 03	120,309 square feet
Pipeline	361,245 square feet
Balance Allowable	137,058 square feet
Total 01-thru 06	648,612 square feet

If all of the allowable square footage is constructed before the end of 2006, the annual rate of construction will be over 100,000 square feet per year, or more than double the average for the 1990's decade.

Using standard density relationships, we can convert the building area to employees to determine new employment growth. Table II-7 provides the analysis with the finding that the

648,612 square feet will be associated with 2,325 new jobs, or far less than the ABAG projection, even accounting for the difference in time periods.

Jobs and Housing Projection Relationships

In Walnut Creek residential construction has also been at a higher rate in the last five years compared to the 1990's decade. According to the City, 888 units have either been built since 2000 or are in the pipeline. This would allow an additional 1,205 units per the GLP, for a total of 2,093 units in the period 2001 through 2006.

If Walnut Creek does build 2,093 units in the period through 2006 and the total commercial area permitted in the GLP is also built, then the City would produce more units than new worker households. The ratio of new residential units to new worker households would be close to 1.5 to 1 units to new worker households.

Once again, the ratio discussion of total new units and new worker households does not take into account the matter of affordability. If roughly 75% of the new worker households will have incomes of 120% of median income or less, then the number of affordable units needed will far exceed affordable unit production under any likely scenario. During the last decade nearly 250 units, or a quarter of all the units built, were affordable. Even if this rate of affordable unit production were maintained, the supply of affordable housing to the new workforce would not be adequate. A commercial linkage fee program would provide additional resources to improve affordable unit production for new worker households.

TABLE II-1
JOB GROWTH, 1990 - 2000
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

Total Jobs[1]
Walnut Creek Jurisdictional Boundary

	1990 [2]	2000 [3]	Job Growth	% Change
Total Jobs	55,080	56,280	1,200	2%

Jobs by Major Industries
Walnut Creek Sphere of Influence (SOI)

	1990 [2]	2000 [3]	Job Growth	% Change
Agriculture & Mining	510	500	(10)	-2%
Manufacturing Jobs	4,850	4,930	80	2%
Retail Jobs	9,260	9,830	570	6%
Service Jobs	22,220	27,040	4,820	22%
Other Jobs [4]	18,640	18,940	300	2%
Total/Average	55,480	61,240	5,760	10%

1 The data series for Jurisdictional Boundary does not provide jobs by major industry type.

2 ABAG Projections 2002

3 ABAG Projections 2003

4 Includes construction; transportation, communications, utilities; office (finance, insurance, real estate; and government), including national security.

Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\Macro Analysis Tables - revised again1; Job Growth; 12/7/2004; MTN

TABLE II-2
NON-RESIDENTIAL CONSTRUCTION ACTIVITY 1990-2000
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

Square Feet Building Area

YEAR[1]	OFFICE	RETAIL	MISC./SMALL[2]	ALL BUILDING TYPES
1990-1992				86,663
1992-1994			5,869	5,869
1994-1996	42,000		15,200	57,200
1996-1998	13,721	67,087	129,147	209,955
1998-2000	127,678		7,729	135,407
Total (1990-2000)	183,399	67,087	157,945	495,094
Annual Average	16,673	6,099	14,359	45,009

Source: CIRB and City of Walnut Creek Building Department. There was no hotel/motel or industrial development during this time period. Incomplete projects are excluded from the analysis.

[1] The City reports building activity in two year increments, based on square feet completed.

[2] Includes project smaller than 5,000 sq ft. Excludes a storage facility expansion. Kaiser Medical Center is included.

[3] Construction prior to 1993 was exempt from the Growth Limitation Plan. The City began to track building activity in square footage in 1992. Thus, for the purpose of this analysis, building activity for 1990-1992 is based on building permit data from Construction Industry Research Board and reflects the lag between permit issuance and building completion. A breakdown by non-commercial is not available for these years. Data is available by permit valuation, which was converted to square feet. Building alteration and additions are excluded from the analysis.

TABLE II-3
RELATIONSHIP BETWEEN NON-RESIDENTIAL CONSTRUCTION AND EMPLOYMENT GROWTH
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

1990-2000

	Jurisdictional Boundary Jobs	
Non-Residential Construction (from Table II-2)[1]	495,094	
Increase in Jobs/Employees (from Table II-1)	1,200	
Relationship of the increases (calculated)	413	Sq. Ft./Empl

[1] City of St. Walnut Creek, 1990-2000.

TABLE II-4
RESIDENTIAL UNITS -- PERMITTED, 1990-1999
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

TOTAL UNITS (Per City) 1990-1999[1]

Year	Single Family	Multiple-Family	Total
1990	72	63	135
1991	42	244	286
1992	17	92	109
1993	19	0	19
1994	14	36	50
1995	30	49	79
1996	57	36	93
1997	20	63	83
1998	46	37	83
1999	27	56	83
Total	**344**	**676**	**1,020**
Annual Avg	34	68	102

TOTAL UNITS BY AFFORDABILITY LEVEL, 1990-1999[1]

Affordability Level	With Deed Restrictions		Total Affordable[4]	
	Units	% Share	Units	% Share
Very Low: < 50% Median Income[2]	20	56%	31	13%
Low: 50 - 80% Median Income[2]	16	44%	48	19%
Moderate: 80 - 120% Median Income[3]			169	68%
Total Affordable Units Constructed	**36**	**100%**	**248**	**100%**

Affordable Units as Share of Total Units Constructed		**4%**		**24%**

[1] Sources: City of Walnut Creek, Community Development Department (March 17, 2003) based on figures prepared for the State Department of Finance. Single-family units include second units. Counts are net of any demolitions or removals. Excludes units gained through annexation.

[2] Affordable unit count is based on the City's prior Housing Element. includes new units that are assumed to have long term income and affordability restrictions. Specifically, the left column excludes the Tice Oaks Senior Apartment project (an acquisition rehab project that preserved affordable units, but did not produce net new affordable units) & Ivy Hill Apts (construction began 2000, completed 2002) and Montego Senior Apartments (these affordable units are restricted to senior citizens; it is unlikely that workers are eligible for the units). "The Oaks" (LIHTC and CDBG funds) is included.

[3] First Time Homebuyer program may not have income restrictions on resale.

[4] Includes the restricted units plus affordable units identified in the Housing Element. Market rate rentals are assumed to be affordable to moderate income based on prevailing current rent levels for new units.

TABLE II - 5
HISTORICAL RELATIONSHIP: EMPLOYMENT GROWTH, RESIDENTIAL UNIT DEMAND AND RESIDENTIAL UNIT PRODUCTION
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

1990-2000

	Jurisdictional Boundary Jobs	
Increase in Jobs (from Table II-1)	1,200	
Increase in Worker Households (@ 1.65 workers per worker household)	727	
Increase in New Residential Units (from Table II-4[1])	1,020	units
Relationship of New Housing Units to New Worker Households	1.4:1	
Surplus/(Shortfall) for 1:1 Ratio	293	units
Affordable Unit Production (Table II-4)	248	units
Affordable Unit Demand from New Worker Households[2] Approximately 75% (x 727)	545	units
Surplus/(Shortfall) for 1:1 Ratio	(297)	units

Note: Worker household demand does not equate to total housing unit demand. Other sources of demand include units for retired households, students, and households employed in other jurisdictions who want to live in Walnut Creek.

[1] New residential construction is through 2000, per the City's building department and permit activity.

[2] See Table III-2 for calculation.

TABLE II - 6
NON-RESIDENTIAL CONSTRUCTION: PIPELINE AND PER GROWTH LIMITATION PLAN
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

Square Feet Building Area

	A	B	C	D	
Building Type	**Construction Completed 1990-2000[1]**	**Construction Completed 2001, '02 &'03**	**Pipeline (SF)[2]**	**Balance of Allowable Development Thru 2006 (= GLP-A[3]-B-C)**	**Total Projected Construction (SF) 2001-2006[5] (=B+C+D)**
Office	183,399	86,734	196,516	68,529	351,779
Retail	67,087	3,575	164,729	68,529	236,833
Misc.[4]	244,608	30,000		30,000	60,000
Total	**495,094**	**120,309**	**361,245**	**137,058**	**648,612**
Annual Avg.	**45,009**	**40,103**			**108,102**

1 See Table II-2; period is eleven years.

2 Includes "Under construction", "Approved" and "Under Review" from reservation and construction pipeline reports

3 Allows 900,000 square feet of commercial development from 1993 to 2006 (excluding community facilities, ie Kaiser Medical Center). Allowable square footage is allocated equally between office and retail.

4 Estimated at 10,000 square feet per year based on 1990-2000 experience. Includes Kaiser Hopsital expansion, which is not in GLP.

5 Assumes the GLP maximum allowable construction for the time period 2001-2006.

TABLE II -7
ESTIMATED JOB GENERATION 2000-2006
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

Building Type	Anticipated Construction (SF)[1]	Density Factor SF/Employee[2]	Projected Jobs
Office	351,779	220	1,599
Retail	236,833	400	592
Misc.	60,000	300	200
Total	***648,612***	***270***	***2,391***

1 See Table II - 6

2 City of Walnut Creek General Plan (1989)

Prepared by Keyser Marston Associates, Inc.
File name: 21101.005\Macro Analysis Tables - revised again1;Pipeline Jobs;12/7/2004

TABLE II - 8
PROJECTED EMPLOYMENT GROWTH, RESIDENTIAL UNIT DEMAND
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

ABAG PROJECTIONS	Jurisdictional Boundary Jobs
Projected Job Growth - Per ABAG[1]	
2000	56,280
2010	62,350
Increase	6,070
Worker Households @ 1.65	3,679
Projected Households/Housing Units - Per ABAG[1]	
2000	30,301
2010	32,680
Increase	2,379
Relationship Housing Units to New Worker Households	0.65 :1
CITY PROJECTIONS (2000-2006)	
Jobs Associated with GLP Projections[2]	2,391
Worker Households @ 1.65	1,449
Projected Housing Supply	
Units Completed or in Pipeline[3]	888
Additional Units Under GLP[4]	1,205
Total	2,093
Relationship of Housing Units to New Worker Households	1.44 :1

1 ABAG Projections 2003

2 See Table II-7

3 Includes completed projects such as Ivy Hill Apts, "Under construction", "Approved" and "Under Review" from City's recent pipeline reports. (Housing Element, Summary of Progress toward RHND.)

4 Equals 2,500 units allowed under Growth Limitation Plan less units constructed since 1993. Excludes all development on BART property.

SECTION III – MICRO ECONOMIC JOBS HOUSING ANALYSIS

This section presents a summary of the analysis of the linkage between three types of workplace buildings and the estimated number of worker households in the income categories that will, on average, be employed within those buildings. This section should not be read or reproduced without the narrative and analysis presented in the previous sections.

Analysis Approach and Framework

The micro analysis establishes the jobs housing linkages for individual building types or land use activities using the relationships presented and discussed in the Section II Macro Economic Jobs Housing Analysis for the City of Walnut Creek.

The analysis approach is to examine the employment associated with the development of 100,000 square foot building 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 households related to building area. In the final step, we convert the numbers of households back to the per square foot level.

The building types or land use activities addressed in the analysis are:

- Office/High Tech
- Hotel
- Retail/Entertainment

Consistent with the inclusionary program, the following three income categories are addressed. For reference, the HUD reported County income level for a two-person household is also provided.

