

Report

Jobs Housing Nexus Analysis

Prepared for:
Napa County

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INTRODUCTION

The following report summarizes an analysis of the impacts of non-residential development on the demand for affordable housing in the County of Napa. The report has been prepared by Keyser Marston Associates, Inc. for Napa County, pursuant to a contract to prepare a nexus study and to assist in updating the County's jobs housing impact fee program.

Background

Napa County adopted an ordinance in 1993 establishing a housing impact fee program. The fee program was supported by a study prepared in 1992 entitled Napa Jobs Housing Nexus Study, City and County of Napa. The 1992 work program was guided by a Jobs Housing Advisory Committee that had been formed to represent affected parties in both the City and the County, and included a cross section of City and County staff, representatives from industrial and business interests, the wine industry, housing advocates and community leaders. This report is an update of the earlier study, also by Keyser Marston Associates (KMA).

The Airport Industrial Area Analysis

This nexus report has been produced along with a companion document on the Airport Industrial Area entitled, Market and Jobs/Housing Projections Update, Napa Airport Industrial Area (A.I.A.). The A.I.A. Report is an in-depth examination of development activity in the A.I.A., a set of market based projections of future development, and an analysis of employment growth in the A.I.A. and associated housing demand impacts. The A.I.A. report is being prepared for a range of planning purposes while the nexus analysis is being prepared to serve as a basis for updating the housing impact fee program.

This nexus analysis report addresses the entire unincorporated area of Napa County, of which the A.I.A. is a major subset.

Both reports address employment levels and growth and associated housing demand by affordability level, and compare the projections to those prepared by the Association of Bay Area Governments (ABAG).

Purpose

The purpose of a nexus analysis is to document the linkages among construction of new workplace buildings (such as office, industrial and retail), the employees that work in them, and the demand for affordable housing. Since the jobs in all buildings cover a range of compensation levels, and the households a range of sizes, there is need for additional housing at all affordability levels. This analysis quantifies the housing need at each affordability level associated with each type of workplace building.

This analysis examines six types of workplace buildings, per direction of County staff.

- Office/High Tech/R&D
- Hotel/Resort
- Retail/Entertainment
- Winery
- Manufacturing/General Industrial
- Warehousing/Storage

These building types represent a minor adjustment over the 1992 analysis and ordinance. Research and Development (R&D), previously treated as a separate building type, has been merged with office in that building shells, parking requirements and other standards of the two uses are similar. Furthermore, R&D buildings have represented minimal activity, or only 1% of all non-residential building area permitted in the 2000 through 2003 period.

The conclusion of the nexus analysis is the number of households, or housing units in demand by affordability level, associated with each building type for a given amount of floor area. 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 to meet the requirements of AB 1600, as contained in California Government Code Section 66000 and following. Such analyses are called linkage or nexus analyses.

Affordability Levels

The housing affordability problems in Napa County now extend well beyond low income households. Households of median and moderate income cannot afford to purchase the minimal new units being delivered by the market place in the County. Staff directed KMA to add the moderate income tier to the affordability levels in the analysis. The three affordability levels addressed are:

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

Report Organization

The report is organized into five sections as follows:

- Section I – presents a summary of the linkage concept and some of the key issues surrounding nexus analyses for jobs and housing.

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- Section II – provides an overview of the economic climate in Napa County and some of the key conditions affecting the nexus analysis.
 - Section III – presents an analysis of the jobs and housing relationships associated with individual prototype buildings. It is a “micro economic” analysis that concludes with a quantification of the number of households at each income level associated with each building type.
 - Section IV - summarizes the cost of delivering housing units affordable to households at the various income levels, allocated to each square foot of the various building types.
 - Section V – provides information to assist policy makers in evaluating fee levels and other program features for the update to the Napa County program.
 - 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 were used wherever possible. The major sources were the U.S. Census 2000 and the California Employment Development Department. While we believe all sources utilized are sufficiently accurate for the purposes of these analyses, we cannot guarantee their accuracy. Keyser Marston Associates, Inc. assumes no liability for information from these and other sources.

SECTION I – THE NEXUS CONCEPT AND MAJOR ISSUES

Introduction

This section outlines the nexus concept and some of the key issues surrounding the linking of new non-residential development to the demand for new residential units in Napa County.