- Under 50% of median – or Very Low Income up to $32,050
- 50% to 80% of median – or Low Income up to $51,280
- 80% to 120% median – or Median Income or up to $76,920

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

Analysis Steps

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

Step 1 – Estimate of Total New Employees

The first step in Table III-1 identifies the total number of direct employees who will work at or in the building type being analyzed.

Employment density factors are used to make the conversion. The density factors used in this analysis are:

- Office – 220 square feet per employee. As previously indicated, average office density is usually found in the range 200 to 300 square feet per employee depending on the character of the office activity (corporate headquarters vs. back office to illustrate extremes.) The density utilized is consistent with the density utilized in the General Plan update.

- Hotel at one employee per room and 500 square feet per hotel room, or 500 square feet per employee. This rate covers a cross section of hotel types from lower service hotels where rooms may be smaller than 500 sq. ft. to higher service convention hotels where average room size (inclusive of the meeting space, etc.) is larger but the number of employees per room is higher.

- Retail uses at 400 square feet per employee. This category covers a broad range of experience from high service successful restaurants where densities are far greater to some retail uses such as furniture stores where densities are far lower. The earlier General Plan utilized a density of 450 square feet; most retail density estimates are in the 300-375 square feet per employee range.

All density factors are averages and individual uses can be expected to be fairly divergent from the average from time to time. (An ordinance variance provision usually addresses the possibility of a building that is so divergent from the average so as to need special treatment.)

For ease of analysis and understanding, KMA conducted the analysis on prototype buildings at 100,000 square feet. We have used this size building in order to count jobs and housing units in whole numbers that can be readily communicated and understood. At the conclusion of the analysis, the findings are divided by building size to express the linkages per square foot, which are very small fractions of housing units.

Based on the density factors outlined above, the number of employees in our hypothetical 100,000 square foot buildings follows: the office will house 455 employees; the hotel 200 employees, and the retail 250 employees.

Step 2 – Adjustment for Changing Industries

This step is an adjustment to take into account any declines, changes and shifts within all sectors of the economy and to recognize that new space is not 100% equivalent to net new employees. For this analysis, a 5% adjustment is utilized to recognize the possibility of future declines and other adjustments. (See Section II discussion.) For demolition of existing structures, an ordinance provision will provide for an offset to any impacts of the proposed construction.

Step 3 – Adjustment from Employees to Employee Households

This step (Table III-1) converts the number of employees to the number of employee households that will work at or in the building type being analyzed. This step recognizes that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers must be reduced. As noted in Section II, the workers per worker household ratio has eliminated from the equation all non-working households, such as retired persons, students, and those on public assistance. The County average of 1.65 workers per worker households is used in the analysis.

Step 4 – Occupational Distribution of Employees

The occupational breakdown of employees is the first step to arriving at income level. Using the 2001 National Industry-Specific Occupational Estimates, a cross matrix of "industries" and occupations, produced by the Bureau of Labor Statistics (BLS), we are able to estimate the occupational composition of employees in the three types of buildings. The occupations that reflect the expected mix of activities in the new buildings are presented in Appendix Tables 2, 3, and 4.

- Office buildings "industrial" mix was tailored to reflect the types of activities attracted to office space in Walnut Creek. These industries represent a broad mix of professional service activities including architecture and engineering, computer and mathematical, legal, management, business and financial operations, healthcare, and sales. The category also includes finance, insurance and real estate type activities. Office and administrative support occupations account for over 37% of these jobs and most of the lower paying positions.

- Hotels employ workers primarily from three main occupation categories: building and grounds cleaning and maintenance (maid service, etc.), food preparation and serving related, and office and administrative support, which together make up 73% of hotel workers. Other Hotel occupations include personal care, management, sales, maintenance and repair, production, and transportation.

- Retail employment is dominated by three main occupation groups: sales (35%), food preparation and serving (33%), and office and administrative support (11%). These three occupations together account for nearly 80% of retail workers. The remaining 20% of retail workers are in occupations that include management, production, and health care.

The numbers in Step #4 (Table III-1) indicate both the percentage of total employee households and the number of employee households in our hypothetical 100,000 square foot buildings.

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

In this step, occupation is translated to income based on recent Contra Costa County wage and salary information for the occupations associated with each building type. The data source is the State Employment Development Department (EDD). The wage and salary information indicated in Appendix Tables 6, 7, and 8 provided the income inputs to the model. Service workers in office buildings, for example, were assigned different income levels than service workers in hotels. This step in the analysis calculates the number of employee households that fall into each income category for each size household.

Individual *employee* income data was used to calculate the number of *households* that fall into these income categories by assuming that multiple earner households are, on average, formed of individuals with similar incomes. Employee households not falling into one of the major occupation categories per Appendix Tables 2, 3, and 4 were assumed to have the same income distribution as the major occupation categories.

See Exhibit III-1 for estimated household income distribution. See Appendix B for more information on Steps #5, #6, and #7.

Step 6 - Estimate of Household Size Distribution

In this step, household size distribution is input into the model in order to estimate the income and household size combinations that meet the income definitions established by HUD, as used by the State and the City (as presented in Section II). The household size distribution utilized in the analysis is that of Contra Costa County since the workers are more representative of the larger universe (the County) than the city of Walnut Creek.

Step 7 - Estimate of Households that meet HUD Size and Income Criteria

For this step we had to build a matrix of household size and income to establish probability factors for the two criteria in combination. For each occupational group a probability factor was calculated for each of HUD's income and household size levels. This step is performed for each occupational category and multiplied by the number of households.

Table III-1A shows the result after completing Steps #5, #6, and #7. The calculated numbers of households that meet HUD size and income criteria shown in Table III-1A are for the Very Low Income or Under 50% of Median Income Category. The methodology is repeated for each income tier (See Table III-2). At the end of these steps, for the Under 50% of Median Income category we have counted office, hotel workers, and retail workers, in our buildings of 100,000 square feet.

Summary by Income Level

Table III-2 indicates the results of the analysis for the two additional lower income categories for the three prototypical 100,000 square foot buildings. The table presents the number of households in each affordability category and the total number up to 120% of median.

The results in Table III-2 also show the worker households that fall into each income category as a percent of all new worker households. Approximately 59% of all office workers have incomes below 120% of median with most of these office workers falling into the low and moderate-income ranges. Hotel and Retail workers have comparably lower incomes, with 94% of workers below 120% of median including more than 50% of workers in the very low-income category.

Adjustment for Commute Relationship

Table III-3 indicates the results of the analysis both before and after an adjustment for commute relationship. As discussed Section II, residents of Walnut Creek hold only 15.1% of the jobs in Walnut Creek. If the existing commute relationship were to hold for new employee households, only 15.1% would be expected to reside in Walnut Creek. The estimates of households for each income category in a prototypical 100,000 square foot building are adjusted downwards by this commute factor.

Summary by Square Foot Building Area

The analysis thus far has worked with prototypical buildings of 100,000 square feet. In this step, the conclusions are translated to the per square foot level and expressed as coefficients. These coefficients state the portion of a household, or housing unit, by affordability level for which each square foot of building area is associated. (See Table III-4).

This is the summary of the housing nexus analysis, or the linkage from buildings to employees, to housing demand by income level. We believe that it is a conservative (understates the low end) approximation of the households by income/affordability level associated with these building types.

TABLE III-1
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION BY BUILDING TYPE
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK, CA

Prototypical 100,000 Sq.Ft. Buildings

	OFFICE	HOTEL	RETAIL / ENTRNTMNT
Step 1 - Estimate of Employees per 100,000 Sq.Ft.			
Employee Density Factor (per sq.ft.)	220	500 *	400
Number of Employees	455	200	250
Step 2 - Adjustment for Changing Industries Replacement Factor (5%)	432	190	238
Step 3 - Adjustment for Number of Households (1.65)	262	115	144
Step 4 - Occupation Distribution[1]			
Management Occupations	8.9%	5.0%	3.7%
Business and Financial Operations	9.7%	1.2%	0.8%
Computer and Mathematical	3.4%	0.2%	0.3%
Architecture and Engineering	4.9%	0.0%	0.0%
Life, Physical, and Social Science	1.8%	0.0%	0.0%
Community and Social Services	0.3%	0.0%	0.0%
Legal	3.6%	0.0%	0.0%
Education, Training, and Library	0.2%	0.0%	0.0%
Arts, Design, Entertainment, Sports, and Media	0.8%	0.3%	0.6%
Healthcare Practitioners and Technical	8.9%	0.0%	1.4%
Healthcare Support	4.4%	0.2%	0.2%
Protective Service	0.6%	2.0%	0.4%
Food Preparation and Serving Related	0.5%	27.2%	33.2%
Building and Grounds Cleaning and Maint.	2.2%	29.0%	0.9%
Personal Care and Service	0.3%	7.3%	0.4%
Sales and Related	6.6%	3.0%	35.2%
Office and Administrative Support	37.4%	16.8%	11.0%
Farming, Fishing, and Forestry	0.0%	0.0%	0.1%
Construction and Extraction	0.7%	0.2%	0.3%
Installation, Maintenance, and Repair	3.8%	3.9%	3.4%
Production	0.6%	2.1%	2.2%
Transportation and Material Moving	0.5%	1.6%	6.0%
Totals	**100.0%**	**100.0%**	**100.0%**
Management Occupations	23.4	5.7	5.3
Business and Financial Operations	25.5	1.4	1.1
Computer and Mathematical	8.9	0.2	0.4
Architecture and Engineering	12.9	0.1	0.0
Life, Physical, and Social Science	4.6	0.0	0.0
Community and Social Services	0.7	0.0	0.0
Legal	9.5	0.0	0.0
Education, Training, and Library	0.6	0.0	0.0
Arts, Design, Entertainment, Sports, and Media	2.1	0.4	0.8
Healthcare Practitioners and Technical	23.3	0.0	2.1
Healthcare Support	11.6	0.2	0.3
Protective Service	1.5	2.3	0.6
Food Preparation and Serving Related	1.3	31.3	47.8
Building and Grounds Cleaning and Maint.	5.7	33.4	1.3
Personal Care and Service	0.8	8.4	0.5
Sales and Related	17.2	3.5	50.7
Office and Administrative Support	97.9	19.4	15.9
Farming, Fishing, and Forestry	0.1	0.0	0.1
Construction and Extraction	1.8	0.2	0.4
Installation, Maintenance, and Repair	10.0	4.5	4.9
Production	1.5	2.4	3.1
Transportation and Material Moving	1.2	1.8	8.6
Totals	**262**	**115**	**144**

* 1 employee per room @ 500 sq.ft./room

[1] See Appendix Tables 2, 4 and 6 for additional information from which the percentage distributions were derived

Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Main Model;April 2004

TABLE III-1A
ESTIMATE OF QUALIFYING HOUSEHOLDS BY INCOME LEVEL
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK, CA

Prototypical 100,000 Sq.Ft. Buildings
Analysis for Households Earning Less than 50% Median

	OFFICE	HOTEL	RETAIL / ENTRNTMNT
Step 5, 6, & 7 - Households in Major Occupation Categories Earning Less than 50% Median [1]			
Management	0.01	0.01	0.02
Business and Financial Operations	0.00	0.00	0.00
Computer and Mathematical	0.00	0.00	0.00
Architecture and Engineering	0.27	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00
Community and Social Services	0.00	0.00	0.00
Legal	0.01	0.00	0.00
Education Training and Library	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00
Healthcare Practitioners and Technical	0.00	0.00	0.00
Healthcare Support	0.71	0.00	0.00
Protective Service	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	24.44	36.42
Building Grounds and Maintenance	0.00	18.50	0.00
Personal Care and Service	0.00	2.23	0.00
Sales and Related	2.55	1.58	24.95
Office and Admin	11.00	8.16	2.96
Farm, Fishing, and Forestry	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00
Installation Maintenance and Repair	0.28	0.05	0.60
Production	0.00	0.00	0.00
Transportation and Material Moving	0.00	0.00	3.22
Total HH earning less than 50% Median - Major Occupations	14.83	54.97	68.17
HH earning less than 50% Median - "all other" occupations	1.35	4.69	5.55
Total Households Earning Less than 50% of Median	**16.2**	**59.7**	**73.7**

[1] See Appendix Tables 1, 3 and 5 for additional information on Major Occupation Categories

TABLE III-2
WORKER HOUSEHOLDS BY AFFORDABILITY LEVEL
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK, CA

Prototypical 100,000 Sq. Ft. Buildings
Analysis for Households Before Commute Adjustment

Household Income Level		OFFICE	HOTEL	RETAIL / ENTRNTMNT
Under 50% Median Income		16.18	59.67	73.72
50% to 80% Median Income		62.20	35.92	45.40
80% to 120% Median Income		76.51	12.64	16.55
	Total	**154.89**	**108.23**	**135.68**
Total New Worker Households		262	115	144
Under 50% Median Income		6.2%	51.8%	51.2%
50% to 80% Median Income		23.7%	31.2%	31.5%
80% to 120% Median Income		29.2%	11.0%	11.5%
	Total	**59%**	**94%**	**94%**

TABLE III-3
TOTAL HOUSING NEXUS COST
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK, CA

PROTOTYPICAL 100,000 SQ. FT. BUILDING
BEFORE COMMUTE ADJUSTMENT

INCOME CATEGORY	Number of Households[1]		
	Office	Hotel	Rtl./Ent.
Under 50% of Median Income[3]	16.18	59.67	73.72
50% to 80% of Median Income[3]	62.20	35.92	45.40
80% to 120% of Median Income[4]	76.51	12.64	16.55
Total	**154.89**	**108.23**	**135.68**

AFTER 15.10% Commute Adjustment

INCOME CATEGORY	Number of Households[1]		
	Office	Hotel	Rtl./Ent.
Under 50% of Median Income	2.45	9.02	11.14
50% to 80% of Median Income	9.40	5.43	6.86
80% to 120% of Median Income	11.56	1.91	2.50
Total	**23.41**	**16.36**	**20.51**

TABLE III-4
HOUSING DEMAND NEXUS FACTORS PER SQ.FT. OF BUILDING AREA
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK, CA

WITH COMMUTE ADJUSTMENT AT 15.10%

	Number of Housing Units per Sq.Ft. of Building Area[1]		
	OFFICE	**HOTEL**	**RETAIL / ENTRNTMNT**
Under 50% Median Income	0.00002446	0.00009019	0.00011143
50% to 80% Median Income	0.00009401	0.00005429	0.00006863
80% to 120% Median Income	0.00011565	0.00001911	0.00002502
Total	**0.00023412**	**0.00016359**	**0.00020508**

[1]Calculated by dividing number of household in bottom left portion of Table III-3 by 100,000 to convert households per 100,000 sq. ft. building to households per 1 sq. ft. of building.

SECTION IV: TOTAL HOUSING LINKAGE COSTS

This section takes the conclusions of the previous section on the number of households in the lower income categories associated with each building type and identifies the total cost of assistance required to make housing affordable. This section establishes a "nexus cost" for each income level to produce the "total nexus cost."

A key component of the analysis is the size of the gap between what households can afford and the cost of producing additional housing in Walnut Creek. This analysis uses a standard methodology to determine what households can afford, and compares that to the cost of providing additional housing. The analysis is conducted for the three categories of income: under 50%, 50% to 80%, and 80% to 120% of median income.

The analysis is conducted assuming rental housing for the two lower income categories under 50% and 50% to 80% of median income and ownership units for the income group from 80% to 120% of median income, or moderate income.

This following analysis is consistent with the analysis prepared by KMA for the Inclusionary Zoning Ordinance program. The study was conducted during the summer of 2003

Income and Household Size Assumptions

Income definitions for housing programs are established by HUD for varying household sizes, as presented in Section II. 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 policies. Multi-family rental apartments are the assumed type for the under 50% and 50% to 80% of median income groups. For-sale condominium and town home units are assumed for the 80% to 120% of median group. The average three-person household is assumed to be accommodated in a two-bedroom unit per local policy.

The top income of the qualifying range in each category has been utilized to determine maximum housing costs in this analysis. That is to say that the upper limit of households in the 50% to 80% of median category will be 80% of Median. Units restricted to this income level are eligible to count toward the City's Regional Housing Need for low income units. In reality, this understates the costs, because not all households in the category have incomes at the upper end of the range.

Development Costs

The cost of developing new residential units in Walnut Creek was assembled from a number of sources as part of the work program for the Inclusionary Program. The City provided

appraisals with land cost estimates and the names of residential developers and brokers active in Walnut Creek that we contacted. As supplemental information, KMA is actively working on a number of rental and condominium projects at various locations in the greater Bay Area and has recent developer pro forma financial analyses from central Contra Costa cities. Once the market research was completed, KMA and other City staff met with eleven residential development professionals to discuss the analysis and its reasonableness. Based on the input received from the meeting, KMA made adjustments to the analysis.

Typical residential projects and their costs range considerably throughout the city. For instance, the downtown Core area allows greater densities, which combined with limited land, results in the need to build parking in structures, which dramatically increases costs. KMA worked with City of Walnut Creek staff to identify suitable housing prototype projects for Walnut Creek in terms of density configuration, unit sizes, parking solutions, etc.

From the assembled sources, KMA prepared a summary of total development costs for prototypical apartment units and for townhouse or condominium units. In both cases, prototypes were described and costs identified for core area conditions and for outside the core area in a lower density configuration.

In all cases the two bedroom unit was used as the average size, although the square footage of the unit was smaller in the Core Area prototypes. To determine the affordability gap, a match to a household of three persons was utilized per state and local policy.

The affordability gaps were established as indicated below. These are the same gaps presented and utilized in the Inclusionary Zoning materials. The costs and values supported are summarized in Table IV-1 with additional materials in the report Appendix section.

Affordability Gaps for two bedroom units/three person households
(AMI refers to Area Median Income)

Rental Units

Core Area

Very Low Income @ 50% AMI	$193,000
Low Income @ 80% AMI	$111,600

Outside Core Area

Very Low Income @ 50% AMI	$125,000
Low Income @ 80% AMI	$ 42,700

Ownership Units

Core Area Condominiums/Townhomes outside the Core

Moderate Income @ 120 AMI	$184,500

For purposes of the nexus analysis, the lower affordability gaps were utilized, or for units outside the Core Area in the case of rentals. The affordability gaps for the Core Area condominiums and the townhomes outside the core were essentially the same.

Total Linkage Costs

The last step in the linkage fee analysis marries the findings on the numbers of households at each of the income ranges associated with the three types of buildings to the affordability gaps, or the costs of delivering housing in Walnut Creek.

Table IV-4 summarizes the analysis. The numbers of households associated with each building type by income category, indicated on the left side of the table, are drawn from the end of the Section III analysis, still assuming 100,000 sq.ft. buildings. The affordability gaps are from the prior discussion. The "Nexus Cost Per Square Foot" shows the results of the calculation: number of units times affordability gap, divided by 100,000 sq. ft. to bring the conclusion back to the per square foot level.

The total nexus costs are calculated for the total impacts, as indicated in the upper portion of the table, and after an adjustment for the fact that only a share of the worker households will seek housing in Walnut Creek. The 2000 Census found that slightly over15% of those who work in Walnut Creek also live in Walnut Creek. If this relationship is applied a far lower nexus cost is determined from the analysis, as indicated in the lower portion of the table.

The use of the existing commute relationship is subject to discussion. The 15% finding is already a reflection of housing market conditions and affordability constraints. With no policy intervention or attempt to improve the supply housing affordable to workers, one could argue that in the future even fewer than 15% will be able to find affordable housing in Walnut Creek. Some communities regard the share as a policy target and utilize a percentage that reflects the share of new demand that the city would like to try and accommodate locally. Absent a directive to do otherwise, we have utilized the existing commute relationship for calculating the nexus cost.

The figures below present the total jobs housing nexus costs per square foot of building area, after the 15.1% adjustment for the commute relationship. Table IV-2 at the end of this section presents the analysis before and after the commute adjustment.

	Office	Hotel	Retail
Under 50% Median Income	$3.06	$11.27	$13.93
50% to 80% Median Income	4.01	2.32	2.93
80% to 120% Median Income	21.34	3.53	4.62
Total	$28.41	$17.12	$21.48

These costs express the total linkage or nexus costs for the three building types. These total nexus costs represent the ceiling for any requirements placed on new construction for affordable housing. The totals are not the recommended levels for fees; they represent only the maximums established by this analysis, below which fees or other requirements may be set.

Section V provides materials to assist policy makers in identifying appropriate fee levels for Walnut Creek that are below the calculated nexus costs.

TABLE IV - 1
AFFORDABILITY GAP SUMMARY
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

Numbers Rounded (000's)

2 Bedroom Unit
3 Person Household

	Development Cost	Value Suported/ Sales Price	Affordability Gap
Rental Units			
Core Area			
Very-Low @ 50% AMI	$243,300	$49,400	$193,900
Low @ 80% AMI	$243,300	$131,700	$111,600
Outside Core Area			
Very-Low @ 50% AMI	$180,000	$55,000	$125,000
Low @ 80% AMI	$180,000	$137,300	$42,700
Ownership Units			
Core Area/Townhome			
Moderate @ 120% AMI	$500,600	$316,100	$184,500

TABLE IV-2
TOTAL HOUSING NEXUS COST
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK, CA

BEFORE COMMUTE ADJUSTMENT

INCOME CATEGORY	Number of Households[1]			Affordability Gap[2]	Nexus Cost Per Sq. Ft.		
	Office	Hotel	Rtl./Ent.		Office	Hotel	Rtl./Ent.
Under 50% of Median Income[3]	16.18	59.67	73.72	$125,000	$20.22	$74.58	$92.15
50% to 80% of Median Income[3]	62.20	35.92	45.40	$42,700	$26.56	$15.34	$19.39
80% to 120% of Median Income[4]	76.51	12.64	16.55	$184,500	$141.16	$23.33	$30.54
Total	**154.89**	**108.23**	**135.68**		**$187.94**	**$113.25**	**$142.08**
Total New Worker Households	262	115	144				

AFTER 15.10% COMMUTE ADJUSTMENT

INCOME CATEGORY	Number of Households[1]			Affordability Gap[2]	Nexus Cost Per Sq. Ft.		
	Office	Hotel	Rtl./Ent.		Office	Hotel	Rtl./Ent.
Under 50% of Median Income[3]	2.45	9.02	11.14	$125,000	$3.06	$11.27	$13.93
50% to 80% of Median Income[3]	9.40	5.43	6.86	$42,700	$4.01	$2.32	$2.93
80% to 120% of Median Income[4]	11.56	1.91	2.50	$184,500	$21.34	$3.53	$4.62
Total	**23.41**	**16.36**	**20.51**		**$28.41**	**$17.12**	**$21.48**

[1] Per 100,000 sq. ft. of building area

[2] Assume two-bedroom unit.