The nexus analysis and discussion focus on the relationships among development, growth, employment, income of workers and demand for housing. The analysis yields a connection between new construction of types of buildings in which there are workers 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 the 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. Here, the problem is the lack of affordable housing and the action contributing to the problem is building workspaces that mean more jobs and worker households needing more affordable housing.

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 demonstrate that there is a reasonable relationship between the fee amount and the cost of mitigating the problem that the fee addresses. Studies by local governments designed to fulfill the requirements of AB 1600 reports 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 Court 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 County; these workers demand additional housing in proximity to the jobs, a portion of which needs to be affordable to the workers in lower and middle income households.

The methodology utilized in this analysis is "micro" analysis that examines individual 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.
- Then, 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 lower to middle 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 San Francisco Bay Area 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 of this outmigration.

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 County of Napa in its Housing Element, the Affordability Housing Task Force Report and other materials clearly document that the housing needs of the existing lower and middle 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 30% of income for rent as set forth in federal and state guidelines, overcrowding and other factors which are extensively documented by the Census and other 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.

Local analyses of housing conditions have found that new housing affordable to lower and middle income households is not being added to the supply in sufficient quantity to meet the needs of new employee households. If this were not the case and significant numbers of units were being added to the supply to accommodate the low to middle income groups, or if residential units in Napa County 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 Napa County may be occupied partly, or even perhaps totally, by employees relocating from elsewhere in County. Buildings are often leased entirely to firms relocating from other buildings in the same jurisdiction. However, when a firm relocates to a new building from elsewhere in the region, there is a space in an existing building that is vacated and 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 middle income workers associated with each type of building and significantly understates the impacts.

If the concept of indirect employees were introduced into the analysis, one might ask about 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 and thus conservatively counts only direct impacts.

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 was 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 more than half 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.

When KMA was preparing the 1992 jobs housing analysis the closure of Mare Island had been announced and a significant number of Mare Island workers who lived in Napa faced loss of employment. These workers would presumably find new work in Napa and thus some of the employment in new buildings would be for workers who would not be new to the County and already had housing. To address this situation a 10% discount was utilized, which is to say that for all new jobs, one of ten would not be net new and the worker household already lived in Napa.

After reviewing the Napa economy at the time of this update, the conclusion is that there are no major declines or shifts in evidence. However, to allow for minor adjustments or declines, as perhaps in the mining sector, a 5% discount is utilized in the analysis.

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.

Other Napa County Affordable Housing Programs

Napa County is committed to creating new opportunities for affordable housing as well as preserving the existing affordable housing stock.

The County has a comprehensive and multifaceted program that tackles the affordable housing shortage from many approaches. The inclusionary program makes all residential construction contribute funds to help finance the construction of more affordable units. The job housing linkage program is but one of many programs in the Napa County that raises funds to increase the supply of affordable housing.

SECTION II – MACRO ECONOMIC JOBS HOUSING ANALYSIS

This section examines the relationships in the unincorporated area of Napa County that underlie jobs housing linkage. In particular, the history of non-residential construction, employment growth, and residential demand on the part of new workers in Napa is analyzed and compared to housing production.

In addition to historical data, this section contains a projection of jobs and dwelling units as prepared by 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 specified projected level of construction or 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 or rapidly than projected, then commercial and industrial construction and housing demand will be affected accordingly.

Non-Residential Construction History

Construction of commercial and industrial buildings occurs in scattered locations throughout the unincorporated area of the county and in a concentrated industrial area around the airport in the southern portion of the county. Over the last 15 years, the wineries and other agricultural areas have been the location of considerable construction of buildings related to the production of wine — buildings for the processing (manufacturing), storage (warehousing), administration and marketing (office space) and tasting rooms for the sale of wine (retail).

The County has maintained records of the square footage of buildings permitted since 1995 in the unincorporated area in general. A more comprehensive database is maintained for the Airport Industrial Area (A.I.A.) in the South County. Comparable period development is estimated as follows:

**Non-Residential Construction Activity
Napa Unincorporated Area and A.I.A.**

	<u>Total Sq.Ft.</u>	<u>Annual Average Sq.Ft.</u>
	<u>Total Unincorporated Area</u>	
1995-99 (5 yrs.)	4,554,547	910,900/Yr.
2000-03 (4 yrs.)	<u>3,003,764</u>	<u>750,940/Yr.</u>
1995-03 Total/Average	7,558,311	839,812/Yr.