[3] Assumes households are housed in rental units

[4] Assumes households are housed in ownership units.

Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Main Model;April 2004

SECTION V – MATERIALS TO ASSIST IN DESIGNING A FEE PROGRAM FOR WALNUT CREEK

The purpose of this section is to provide information to assist policy makers in designing a fee program for Walnut Creek. As indicated at the end of the previous section, the nexus analysis establishes maximum levels supported by the analysis. Recognizing a variety of City objectives, policy makers may set the fee or other obligations at any level below the maximum, and may add other program features to meet local goals and objectives.

Policy makers may establish fees below the maximum for the four building types — office, hotel, and retail — in the same proportion to the nexus, such as 20%, or may independently select the fee for each building type, weighing the policy considerations separately for each one.

Ordinance or Program Features

Before addressing alternative fee levels, it is helpful to recognize that a linkage fee program and governing ordinance can contain other features to address specific concerns and policy objectives. Following are the most important ones:

A. Minimum Size Threshold

A minimum size threshold sets a building size over which the fees are in effect. Some very large cities with high fees tend to set thresholds at 25,000, 50,000 or even 100,000 square feet so that only large projects are impacted. Smaller cities may look to the, say, 10,000 to 25,000 square foot range. Other cities, such as Sacramento, have no minimum size thresholds where projects of any size (including building additions) are subject to the fee. Some cities charge a lesser fee on small projects.

B. Geographic Area Variations

Some cities with linkage programs exclude specific areas such as redevelopment areas, and enterprise or empowerment zones. The rationale is that these areas are designated as needing investment and should be spared all burdens possible. Cities with redevelopment areas that are no longer highly blighted or with redevelopment agencies that have substantial financial resources generally do not see these areas as candidates for exemption.

In general, geographic area special treatments are recommended only when they are previously established areas for another purpose. The same is true for the reverse treatment — having a fee program in effect only for a designated area such as the high density

commercial zone or a newly developing area. Designating geographic boundaries for the sole purpose of fee application is to be avoided.

Walnut Creek could consider a different fee level for inside the Core Area as distinct from the rest of Walnut Creek.

C. Specific Use Exemptions

Some cities exempt specific uses in their programs. The most common example is childcare centers, either free standing or within any building type.

D. Other Features

Other ordinance features include provisions to address demolition of existing structures where an adjustment for the building removed is taken into account. Changes of use can also be accommodated with an adjustment, especially when a building is converted from a less employment dense use to a more employment dense use, such as a warehouse to an office or retail use.

For mixed-use projects, the City may wish to consider an ordinance provision that addresses the fact that the commercial portion may owe an affordable housing fee and the residential portion may be have an inclusionary housing requirement. Instead of a double requirement, mixed-use projects could be given a "break" to allow one obligation, such as commercial on the ground floor, to contribute to the creation of affordable units on the upper floors. This could serve to encourage mixed-use projects, if that is a policy objective. Such a provision could be limited to certain geographic areas, such as the downtown, or allowed wherever mixed-use is permitted. The design of such a provision would be best configured after the basic linkage fee obligation has been established.

Total Development Cost Evaluation

One way to evaluate the impact of alternative fee levels on the development of commercial projects is to examine alternatives in the context of total development costs. The chief concern of policy makers in deliberating housing linkage fees is whether the fee will have a negative impact on development activity. Most cities want more financial resources for affordable housing but not at the expense of driving desirable development activity outside the city borders.

The purpose is to evaluate alternative fee levels in the context of total development costs to ascertain to what extent costs would be increased assuming, for a moment, all other costs are fixed. For Walnut Creek typical buildings, total development costs have been assembled

inclusive of land, building construction, tenant improvements, and all indirect or "soft" costs such as architectural and engineering, City and impact fees, financing, etc.

As with the residential total development costs, the City provided KMA with names of proposed and recently developed projects. The City provided staff reports for the projects for the purpose of illustrating development profiles. All the prototypes were selected and discussed with City staff. For cost assumptions, KMA drew from its extensive experience with pro forma financial analyses for projects located within the Walnut Creek area and elsewhere in the Bay Area.

There are a number of key variables in each configuration. One major variable is land cost. Land inside the Core Area is far more valuable than in other locations in Walnut Creek. In fact, based on our research, development inside the Core Area may cost from 50% to twice more than outside the Core. For purposes of evaluating the impact of alternative fee levels, KMA applied land cost ranges for each prototype and location.

Another variable for each configuration is the building shell and tenant improvement costs by building location and use. In regard to location, again, development in the Core Area will support a higher level of architectural treatment and attract the most expensive tenant improvements in the City.

Finally, fees charged by the City and other districts vary by project use. The calculations of fees for each prototype were reviewed by City staff and are shown in Appendix Table 13.

Office Outside Core Area

In the near term future it is unlikely that office projects will be developed within the Core Area due to construction and land costs and due to regional office market conditions. Therefore, it is assumed that the office prototype is located outside the Core Area.

The prototype project is a 14,000 square foot office building with two-stories and 51 surface parking spaces. Land has been assumed available in the range of $20 to $40 per square foot land area, which is consistent with recent appraisals conducted for commercial land in Walnut Creek (outside the Core Area). The "all in" cost range is $264 to $326 per square foot. (Table V-1)

The office market in Walnut Creek includes medical office, an important component due to the number of local hospitals and concentration of medical services in the area. Medical office developments require more parking spaces per City code and construction with more plumbing and other adjustments, resulting in a higher development cost per square foot.

Retail

Inside Core

The retail prototype inside the Core Area is an 18,500 square foot free standing one-story retailer project with a rooftop parking deck, which is an atypical parking solution. The prototype has been drawn from the "Talbott's" store submittal and adapted to represent a more generic prototype. Land inside the Core Area has been assumed available in the $95 to $150 per square foot range for a commercial use. The low end "all in" cost is approximately $344 per square foot and the higher cost is $435 per square foot (Table V–2). Many projects are experiencing even higher costs due to even higher value sites. The retail rent levels achievable in the Walnut Creek retail core support these costs.

Outside Core Area

The retail prototype outside the Core Area is a 5,000 square foot free standing one-story building with 23 surface parking spaces. As with the office prototype, land has been assumed available in the $20 to $40 per square foot range for a retail use. The low-end cost is approximately $246 per square foot "all in" and the higher end cost is $328 per square foot. (Table V-2)

Summary

In summary, total development costs fall in a wide range of $250 to $430 per square foot for the building types under consideration. More specifically, the "all in" cost outside the Core Area is in the $250 to $350 per square foot range. Development costs inside the Core Area often run higher by as much as $100 per square foot or more.

Fees as Percent of Total Development Cost

One way to approach fee levels for each building type is by considering a percentage of total development cost. Table V-3 summarizes the total development cost conclusions for the four building types and indicates a fee level at 1% and 3%. Generally, these percentage levels are low enough so as not to alter development decisions and impact growth.

The information on the table could also be used as a tool to adjust the fee amount by building type, in conjunction with the nexus findings. In Walnut Creek costs are similar for office and retail buildings, so there could be a rationale for having one fee for these uses. Also from the perspective of administering the fee, this could be desirable.

Impact on Land Value

The evaluation of total development costs assumes, for the moment, that all costs are fixed. While most costs of development are relatively fixed, or at least not subject to adjustment as a result of local policies, land cost is not. Land cost is the variable in the equation that adjusts to reflect the income capacity of the project, based on all other costs and market forces. Rents and values generally act independent of costs. As a result, an increased cost of development due to a local fee will not be directly translated to a higher rent being achievable. The variable that can adjust is land value. If costs are increased as a result of a local fee, land values are theoretically decreased by a corresponding amount.

Assuming that fee impacts are absorbed by land value adjustments, it is useful to examine impacts on land values in Walnut Creek inside and outside the Core Area. Land values are far lower outside the Core Area, $20 to $40 per square foot as opposed to over $100 per square foot inside the Core. However, site coverage or density is also very different. Site coverage outside the Core is likely to be 25% to 50%, or 0.25 to 0.5:1 FAR. Inside the Core density ranges from 0.85 to 1.5:1 FAR.

The result of these differences in combination is a land value per square foot of building area that is a far narrower range.

$20 land, 0.25 FAR = land value $80 per square foot building area
$40 land, 0.5 FAR = land value $80 per square foot building area
$100 land, 0.85 FAR = land value $85 per square foot building area
$150 land, 1.5 FAR = land value $100 per square foot building area

Another words, the impact of the fee on land value affects the narrow range of land values per square foot of building area. A $5 per square foot fee, for example, would reduce the above range of values by $5, from $80 to $100 per square foot down to $75 to $95 per square foot. The impact of a fee on projects inside the Core Area would not vary substantially from the impact on project outside the Core Area, or at least far less than the difference between $20 land and $100 land would suggest.

The word theoretically is used in the discussion. In the real world, other forces, most particularly market demand drive land values far more powerfully than fees do. Any fee that Walnut Creek is likely to assess will have only a marginal impact on land values.

Fee Revenues

Another consideration in evaluating alternative fee levels is the amount of fee revenues to be generated. Table V-4 presents the revenue that the City would receive, assuming a range of fee levels. For purposes of the illustration, fees of $2 per square foot to $8 per square foot are

assumed and the maximum development allowed by the Growth Limitation Plan (GLP) is achieved each year on average. As previously presented in Section II, the GLP limits annual commercial development to 75,000 square feet per year plus there is an opportunity to develop approximately 10,000 square feet of small projects per year. Given this projection, each dollar of fee will produce about $85,000 in fee revenue per year.

With the estimated revenue generated from a $2 and $8 per square foot fee at maximum construction levels (85,000 sq.ft./yr), the program could fund the full gap for 2 to 8 rental units outside of the Core Area per year, based on the gaps established in Section IV. Most cities leverage their linkage fee revenues to assist projects, using funds from multiple sources, such as the federal tax credit program (Low Income Housing Tax Credits). Walnut Creek's experience has been to expend $35,000 to $55,000 per unit from local funds to supplement other sources. At this rate, the program with a $5 fee could fund 8 to 12 additional units per year.

Other Jurisdiction Housing Linkage Programs

It is always of interest to policy decision makers to know what other cities and counties have in place in the way of similar programs. As a generality, compared to inclusionary programs, linkage programs are far fewer in number.

Table V-5 is a two-page chart summarizing the programs in a range of California jurisdictions. The organization of the chart is by fee amount. The top tier is cities with fees of $10 per square foot or more – San Francisco, Palo Alto and Menlo Park, all cities with very powerful market conditions, the current recession notwithstanding.

The second tier is five cities that have programs in the $4 to $9 per square foot range. These cities include several Silicon Valley cities and a few others. Most updates underway and most new programs will probably adopt fees somewhere in this range.

The third tier is cities with fees under $4 per square foot, many of them in the $1 per square foot range. With some exceptions, these tend to be older programs or programs in jurisdictions where a huge volume of construction activity is occurring such as Sacramento and San Diego.

The chart provides information on a number of program features in addition to the fee amount, such as exemptions and thresholds.

Summary

This section of the report has provided materials to assist in deliberating a range of options in selecting fee levels for each building type. All fee levels likely to be considered are well below the "total nexus cost" maximums established by the analysis.

The experience of other cities is often a powerful influence in approaching fee programs. The chart on other jurisdictions points to a number of cities with some similarity to Walnut Creek and most of them are in the mid tier fee range, or $4 to $9 per square foot. Given the market strength and development cost structure of Walnut Creek, coupled with the limited volume of construction activity due to the Growth Limitation Plan, we would expect Walnut Creek to consider fees in the mid range.

To recapitulate, the major approaches to fee setting are (no order implied):

- All building types subject to a single level fee – such as $5 per square foot

- Apply a percentage to the total nexus cost. For example, at 20%, the fees would be:

Office	$5.68 per square foot
Retail	$4.29
Hotel	$3.42

- Apply a percent of total development cost. For example, at 2% of the bottom of the cost range fees, fees would be:

Office	$5.28 per square foot
Retail (Core)	$6.88
Retail (outside Core)	$4.92
Hotel (no analysis provided; more expensive to develop)	

- Select fee levels independently based on policy considerations, using no formula.

In summary, the City is fee to design the fee program to meet its objectives. We believe that all the formula approaches have validity and there is no one correct way to select fees, beyond a careful consideration of local policies and goals.

TABLE V-1
TOTAL DEVELOPMENT COSTS - OFFICE PROTOTYPE
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

	Small Project Outside Core Area *14,000 SF* *2 stories* *Surface Parking* *0.5 :1 FAR*		
Development Costs ($/SF Bldg Area)			
Site Work		**$5**	
Direct Costs (Excl parking)			
Building Shell	$110	-	$120
Tenant Improvements	$20	-	$30
Contingency 10%	$13	-	$15
Total	**$143**	-	**$165**
Indirect & Financing Costs		$57	
Plus: City Fees[1]		9.58	
Other District Fees[2]		3.56	
Total		**$70**	
Parking Cost			
Required Number of Spaces[3]		51	
Cost per Space		$1,500	/Space
Cost per SF Bldg Area		**$5**	
Land Cost Range			
Per SF Land	$20	-	$40
Per SF Building Area	**$40**	-	**$80**
Total Development Costs			
Per SF Bldg Area	**$264**	-	**$326**

[1] The permit fees, calculated via the City of Walnut Creek website, are attached and include the following fees: Art, Drainage, Planning, Property Development and SMI, Site Development, Traffic Mitigation and Underground Utilites. Encroachment Fees are excluded. See Appendix Table 13.

[2] Includes fire, school, water and sewer fees. See Appendix Table 13.

[3] Office parking requirement: standard office requires one space per 250 SF net rentable space; medical office requires one space per 200 SF net rentable space.

Note: A medical office development would require more parking spaces and unique construction resulting in a more expensive office project.

TABLE V-2
TOTAL DEVELOPMENT COSTS - RETAIL PROTOTYPES
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

	Shops/Restaurant Project Outside Core Area			**Free-Standing Retailer[1] Core Area**		
	5,000 BSF			*18,500 BSF*		
	1 Story			*1 Story*		
	Surface Parking			*Roof Parking[2]*		
	0.35 :1 *FAR*			0.8 :1 *FAR*		
Development Costs ($/SF Building Area)						
Site Work	**$5**			**$5**		
Direct Costs (Excl parking)						
Building Shell	$85	-	$95	$95	-	$105
Tenant Improvements	$20	-	$30	$20	-	$30
10% Contingency	$11	-	$13	$12	-	$14
Total	**$116**	-	**$138**	**$127**	-	**$149**
Indirect & Financing Costs	$46			$51		
Plus: City Fees[3]	11.10			7.83		
Other District Fees[4]	1.49			1.45		
Total	**$59**			**$60**		
Parking Cost						
Required Number of Spaces[5]	23			41		
Cost per Space	*$1,500* /Space			*$15,000* /Space[6]		
Cost per SF Bldg Area	**$7**			**$33**		
Land Cost Range						
psf Land area	$20	-	$40	$95	-	$150
psf Bldg area	**$60**	-	**$120**	**$119**	-	**$188**
Total Development Costs						
Per SF Bldg Area	**$246**	-	**$328**	**$344**	-	**$435**

Zoning Assumptions: Outside Core is General Retail. Inside Core is Pedestrian Retail.

[1] Prototype is the Talbot's project

[2] Roof top deck

[3] The permit fees, calculated via the City of Walnut Creek website, are attached and include the following fees: Art, Drainage, Planning, Property Development and SMI, Site Development, Traffic Mitigation and Underground Utilites. Nonresidential projects <15,000 SF do not pay Art Fee. Projects in the Core are not charged the Utility Fee. See Appendix Table 13.

[4] Includes fire, school, water and sewer fees. See Appendix Table 13.

[5] Parking codes: Community Commercial requires one space/200 SF net rentable area (unless Eating & Drinking - one space per 75 SF dining area). Pedestrian Retail requires one space/300 SF (net rentable area). Talbot project was required to replace 33 existing spaces on the site and add parking spaces for net new square footage.

[6] Parking cost based on structured parking, assumed to be comparable to roof solution with ramp and extra building strengthening.

TABLE V-3
ALTERNATIVE FEE LEVELS AS SHARE OF TOTAL DEVELOPMENT COST
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

Building Type	Total Development Cost per SF	Fee @ 1%	Fee @ 3%
Retail Prototypical Project Outside Core	$246 - $328	$2.46 - $3.28	$7.38 - $9.84
Retail Prototypical Project Inside Core	$344 - $435	$3.44 - $4.35	$10.31 - $13.04
Office Prototypical Project Outside Core	$264 - $326	$2.64 - $3.26	$7.91 - $9.77

TABLE V-4
NON-RESIDENTIAL CONSTRUCTION ACTIVITY
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

REVENUE PROJECTIONS BASED ON CONSTRUCTION ACTIVITY

Fee Per Square Foot	$2	$5	$8
Annual Growth (SF)[1]	85,000	85,000	85,000
Annual Revenue	$170,000	$425,000	$680,000
Ten Year Total Revenue	$1,700,000	$4,250,000	$6,800,000

[1] Assumes the GLP set maximum for annual commercial construction. Also includes an allowance for small misc. projects, which are exempt from the GLP.

TABLE V-5
OTHER JOBS HOUSING LINKAGE PROGRAMS
HOUSING IMPACT FEE NEXUS ANALYSIS
CITY OF WALNUT CREEK

HIGH FEE CITIES

Jurisdiction	Yr. Adopted /Updated	Current Fee Levels per SF	Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
City of Palo Alto	1984 Updated in March 2002.	• Commercial & Industrial $15.58	No Minimum Threshold. Churches; colleges and universities; comm'l recreation; hospitals, convalescent facilities; private clubs, lodges, fraternal org.'s; private educational facilities; and public facilities are exempt.	Yes	Very Substantial	Fee is adjusted annually based on CPI.
City and County of San Francisco	1981 Updated fees in 2002.	• Office $14.96 • Hotel $11.21 • Retail $13.95	25,000 gross SF threshold. Excludes: redevelopment areas and Port.	Yes, may contribute land for housing.	Very Substantial	$40 million raised
City of Menlo Park	1998	• Commercial & Industrial $10.00. • Warehousing, printing, assembly $5.45.	10,000 gross SF Threshold. Churches, private clubs, lodges, fraternal orgs and public facilities are exempt.	Yes, may provide housing on- or off-site.	Very Substantial	Fee is adjusted annually based on CPI.

MEDIUM FEE CITIES

Jurisdiction	Yr. Adopted /Updated	Current Fee Levels per SF	Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
City of Mountain View	2001	• Office/Industrial $6.00 • Hotel $2.00 • Retail $2.00	Fee is 50% less if building meets thresholds: Office <10,000 sf Hotel <25,000 sf Retail <25,000 sf	Yes	Very Substantial	
County of Marin	2003	• Office/R&D $7.19 • Retail/Rest. $5.40 • Warehouse $1.95 • Hotel/Motel $1,746/room • Manufacturing $3.74	No minimum threshold.	Yes, preferred.	Substantial	
City of St. Helena	2004	• Office $3.40 * • Comm./Retail $4.30 * • Hotel $3.14 * • Winery/Industrial $1.05 * (See comments).	Small childcare facilities, churches, non-profits, vineyards, and public facilities are exempt.	Yes, subject to City Council approval.	Substantial.	* Fee will be phased-in over 3 time periods. Fees listed are full fees, starting in October 2005.
City of Oakland	2002	• Office/ Warehouse $4.00	25,000 sf exemption	Yes - Can build units equal to total eligible sf times .0004	Moderate	Fee will be effective July 1, 2005. Fee due in 3 installments. Fee will be adjusted with an annual escalator tied to residential construction cost increases.
Town of Corte Madera	2001	• Office $4.79 • R&D lab $3.20 • Light Industrial $2.79 • Warehouse $0.40 • Retail $8.38 • Com Services $1.20 • Restaurant $4.39 • Hotel $1.20	No Minimum Threshold.	NA	Substantial	

TABLE V-5 (cont'd)
OTHER JOBS HOUSING LINKAGE PROGRAMS
HOUSING IMPACT FEE NEXUS ANALYSIS
CITY OF WALNUT CREEK

City of Berkeley	1993	• All Commercial $4.00 • Industrial $2.00	7,500 SF threshold.	Yes.	Substantial.	Fee has not changed since 1993; may negotiate fee downward based on hardship or reduced impact.
City of Sunnyvale	1984 Updated in 2003.	• Industrial & Office $8	Applies only to the portion of the project that is in excess of allowable FAR (typically 0.35:1).	NA	Very Substantial	Fee had not changed since the 1980's, until fee was recently raised from $7.19.
City of Santa Monica	1984 Updated fees in 2002.	• Office only • $3.87 per square foot for first 15,000 sf • $8.61 per square foot in excess of 15,000 sf.	15,000 sf exemption for new construction, 10,000 sf exemption for additions.	N/A	Very Substantial	
LOW FEE CITIES						
Jurisdiction	**Yr. Adopted /Updated**	**Current Fee Levels per SF**	**Thresholds & Exemptions**	**Build Option/ Other**	**Market Strength**	**Comments**
City of Alameda	1989	• Office $3.63 • Retail $1.84 • Warehouse $0.63 • Hotel/Motel $931 per room	No Minimum Threshold.	Yes. Program specifies number of units per 100,000 square feet.	Moderate	Fee may be adjusted by CPI.
City of Petaluma	2003	• Commercial $2.08 * • Industrial $2.15 * • Retail $3.59 * (See Comments)	Fee is 50% less if located in redevelopment project area	NA	Moderate/ Substantial	* Fee will be phased-in over 3 years beginning 2005. Fees listed are full fees, starting in 2007.
City of San Diego	1990 Fees reduced in mid 90s; have not been readjusted.	• Office $1.06 • Hotel $0.64 • R&D $0.80 • Retail $0.64 • Manufacturing $0.64 • Warehouse $0.27	No Minimum Threshold. No exempted uses. Does exclude some geographic areas.	Can dedicate land or air rights in lieu of fee.	Substantial	Since 1990, $33 million raised. Update in process.
County of Napa (Also City of Napa)	County – Updated 2004 City 1999	• Office $2.00 • Hotel $3.00 • Retail $2.00 • Industrial $1.00 • Warehouse $0.80	No Minimum Threshold. Non-profits are exempt.	Units or land dedication; on a case by case basis.	Moderate/ Substantial	There is a companion fee of 1% of construction costs on all residential construction. Napa City rates not updated to these levels yet.
City and County of Sacramento	1989 Updated in 2004.	• Office $1.79 * • Hotel $1.70 * • R&D $1.52 * • Commercial $1.43 * • Manufacturing $1.12 * • Warehouse/Office $0.65 * • Warehouse $0.49 * (See Comments)	No Minimum Threshold. Service uses operated by non-profits are exempt.	Pay 20% fee plus build at reduced nexus. (Not meaningful given amount of fee).	Moderate	* Higher fees will be phased in; fees listed will be in effect July 2005. Applies to all non-residential construction; alternate fees for North Natomas area. Since 1989, raised more than $11 million.
City of Cupertino	1993	• Office & Industrial $2.25.	No Minimum Threshold.	NA	Very Substantial	Fee is adjusted annually based on CPI. Update in process.
City of Livermore	1999	• Retail $0.81 • Service Retail $0.61 • Office $0.52 • Hotel $397 per room	No Minimum Threshold. Church; private or public schools.	Yes; negotiated on a case-by-case basis.	Moderate	

TABLE V-5 (cont'd)
OTHER JOBS HOUSING LINKAGE PROGRAMS
HOUSING IMPACT FEE NEXUS ANALYSIS
CITY OF WALNUT CREEK

		• Manufacturing $0.25 • Warehouse $0.07 • Business Park $0.52 • Heavy Industrial $0.26 • Light Industrial $0.16				
City of Pleasanton		• Commercial, Office & Industrial $2.31 sq. ft.	No Minimum Threshold	NA	Moderate	Fee increased in 2003.