	<u>A.I.A. (Included Above)</u>	
1995-99 (5 yrs.)	2,000,000*	400,000/Yr.
2000-03 (4 yrs.)	<u>1,211,590</u>	<u>302,900/Yr.</u>
1995-03 Total/Average	3,211,590	356,840/Yr.

*Estimate based on A.I.A. inventory/database.

Since the data sets are not drawn from the same database, the two sets of data may not be exactly comparable. For example, the A.I.A. data are maintained according to the building completion date and the rest of the data likely by building permit date. Nonetheless, the information enables us to conclude that the A.I.A. accounts for approximately 35% to 45% of all non-residential construction in the unincorporated area of Napa County.

Altogether, over 7.6 million square feet of new space was added during the nine year period or 840,000 square feet per year. This period is of interest because it includes a substantial boom in the national and regional economy, one that particularly fostered value increases in Napa wines and the prestige of owning winery operations in Napa County. The period also includes the post 2000 recession, when, as can be seen, the rate of construction slowed in both the A.I.A. and the remaining unincorporated area.

Development Distribution by Building Type

Since 2000, the County has also maintained the data to enable a breakdown by building type (as indicated by the following percentage distribution). If the distribution is applied to the annual average construction, the annual amount of construction is computed as follows:

2000-2003 Napa County Unincorporated Area Distribution by Building Type

<u>Building Type</u>	<u>% Composition</u>	<u>Annual Sq. Ft.</u>
Warehouse	51%	383,000
Manufacturing	21%	157,000
Office/Residential	17%	128,000
Retail	9%	67,000
Hotel	<u>2%</u>	<u>15,000</u>
Total	100%	750,000

Over half the space built in the County is warehouse and storage type space. Warehouse along with manufacturing is over 70%, or over 70% is "industrial." The other three (office, retail, hotel) are generally termed commercial uses, although a major share of the office space located within the industrial area is not pure office space and includes wholesale and fabrication uses (see A.I.A. Report).

The analysis of the A.I.A., contained in the companion document, contains an analysis of construction by building type for slightly different timeframes. From the two sources, we can conclude the following:

- Approximately half of the warehouse space built in the County (unincorporated area) is located in the A.I.A. and the rest is scattered throughout the agricultural area.
- Roughly a third of the manufacturing space, which includes wine production buildings, is included in the A.I.A. and the rest is in the agricultural areas.
- Over half the office space is in the A.I.A. and the rest is scattered in both the agricultural areas (support for wine industry operations) and small commercial sites.
- The vast majority of the retail space is not in the A.I.A. but is scattered in small commercial sites, as along major roadways.

In summary, while the A.I.A. may represent 35% to 45% of the building space, it is not evenly distributed by building type.

Employment Growth

The California Department of Employment Development (EDD) is the lead agency in the collection and maintenance of employment information, but this agency does not release information for geographic areas below the county level. ABAG works with EDD data and prepares estimates of past and current levels of employment at the sub-county level, ABAG also prepares projections based on trends and land use capacity.

ABAG's estimates for past employment levels in the unincorporated portions of Napa County are as follows:

<u>Year</u>	<u>Number of Jobs</u>	<u>ABAG Source</u>
1990	11,210	Projections 98 and all subsequent
1995	13,700	Projections 98, two estimates averaged
2000	19,440	Projections 03
1990-1995	2,490	Or approximately 500 jobs per year
1995-2000	5,740	Or approximately 1,150 jobs per year

The latter half of the 1990's was a period of substantially increased job growth in the unincorporated area of the county. While construction activity for the early portion of the decade is not available for the County, the experience of construction activity in the A.I.A. suggests a similar pattern. Table II-1 following this section presents levels of construction for various time periods prior to 2000 in the A.I.A. and it can be seen that the 1996 to 2000 period growth was roughly 2.8 times the rate of construction in the 1991-95 period. The earlier period was one of national and regional recession and also an earlier stage in the establishment of the A.I.A. as a competitive industrial location on a regional level.

An examination of building construction in the unincorporated area related to employment growth demonstrates the linkage between construction and job growth. Annual construction in the late 1990's was 909,000 square feet per year (rounded) and job growth per ABAG was 1,150 jobs per year. The average density computes to 790 square feet per job.