Programs Pending: San Mateo
San Rafael

Appendix A

APPENDIX TABLE 1
INCOME DEFINITIONS BY HOUSEHOLD SIZE[1]
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

	Median	Very-Low Income 0%-50% of Median		Low Income 51%-80% of Median[1]		Moderate Income 81%-120% of Median	
Household Size							
1 Person	$53,600	$0	$28,050	$28,050	$44,850	$44,850	$64,350
2 Person	61,300	0	32,050	32,050	51,250	51,250	73,500
3 Person	68,950	0	36,050	36,050	57,650	57,650	82,700
4 Person	76,600	0	40,050	40,050	64,100	64,100	91,900
5 Person	82,750	0	43,250	43,250	69,200	69,200	99,250
6 Person	88,850	0	46,450	46,450	74,350	74,350	106,600
7 Person	95,000	0	49,650	49,650	79,450	79,450	113,950
8 Person	101,100	0	52,850	52,850	84,600	84,600	121,300

2003 Income Standards Distributed by HUD, Contra Costa County, California

APPENDIX TABLE 2
2001 NATIONAL OFFICE WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING LINKAGE ANALYSIS
CITY OF WALNUT CREEK, CA

Major Occupations (3% or more)	2001 National Office Industry Occupation Distribution	
Management Occupations	1,346,090	8.9%
Business and Financial Operations Occupations	1,471,760	*9.7%*
Computer and Mathematical Occupations	512,930	*3.4%*
Architecture and Engineering Occupations	742,930	*4.9%*
Legal Occupations	548,850	*3.6%*
Healthcare Practitioners and Technical Occupations	1,340,230	*8.9%*
Healthcare Support Occupations	668,330	*4.4%*
Sales and Related Occupations	989,350	*6.6%*
Office and Administrative Support Occupations	5,643,210	*37.4%*
Installation, Maintenance, and Repair Occupations	574,250	*3.8%*
All Other Office Related Occupations	1,261,030	*8.4%*
INDUSTRY TOTAL	15,098,960	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Office; Major Occupations Matrix; 4/26/2004;

APPENDIX TABLE 3
2001 NATIONAL HOTEL WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING LINKAGE ANALYSIS
CITY OF WALNUT CREEK, CA

Major Occupations (3% or more)	2001 National Hotel Industry Occupation Distribution	
Management Occupations	85,090	5.0%
Food Preparation and Serving Related Occupations	464,970	*27.2%*
Building and Grounds Cleaning and Maintenance Occupations	495,780	*29.0%*
Personal Care and Service Occupations	124,860	*7.3%*
Sales and Related Occupations	51,500	*3.0%*
Office and Administrative Support Occupations	288,260	*16.8%*
Installation, Maintenance, and Repair Occupations	66,340	*3.9%*
All Other Hotel Related Occupations	134,600	*7.9%*
INDUSTRY TOTAL	1,711,400	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Hotel; Major Occupations Matrix; 4/26/2004

APPENDIX TABLE 4
2001 NATIONAL RETAIL WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING LINKAGE ANALYSIS
CITY OF WALNUT CREEK, CA

Major Occupations (3% or more)	2001 National Retail Industry Occupation Distribution	
Management Occupations	854,840	3.7%
Food Preparation and Serving Related Occupations	7,739,140	*33.2%*
Sales and Related Occupations	8,201,870	*35.2%*
Office and Administrative Support Occupations	2,575,220	*11.0%*
Installation, Maintenance, and Repair Occupations	798,620	*3.4%*
Transportation and Material Moving Occupations	1,398,630	*6.0%*
All Other Retail Related Occupations	1,757,080	*7.5%*
INDUSTRY TOTAL	23,325,400	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Retail; Major Occupations Matrix; 4/26/2004;

APPENDIX TABLE 5
AVERAGE ANNUAL COMPENSATION, 2002
OFFICE WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
CITY OF WALNUT CREEK, CA

Occupation [4]	2002 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total Office Workers
Management Occupations			
Chief Executives	$140,000 [3]	8.4%	0.8%
General and Operations Managers	$92,800	23.9%	2.1%
Administrative Services Managers	$67,600	5.0%	0.4%
Computer and Information Systems Managers	$96,300	4.4%	0.4%
Financial Managers	$91,400	16.6%	1.5%
Engineering Managers	$109,000	4.3%	0.4%
Property, Real Estate, and Community Association Managers	$44,000	10.0%	0.9%
All Other Management Occupations	$81,200	27.4%	2.4%
Weighted Mean Annual Wage	***$88,100***	**100.0%**	**8.9%**
Business and Financial Operations Occupations			
Management Analysts	$87,300	10.5%	1.0%
Accountants and Auditors	$59,600	24.7%	2.4%
Financial Analysts	$66,000	6.3%	0.6%
Personal Financial Advisors	$69,100	5.0%	0.5%
Loan Officers	$68,100	13.6%	1.3%
All Other Business and Financial Operations Occupations (avg all categories)	$60,500	39.8%	3.9%
Weighted Mean Annual Wage	***$64,900***	**100.0%**	**9.7%**
Computer and Mathematical Occupations			
Computer Programmers	$76,200	12.7%	0.4%
Computer Software Engineers, Applications	$86,300	11.5%	0.4%
Computer Software Engineers, Systems Software	$81,900	11.6%	0.4%
Computer Support Specialists	$51,700	15.0%	0.5%
Computer Systems Analysts	$72,500	13.6%	0.5%
Database Administrators	$60,900	4.4%	0.1%
Network and Computer Systems Administrators	$64,500	10.4%	0.4%
Network Systems and Data Communications Analysts	$65,800	6.6%	0.2%
All Other Computer and Mathematical Occupations (avg all categories)	$73,100	14.2%	0.5%
Weighted Mean Annual Wage	***$70,800***	**100.0%**	**3.4%**
Architecture and Engineering Occupations			
Architects, Except Landscape and Naval	$60,200	10.0%	0.5%
Surveyors	$61,900	5.8%	0.3%
Civil Engineers	$70,400	14.5%	0.7%
Electrical Engineers	$71,100	5.8%	0.3%
Electronics Engineers, Except Computer	$75,800	4.4%	0.2%
Mechanical Engineers	$78,400	5.5%	0.3%
Architectural and Civil Drafters	$41,700	9.3%	0.5%
Civil Engineering Technicians	$46,700	5.3%	0.3%
Electrical and Electronic Engineering Technicians	$51,600	5.3%	0.3%
Surveying and Mapping Technicians	$51,800	5.0%	0.2%
All Other Architecture and Engineering Occupations (avg all categories)	$65,300	29.0%	1.4%
Weighted Mean Annual Wage	***$62,300***	**100.0%**	**4.9%**
Legal Occupations			
Lawyers	$100,300	64.2%	2.3%
Paralegals and Legal Assistants	$50,800	26.2%	1.0%
All Other Legal and Related Occupations	$37,700	9.6%	0.3%
Weighted Mean Annual Wage	***$81,300***	**100.0%**	**3.6%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Office; Compensation; 4/26/2004;

Occupation [4]	2002 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total Office Workers
Healthcare Practitioners and Technical Occupations			
Dentists	$140,000 [3]	6.1%	0.5%
Family and General Practitioners	$112,100	5.4%	0.5%
Registered Nurses	$72,600	19.6%	1.7%
Dental Hygienists	$77,000	10.8%	1.0%
Licensed Practical and Licensed Vocational Nurses	$44,600	7.7%	0.7%
All Other Healthcare Practitioners and Technical Occupations (avg all categories)	$62,800	50.4%	4.5%
Weighted Mean Annual Wage	***$72,200***	**100.0%**	**8.9%**
Healthcare Support Occupations			
Nursing Aides, Orderlies, and Attendants	$26,600	4.7%	0.2%
Dental Assistants	$34,400	38.2%	1.7%
Medical Assistants	$30,600	37.2%	1.6%
Medical Transcriptionists	$35,200	5.8%	0.3%
All Other Health Care Support Occupations (avg all categories)	$28,700	14.1%	0.6%
Weighted Mean Annual Wage	***$31,900***	**100.0%**	**4.4%**
Sales and Related Occupations			
First-Line Supervisors/Managers of Non-Retail Sales Workers	$76,300	5.5%	0.4%
Insurance Sales Agents	$54,200	16.9%	1.1%
Securities, Commodities, and Financial Services Sales Agents	$70,800	26.3%	1.7%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	$57,600	4.7%	0.3%
Real Estate Sales Agents	$41,400	10.1%	0.7%
Telemarketers	$28,100	7.1%	0.5%
All Other Sales and Related Occupations (avg all categories)	$35,400	29.4%	1.9%
Weighted Mean Annual Wage	***$51,300***	**100.0%**	**6.6%**
Office and Administrative Support Occupations			
First-Line Supervisors/Managers of Office and Administrative Support Workers	$49,800	7.3%	2.7%
Bookkeeping, Accounting, and Auditing Clerks	$36,800	7.0%	2.6%
Tellers	$22,400	9.3%	3.5%
Customer Service Representatives	$34,100	10.1%	3.8%
Receptionists and Information Clerks	$26,000	7.2%	2.7%
Executive Secretaries and Administrative Assistants	$42,000	6.6%	2.5%
Legal Secretaries	$54,800	4.1%	1.5%
Medical Secretaries	$33,300	4.1%	1.5%
Secretaries, Except Legal, Medical, and Executive	$34,300	7.0%	2.6%
Office Clerks, General	$27,900	10.1%	3.8%
All Other Office and Admin. Support Occupations (avg all categories)	$33,400	27.2%	10.2%
Weighted Mean Annual Wage	***$34,300***	**100.0%**	**37.4%**
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	$63,600	7.2%	0.3%
Telecommunications Equipment Installers and Repairers, Except Line Installers	$39,100	27.6%	1.1%
Maintenance and Repair Workers, General	$39,300	40.2%	1.5%
Telecommunications Line Installers and Repairers	$48,900	12.6%	0.5%
All Other Installation, Maintenance, and Repair Occupations (avg all categories)	$40,700	12.3%	0.5%
Weighted Mean Annual Wage	***$42,400***	**100.0%**	**3.8%**
			91.6%

[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 2001 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2002. OES 2001 - Oakland MSA includes Alameda and Contra Costa Counties.