An analysis of the construction by building type, as presented previously, using employment density factors developed as part of the Airport Industrial Area work program, yields job growth similar to the ABAG estimates. The A.I.A. report summarizes an investigation into density of employment that particularly focused on very large warehouse and winery type uses. These uses were found to be of very low density, or an average in the range of 4,000 square feet per employee. Assuming this warehouse density, manufacturing at 900 square feet per employee, and the commercial uses in the 350 to 500 square feet per employee, the construction in the county during the latter half of the 1990's produces job growth similar to the ABAG projection.

In summary, non-residential construction and employment growth during the 1990 to 2000 period demonstrates the linkage between construction activity and job growth.

Characteristics of Napa County Employees and Their Households

This section examines several key characteristics of Napa County 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 new workers in Napa County buildings will seek housing within the County. 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 new workers were already living locally and had housing. 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 do not work. 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 Napa County was 1.71. Since workers in the unincorporated area of Napa County are likely to live all over the County, the County average is a good reflection of workers in the unincorporated area.

Wages and Salaries of Napa County Workers and Household Income

The average wage or salary of Napa County workers and the income of households formed by the 1.71 workers determine the household's ability to afford housing. Each year, the California

Employment Development Department (EDD) reports information on average wages and salaries paid to Napa County workers, by occupation.

A summary of the occupations associated with each building type was developed from the 2002 National Industry-Specific Occupational Employment Estimates, produced by the U.S. Bureau of Labor Statistics, which cross-references occupations by industry. Appendix Tables 1, 3, 5, 7, 9, and 11 present summaries for each building type.

Following is a summary table of average salary levels for major occupation groups by building type. The three occupations with the greatest share of employment are provided for each building type. A detailed summary of wages and salaries for occupations in each building type is provided in Appendix Tables 2, 4, 6, 8, 10, and 12.

**Compensation by Occupation by Building Type
Napa County**

<u>Building Type</u>	<u>Major Occupation Groups</u>	<u>% of Employment</u>	<u>Average Annual Compensation</u>
<i>Office/Tech/R&D</i>			
	Office and Administrative Support	42%	\$30,200
	Business and Financial Operations	16%	\$53,300
	Management	10%	\$90,100
<i>Hotel</i>			
	Building and Grounds (incl. Housekeeping)	30%	\$21,200
	Food Preparation & Serving	29%	\$19,400
	Office and Administrative Support	17%	\$24,100
<i>Retail / Restaurant / Entertainment</i>			
	Sales	34%	\$25,700
	Food Preparation & Serving	30%	\$19,600
	Office and Administrative Support	11%	\$27,500
<i>Wine Production</i>			
	Production Occupations	31%	\$29,500
	Transportation & Material Moving	25%	\$29,000
	Office and Administrative Support	11%	\$29,200
<i>Manufacturing / Industrial</i>			
	Construction and Extraction	33%	\$52,000
	Production Occupations	24%	\$31,500
	Installation, Maintenance, and Repair	10%	\$39,100

<u>Building Type</u>	<u>Major Occupation Groups</u>	<u>% of Employment</u>	<u>Average Annual Compensation</u>
<i>Warehousing / Storage</i>			
	Transportation and Material Moving	44%	\$27,800
	Office and Administrative Support	22%	\$27,700
	Sales (Wholesale)	14%	\$45,700

Source: California Employment Development Department, 2002 Occupational Employment Statistics Survey, Wages 3rd Quarter 2003, Napa County

The occupations with the largest share of jobs in the lowest compensation levels are in the retail and hotel industries, or the industries related to Napa's tourism sector.

Household Income

When workers in these occupations form households, their income, either alone or in combination with other workers, produces the household income. In addition, of course, there may be children and/or other household members who are not employed. According to HUD, the annual median income of a four-person household in Napa County for the year 2004 is \$73,900. This analysis focuses on three classifications of household income:

- 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 upper end of the income classifications for two, three and four person households in Napa County for 2004 appear in the table below:

<u>Two Person HH</u>	
50% of Median Income	\$29,550
80% of Median Income	\$46,000
Median Income	\$59,100
120% of Median Income	\$70,920
<u>Three Person HH</u>	
50% of Median Income	\$33,250
80% of Median Income	\$51,750
Median Income	\$66,500
120% of Median Income	\$79,800
<u>Four Person HH</u>	
50% of Median Income	\$36,950
80% of Median Income	\$57,500
Median Income	\$73,900
120% of Median Income	\$88,680

Source: City of Napa Housing Authority, U.S. Dept of Housing and Urban Development.

The above income levels are the levels set and utilized by HUD and the State for most housing programs.

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 Napa County jobs held by Napa County residents. The major source of information regarding commute relationships is the Metropolitan Transportation Commissions report on County-to-County worker flows, which is based on U.S. Census data.

In 2000 there were 44,341 Napa County residents who also worked in Napa County. For the same year, there were a total of 59,875 jobs. It can then be concluded that Napa County residents held 74% of the total jobs in Napa County.

In the southern portion of the County, the share of jobs held by Napa residents is far less than the average due to in-commuting from other counties. More detailed information on commuting is scheduled for release by the U.S. Census in May 2004 (and may be added to the revised draft report).

Housing Demand and Production

The underlying premise of jobs housing nexus, as described in Section I of this report, is that job growth results in net new worker households who have needs for net new housing units. At this juncture, we can examine past job growth in Napa County unincorporated area, and quantify new worker households and housing demand.

During the period from 1990 to 2000, there were approximately 8,230 new jobs in unincorporated Napa County. Using the rate of workers per worker household, indicated previously, at 1.71, we can quantify 4,813 new worker households needed additional residential units. Annually, these new worker households needed 481 new residential units per year.

Housing production in Napa County is constrained by a number of both economic and governmental factors as summarized in the draft Housing Element (August 20, 2001). New units added have been as follows:

1990-1995	594 units or 119 units per year
1996-2000	505 units or 101 units per year

This rate of housing unit production is far less than the demand on the part of new worker households at 481 units per year.

For the three years following 2000 (2001 through 2003), job growth appears to be less, or approximately 80% of the rate of the late 1990's. Housing production appears to be the same rate at a little over 100 units per year, or far less than the demand generated by job growth alone. Even if new worker households are assumed to seek their housing in other counties (26% of all Napa workers currently live in other counties), housing production still falls far short of new needs.

Affordable Unit Demand and Production

The analysis thus far has addressed total jobs, households and housing units without respect to affordability. As will be demonstrated in the next section of the report on worker household demand by affordability level, the majority of the demand on the part of worker households is for affordable units. When affordable is defined as up through 120% of median income, then roughly 65% to 75% of new worker household demand in Napa County is for affordable units.

Affordable unit production figures are available for the period from 1999 to the present. The County reports that 127 affordable units have been built or are under construction. As a share of total units over the same time period, the share is over 20%. However, as a share of total demand, affordable unit production is under 5%.

In summary, affordable residential unit production in Napa County unincorporated area has been far less than needed to house new worker households associated with non-residential construction. An increase in the jobs housing impact fee would provide more revenues to assist the development of affordable units and reduce shortfall in supply relative to demand.

Future Projections

This section provides a brief examination of future projections as it relates to building construction, job growth, new worker households, and housing production.

The Association of Bay Area Governments (ABAG) provides projections of employment for the A.I.A. and the remainder of the unincorporated areas. The increments of growth are as follows:

	<u>Employment Growth - ABAG</u>			<u>Total</u>
	<u>2000-05</u>	<u>2005-10</u>	<u>2010-15</u>	
A.I.A.	350	790	650	1,790
Other Unincorporated	<u>840</u>	<u>60</u>	<u>60</u>	<u>960</u>
Total Unincorporated	1,190	850	710	2,750

Source: Projections 2003

These projections indicate that ABAG expects moderate growth in the A.I.A. but only minimal growth in the remainder of the unincorporated areas of the County. KMA has examined past and future growth expectations in the A.I.A. as part of a separate analysis for the County; the KMA projections for the A.I.A. are higher than the ABAG projections (Projections 2003 Series).

It should be emphasized that the methodology for quantifying the impact of job growth on affordable housing demand is not contingent on any specific rate or level of growth occurring. As demonstrated in Section III of this report, the nexus analysis is based on incremental building area and the jobs associated with building area. Over the long term, short term cycles notwithstanding, job growth will occur as new workplaces are constructed, irrespective of whether the growth is consistent with any given set of projections or not.