[3] Wage data was not available as it cannot be reliably calculated due to hourly wages averaging in excess of $70 per hour, assumed $140,000 ($70/hr @2000 hrs/year)

4 including Occupations representing 4% or more of the major occupation group

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Office; Compensation; 4/26/2004;

APPENDIX TABLE 6
AVERAGE ANNUAL COMPENSATION, 2002
HOTEL WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
CITY OF WALNUT CREEK, CA

Occupation [4]	2002 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total Hotel Workers
Management Occupations			
General and Operations Managers	$92,800	18.8%	0.9%
Sales Managers	$94,500	10.7%	0.5%
Financial Managers	$91,400	5.5%	0.3%
Food Service Managers	$44,600	14.0%	0.7%
Lodging Managers	$44,100	30.4%	1.5%
All Other Management Occupations	$81,200	20.7%	1.0%
Weighted Mean Annual Wage	***$69,000***	**100.0%**	**5.0%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors/Managers of Food Preparation and Serving Workers	$29,600	4.1%	1.1%
Cooks, Restaurant	$25,100	11.3%	3.1%
Food Preparation Workers	$21,600	4.2%	1.1%
Bartenders	$14,900	8.2%	2.2%
Waiters and Waitresses	$16,600	29.4%	8.0%
Food Servers, Nonrestaurant	$17,300	8.0%	2.2%
Dining Room and Cafeteria Attendants and Bartender Helpers	$17,500	9.3%	2.5%
Dishwashers	$16,900	8.2%	2.2%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	$17,100	4.9%	1.3%
Food Preparation and Serving Related Workers, All Other	$18,900	12.5%	3.4%
Weighted Mean Annual Wage	***$18,600***	**100.0%**	**27.2%**
Building and Grounds Cleaning and Maintenance Occupations			
First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	$37,900	6.6%	1.9%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	$24,300	10.0%	2.9%
Maids and Housekeeping Cleaners	$19,700	78.7%	22.8%
All Other Building and Grounds Cleaning and Maintenance Workers	$30,200	4.7%	1.4%
Weighted Mean Annual Wage	***$21,900***	**100.0%**	**29.0%**
Personal Care and Service Occupations			
Amusement and Recreation Attendants	$18,600	6.2%	0.5%
Baggage Porters and Bellhops	$19,800	18.5%	1.3%
Concierges	$22,500	5.0%	0.4%
Personal Care and Service Workers, All Other	$30,700	70.3%	5.1%
Weighted Mean Annual Wage	***$27,500***	**100.0%**	**7.3%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Hotel; Compensation; 4/26/2004

Occupation [4]	2002 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total Hotel Workers
Sales and Related Occupations			
First-Line Supervisors/Managers of Retail Sales Workers	$40,300	5.8%	0.2%
Cashiers	$20,700	32.6%	1.0%
Counter and Rental Clerks	$23,000	4.8%	0.1%
Retail Salespersons	$24,900	9.5%	0.3%
Sales and Related Occupations (avg all categories)	$35,400	47.3%	1.4%
Weighted Mean Annual Wage	***$29,300***	**100.0%**	**3.0%**
Office and Administrative Support Occupations			
First-Line Supervisors/Managers of Office and Administrative Support Workers	$49,800	6.1%	1.0%
Bookkeeping, Accounting, and Auditing Clerks	$36,800	7.8%	1.3%
Hotel, Motel, and Resort Desk Clerks	$18,600	56.7%	9.6%
Reservation and Transportation Ticket Agents and Travel Clerks	$26,200	4.7%	0.8%
All Other Office and Admin. Support Occupations (avg all categories)	$33,400	24.7%	4.2%
Weighted Mean Annual Wage	***$25,900***	**100.0%**	**16.8%**
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	$63,600	6.8%	0.3%
Maintenance and Repair Workers, General	$39,300	81.5%	3.2%
Installation, Maintenance, and Repair Workers, All Other	$45,400	11.8%	0.5%
Weighted Mean Annual Wage	***$41,700***	**100.0%**	**3.9%**
			92.1%

[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 2001 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2002. OES 2001 - Oakland MSA includes Alameda and Contra Costa Counties.

[3] Wage data was not available as it cannot be reliably calculated due to hourly wages averaging in excess of $70 per hour, assumed $140,000 ($70/hr @2000 hrs/year)

4 including Occupations representing 4% or more of the major occupation group

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Hotel; Compensation; 4/26/2004

APPENDIX TABLE 7
AVERAGE ANNUAL COMPENSATION, 2002
RETAIL WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
CITY OF WALNUT CREEK, CA

Occupation [4]	2002 Avg. Compensation [1]	% of Total Occupation Group [2]	% of Total Retail Workers
Management Occupations			
Chief Executives	$140,000 [3]	4.4%	0.2%
General and Operations Managers	$92,800	48.9%	1.8%
Sales Managers	$94,500	6.4%	0.2%
Food Service Managers	$44,600	24.5%	0.9%
All Other Management Occupations	$81,200	15.7%	0.6%
Weighted Mean Annual Wage	***$81,400***	**100.0%**	**3.7%**
Food Preparation and Serving Related Occupations			
First-Line Supervisors/Managers of Food Preparation and Serving Workers	$29,600	6.7%	2.2%
Cooks, Fast Food	$15,700	7.6%	2.5%
Cooks, Restaurant	$25,100	7.6%	2.5%
Food Preparation Workers	$21,600	7.0%	2.3%
Combined Food Preparation and Serving Workers, Including Fast Food	$16,400	24.3%	8.1%
Waiters and Waitresses	$16,600	22.0%	7.3%
Dishwashers	$16,900	4.8%	1.6%
All Other Food Preparation and Serving Related Occupations	$18,900	20.1%	6.7%
Weighted Mean Annual Wage	***$18,800***	**100.0%**	**33.2%**
Sales and Related Occupations			
First-Line Supervisors/Managers of Retail Sales Workers	$40,300	13.1%	4.6%
Cashiers	$20,700	36.3%	12.8%
Retail Salespersons	$24,900	44.2%	15.5%
All Other Sales and Related Occupations (avg all categories)	$35,400	6.4%	2.3%
Weighted Mean Annual Wage	***$26,100***	**100.0%**	**35.2%**
Office and Administrative Support Occupations			
First-Line Supervisors/Managers of Office and Administrative Support Workers	$49,800	5.9%	0.7%
Bookkeeping, Accounting, and Auditing Clerks	$36,800	8.8%	1.0%
Customer Service Representatives	$34,100	9.2%	1.0%
Shipping, Receiving, and Traffic Clerks	$28,600	8.2%	0.9%
Stock Clerks and Order Fillers	$26,500	39.1%	4.3%
Office Clerks, General	$27,900	8.5%	0.9%
All Other Office and Admin. Support Occupations (avg all categories)	$33,400	20.4%	2.3%
Weighted Mean Annual Wage	***$31,200***	**100.0%**	**11.0%**
Installation, Maintenance, and Repair Occupations			
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	$63,600	9.3%	0.3%
Automotive Body and Related Repairers	$43,000	6.5%	0.2%
Automotive Service Technicians and Mechanics	$31,400	42.1%	1.4%
Tire Repairers and Changers	$24,100	8.3%	0.3%
Maintenance and Repair Workers, General	$39,300	6.5%	0.2%
Installation, Maintenance, and Repair Occupations (avg all categories)	$40,700	27.4%	0.9%
Weighted Mean Annual Wage	***$37,600***	**100.0%**	**3.4%**
Transportation and Material Moving Occupations			
Driver/Sales Workers	$26,000	12.3%	0.7%
Truck Drivers, Heavy and Tractor-Trailer	$40,100	4.6%	0.3%
Truck Drivers, Light Or Delivery Services	$28,000	15.8%	0.9%
Service Station Attendants	$18,900	4.3%	0.3%
Industrial Truck and Tractor Operators	$33,900	4.1%	0.2%
Cleaners of Vehicles and Equipment	$21,200	6.3%	0.4%
Laborers and Freight, Stock, and Material Movers, Hand	$24,400	24.8%	1.5%
Packers and Packagers, Hand	$22,100	22.3%	1.3%
All Other Transportation and Material Moving Occupations	$39,900	5.4%	0.3%
Weighted Mean Annual Wage	***$26,200***	**100.0%**	**6.0%**
			92.5%

[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 2001 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2002. OES 2001 - Oakland MSA includes Alameda and Contra Costa Counties.

[3] Wage data was not available as it cannot be reliably calculated due to hourly wages averaging in excess of $70 per hour, assumed $140,000 ($70/hr @2000 hrs/year)

4 including Occupations representing 4% or more of the major occupation group

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Retail; Compensation; 4/26/2004;

APPENDIX TABLE 8
OCCUPATIONS INCLUDED IN ANALYSIS
JOBS HOUSING LINKAGE ANALYSIS
CITY OF WALNUT CREEK, CA

The occupational breakdown of employment by land use is based on the
2001 National Industry-Specific Occupational Employment and Wage Estimates
For these Industries/SIC codes

Office

Includes Standard Industrial Classification (SIC)

Division E: Transportation, Communications, Electric, Gas, and Sanitary Service
- From SIC Major Group 48 - Communications:
  - SIC 481 - Telephone Communications
  - SIC 489 - Communications Services, not elsewhere classifie

Division H: Finance, Insurance, and Real Estat
- From SIC Major Group 60 - Depository Institutions
  - SIC 602 - Commercial Banks
  - SIC 603 - Savings Institutions
  - SIC 606 - Credit Unions
  - SIC 609 - Functions related to depository banking
- SIC Major Group 61 - Non-Depository Credit Institutions
- From SIC Major Group 62 - Security and Commodity Brokers, Dealers, Exchanges, and Services
  - SIC 621 - Security Brokers, Dealers, and Flotation Companies
  - SIC 622 - Commodity Contracts Brokers and Dealers
  - SIC 628 - Services Allied with the exchange of securitie
- SIC 641 - Insurance Agents, Brokers, and Service
- SIC 65 - Real Estate
- SIC 67 - Holding and Other Investment Offices

Division I: Services
- From SIC Major Group 80 - Health Services:
  - SIC 801 - Offices and Clinics of Doctors of Medicine
  - SIC 802 - Offices and Clinics of Dentists
  - SIC 803 - Offices and Clinics of Doctors of Osteopathy
  - SIC 804 - Offices and Clinics of Other Health Practitioners
- SIC Major Group 81 - Legal Services
- SIC Major Group 87 - Engineering, Accounting, Research, Management, and Related Service

Hotel

Includes Standard Industrial Classification (SIC) Sub-Group
- 701 - Hotels and Motels.

Retail

Includes Standard Industrial Classification (SIC) Major Groups
- SIC 52 - Building Materials, Hardware, Garden Supply and Mobile Home Dealer
- SIC 53 - General Merchandise Stores
- SIC 54 - Food Stores
- SIC 55 - Automotive Dealers and Gasoline Service Station
- SIC 56 - Apparel and Accessory Stores
- SIC 57 - Home Furniture, Furnishings and Equipment Stores
- SIC 58 - Eating and Drinking Places
- SIC 59 - Misc. Retail

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: 21101.005\WCrk-Main Model; Appendix Table 8; 4/26/2004

APPENDIX TABLE 9
AFFORDABLE RENTS
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

	1-Bdrm	**2-Bdrm**	3-Bdrm
II. Low Income			
Income @ 80% County Median	$49,040	**$55,160**	$61,280
% of Income Allotted to Housing	30.00%	**30.00%**	30.00%
Monthly Housing Expenses	$1,226	**$1,379**	$1,532
(Less) Utilities Expenses	(79)	**(102)**	(117)
Monthly Rent	$1,150	**$1,280**	$1,420
III. Very-Low Income			
Income @ 50% County Median	$30,650	**$36,050**	$38,300
% of Income Allotted to Housing	30.00%	**30.00%**	30.00%
Monthly Housing Expenses	$766	**$901**	$958
(Less) Utilities Expenses	(79)	**(102)**	(117)
Monthly Rent	$690	**$800**	$840
Household Size	2 persons	**3 persons**	4 persons

2003 Income Standards Distributed by HUD; Contra Costa County

Rounded to 10th

Utility expenses based on the Contra Costa Housing Authority estimate for tenant furnished utilities and other services (March 2003).
Expenses will vary by project and type of utilities.

APPENDIX TABLE 10
AFFORDABILITY GAP - APARTMENT UNITS (TWO BEDROOM)
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

Apartment Project Type	Rent		Less Op Exp[1]	NOI	Unit Value Supported[2]	Affordability Gap Per Unit[3]
	Month	Year				
Mid-/Higher Density (50 DUA)						
Market	$1,931	$23,170	($6,140)	$17,030	$243,300	
Affordable						
Low Income @ 80% AMI	$1,280	$15,360	($6,140)	$9,220	$131,700	($111,600)
Very-Low Income @ 50% AMI	$800	$9,600	($6,140)	$3,460	$49,400	($193,900)
Low to Mid Density (30 DUA)						
Market	$1,530	$18,360	($5,750)	$12,610	$180,000	
Affordable						
Low Income @ 80% AMI	$1,280	$15,360	($5,750)	$9,610	$137,300	($42,700)
Very-Low Income @ 50% AMI	$800	$9,600	($5,750)	$3,850	$55,000	($125,000)

AMI - Area Median Income for Contra Costa County as established and published annually by HUD

[1] General operating expenses based on average operating expenses from similar size apartment projects. Property taxes are based on unit value. Therefore average operating expenses are different for the two prototypes. It is important to note that property tax-exemption is NOT assumed in this analysis.

[2] Net operating income capitalized at 7%. *Rounded to nearest 100.*

[3] Gap is the difference between value supported at market rents and value supported at affordable rents.

APPENDIX TABLE 11
SUPPORTABLE HOUSING PRICES (1-BEDROOM TO 4-BEDROOMS)
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

Affordable Units

	1-Bdrm	**2-Bdrm**	3-Bdrm	4-Bdrm
Moderate Income				
Household Income @ 120% County Median	$73,560	**$82,740**	$91,920	$99,300
Income Allotted to Housing @ 35% of Income	25,750	**28,960**	32,170	34,760
(Less) Ongoing Expenses[1]	5,630	**6,180**	6,634	7,090
Income Available for Mortgage	$20,120	**$22,780**	$25,536	$27,670
Maximum Purchase Price[2]	$279,230	**$316,140**	$354,390	$384,010
Low Income				
Household Income @ 80% County Median	$49,040	**$55,160**	$61,280	$66,200
Income Allotted to Housing @ 35% of Income	17,164	**19,306**	21,448	23,170
(Less) Ongoing Expenses[1]	4,810	**5,310**	5,740	6,110
Income Available for Mortgage	$12,354	**$13,996**	$15,708	$17,060
Maximum Purchase Price[2]	$171,450	**$194,240**	$218,000	$236,760

Market Rate Units (2 Bedroom)

Condominium	**$500,600**
Townhome	**$510,000**

Household Size	2 persons	3 persons	4 persons

2003 Income Standards Distributed by HUD (Contra Costa County)

[1] Includes utilities, homeowner association dues and property taxes based on unit value

[2] Debt @ 6.50 % interest (7.58% mortgage constant) & down payment @ 5.00 % of market price.)

Prepared by Keyser Marston Associates, Inc.
File name: 21101.005\Appendix Table 11;12/7/2004

APPENDIX TABLE 12
AFFORDABILITY GAP
OWNERSHIP UNIT - TWO BEDROOM
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK
Numbers Rounded (00's)

	Two-Bedroom Unit/Three Person Household			
	Income Target % AMI[1]	Annual HH Income	Maximum Sales Price	Gap Per Unit[2]
Affordable Units				
Moderate Income	120%	$82,740	$316,100	$184,500
Low Income	80%	$55,160	$194,200	$306,400

[1] AMI = Area Median Income

[2]Gap is the difference between value supported at market rents and value supported at affordable rents.

APPENDIX TABLE 13
ESTIMATED COMMERCIAL DEVELOPMENT FEES SUMMARY
JOBS HOUSING NEXUS ANALYSIS
CITY OF WALNUT CREEK

City Fees[1]

	Size (SF)	Planning	Impact ($/SF)					Total	
		$/SF	Art	Traffic	Drainage	Site Improvement	Underground Utilities	$/SF	Project
Retail Prototypical Project Outside Core[2]	5,000	$2.90	N/A	$3.18	$0.82	$0.60	$3.60	$11.10	$55,483
Retail Prototypical Project Inside Core[3]	18,500	$1.98	$0.48	$3.53	N/A	$0.60	$1.25	$7.83	$144,924
Office Prototypical Project Outside Core[2&3]	14,000	$2.25	N/A	$4.70	$0.25	$0.60	$1.78	$9.58	$134,071

Other District Fees

	Size (SF)	Fee ($/SF)					Total	
		Fire	School	Traffic[4]	Water[5]	Sewer[6]	$/SF	Project
Retail Prototypical Project Outside Core	5,000	$0.09	$0.33	N/A	$0.01	$1.07	$1.49	$7,445
Retail Prototypical Project Inside Core	18,500	$0.07	$0.33	N/A	$0.00	$1.04	$1.45	$26,777
Office Prototypical Project Outside Core	14,000	$0.08	$0.33	$1.96	$0.00	$1.19	$3.56	$49,775

[1] The following fees were calculated via the City of Walnut Creek website or City staff based on project size and value: Art, Drainage, Planning, Property Development and SMI, Site Development, Traffic Mitigation and Underground Utilites. Encroachment Fees are excluded.

[2] Art fee does not apply to projects with less than 15,000 BSF.

[3] Drainage fee does not apply to projects located inside Core.

[4] Subregional traffic impact fee is charged for office and industrial uses.

[5] Assumes water hookups exist on site. Nominal fee to change account name.

[6] Excludes credit for payments paid by prior occupant, if any.

APPENDIX TABLE 14
COMMERCIAL DEVELOPMENT FEE COMPARISON
WALNUT CREEK AND SELECTED OTHER CITIES
JOBS HOUSING NEXUS LINKAGE ANALYSIS
CITY OF WALNUT CREEK

City	**City of Walnut Creek**	**City of Concord**	**Pleasanton**	**Livermore**	**Sunnyvale**
Population Size	64,296	121,780	63,654	73,345	131,760
Growth Limitation	Yes				
Imp Plan Check Fee				2%-15% value (slide scale)	
Planning Fees	$1.98-$2.25 /SF			Bldg Pmt fee	
Site Development	12% value	$1.10-$5.75 /SF		formula	
Construction Tax	12% value			1-3/4% C$	0.54% value
City Storm Drainage	$.25 - $.82 /SF			$0.08 /SF	
Underground Utilities	$15 /Linear SF				
General Plan Maint.					0.05% value
Traffic Mitigation					
	$3.18-$3.53 /SF Retail	$3.75-$5.75 / SF Com		$5.63 /SF Retail	South of Rt 237:
	$4.70 /SF Office/Indus			$4.26-$10.86 /SF Office/Indus	$3.34 /SF Retail
					$1.32-$2.66 /SF Office/Indus
					Indus Area North of Rt 237:
					$4.01-$9.61 /SF Retail
					$3.03 /SF Indus
Sub-Regional Fee	$1.96 /SF Office/Indus	$1.96 /SF Office/Indus	$.76 - $1.02 /SF Com	$1.14 - $3.07 /SF Com	$1.00 /SF Com
In-Lieu Hsg Impact Fee			$0.48 /SF	$5.20-$8.09 /SF Com	$12.41 /SF office/indus
				$0.72-$5.16 /SF Industrial	(>.35 FAR)
Art		N/A			
	< 15,000 SF = exempt				
	15,000-25,000 SF = .5% C$				
	> 25,000 SF = 1% C$				
Child Care	N/A	0.5% D$			

SF Square Feet
C$ Construction Cost
D$ Development Cost

[1] The permit fees, calculated via the City of Walnut Creek website, are attached and include the following fees: planning, SMI, Property Development and Traffic
[2] Excludes credit for payments paid by prior occupant, if any.

Appendix B

APPENDIX B: SUPPLEMENTAL NEXUS MODEL DOCUMENTATION

This appendix provides additional information on the methodology incorporated into the nexus model as presented and summarized in Section III of this report. Steps #5, #6 and #7 of the model address the income and household size combinations of worker households. Because data is not available that allows us to directly estimate how the workers in each occupation are distributed in terms of household size and income and the category definitions (such as 30% to 50% median), we developed a model to estimate the distribution based on U.S. Census information.

To briefly recap the prior steps:

- Step #1 is the estimate of number of employees based on a density factor.
- Step #2 is an adjustment for changing employment composition.
- Step #3 is an adjustment from employees to employee households
- Step #4 is an occupational distribution of the employees by building type.

Step #5 – Estimate of Employee Households Meeting the Lower Income Definitions

The percent of employees in each occupation category that fall at or below the respective income thresholds is estimated in Step #5.

The data source is the California Employment Development Department compensation survey by detailed occupational category. The 2001 survey was the most recent available at the time of analysis preparation. The composition of each occupational group (such as share of hotel service workers that are maids, vs. food preparation workers, etc.) combined with 25^{th}, 50^{th}, and 75^{th} percentile compensation data was evaluated to estimate an income distribution for each occupation group.

The three income categories that are the focus of this analysis — under 50% of median, 50% to 80% of median, and 80% to 120% of median — were charted for each household size up to six person households, using the HUD income levels.

The HUD income levels apply to household income, rather than employee income. To group employee *households* into the HUD categories based on *individual* employee income, multiple earner households were assumed to be formed of individuals of similar income. The average number of workers per worker household as noted in Section I is 1.65. Given these assumptions, employee households will, on average, have 1.65 times the income that an individual employee has. Thus employee income was adjusted upwards by a factor of 1.65 for the purpose of calculating the number of employee households in each income category.

Using the compensation data by occupation, the share of employee households that fall at or below the income level was estimated.

Step #6 – Estimate of Household Size Distribution

Since the HUD criteria for income definition is dependent on a household meeting a combination of income and size requirements, the household size distribution ranging from one person to six person households was input into the model.

For the Walnut Creek analysis, the household size characteristics of the county was utilized since workers in the City live all over the County area and are more similar to the larger area than the characteristics of those who live in the City.

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

This step calculates the number of employee households that meet HUD criteria for each income category, separately analyzed for the employees associated with each building type. Using a matrix format, a probability factor was calculated for each of the income subgroups (based on the U.S. Census), and then totaled. This number represents the probability that a household in a given occupation category will meet both income and household size criteria established by HUD.