With any growth assumption there will be growth in jobs at the lower and mid level compensation levels resulting in growth in demand for housing that is not being produced by the private market. Growth in jobs in the County will translate to more demand for affordable housing and the need for more resources in the County to produce the housing. The housing impact fee will contribute to the resources available.

SECTION III – MICRO ECONOMIC JOBS HOUSING ANALYSIS

This section presents a summary of the analysis of the linkage between six 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. This section quantifies the connection, drawing from the relationships described in Section II, between employment growth in Napa County and affordable housing demand.

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 for 100,000 square foot buildings back to the per square foot level.

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

- Office / Tech / R&D
- Hotel
- Retail / Restaurant / Entertainment
- Winery
- Manufacturing / Industrial
- Warehousing / Storage

Section II presented information on the income categories addressed in this analysis. For a four-person household, these income levels for Year 2004 are:

- Median Income - \$73,900
- Very Low Income – Under 50% of Median (Up to \$36,950)
- Low Income – 50% to 80% of Median (Up to \$57,500)
- Moderate Income – 80% to 120% of Median (Up to \$88,680)

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 possible, 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 six 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 based on the Napa Airport Industrial Area (A.I.A.) Market and Jobs/Housing Projections Update completed by KMA in June of this year (with the exception of retail & hotel density factors). The A.I.A. report particularly focused on larger warehouse and winery uses. Estimates of employment density supported by data from County permit submittals, a very thorough employment density study completed for the Portland Area, and other materials were assembled to produce new estimates of density in these key building types. All density averages are for buildings that may contain a mix of activities, but also have a dominant use which dictates the building type for a range of code purposes, like parking.

- *Office / Tech / R&D* – 500 square feet per employee. This figure is lower than typical office densities, which are usually found in the range of 200 to 300 square feet per employee depending on the character of the office activity (corporate headquarters vs. back office to illustrate extremes.) Data on existing office densities in the unincorporated area of the County and the inclusion of R&D activities within the office category justify using a lower than average employment density.
- *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 / Entertainment* – 400 square feet per employee. This category covers a broad range of experience from high service restaurants where densities are far greater to some retail uses, such as furniture stores, where densities are far lower.
- *Winery* – 3,000 square feet per employee. This category covers winery facilities that may include small office, sales, production, storage, and transportation/moving functions. The space requirements of production, storage, and transportation activities dictate a much larger building size than the other uses, dramatically increasing the ratio of square feet to employee.
- *Manufacturing / Industrial* – 900 square feet per employee. Manufacturing employment densities are variable and depend on the nature of the manufacturing activity. This

classification uses an aggregate density scaled to industries and uses that are reoccurring in the Napa County economy including industrial parks, general light industrial uses, food products, manufacturing building and equipment contractors, building materials, and machine shops. Also there is significant wine industry related industrial such as cork production, barrel manufacturing and label printing.

- *Warehousing / Storage* – 4,000 square feet per employee. This category covers wholesalers and transportation and storage facilities that tend to have few employees relative to total building area.

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 are as follows: the office/ tech / R&D will house 200 employees; the hotel 200 employees, the retail / restaurant / entertainment 250 employees; winery 33 employees; manufacturing / industrial 111 employees; and warehousing/storage 25 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 always 100% equivalent to net new employees. In the 1992 analysis, a larger adjustment was used to recognize the then forthcoming closure of Mare Island and the workers who lived in Napa County that would need to find another job. (Mare Island completed closure in 1996.) As discussed in Section II, Napa County has stable or expanding employment across all industry sectors. For this analysis, a 5% adjustment is utilized to recognize the possibility of future minor declines and other adjustments.

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, all non-working households, such as retired persons, students, and those on public assistance, have been eliminated from the workers per worker household ratio. The Napa County average of 1.71 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 levels. Using the 2002 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 six types of buildings. The occupations that reflect the expected mix of activities in the new buildings are presented in Appendix Tables 1, 3, 5, 7, 9, and 11.

- Office / Tech / R&D buildings “industrial” mix has to be tailored to reflect the types of activities attracted to office space in unincorporated Napa County. These industries represent a mix of professional service activities including business and financial operations, architecture and engineering, computer and mathematical, management, and sales. Office and administrative support occupations (i.e., clerical) comprise 42% of all office related employment.
- Hotels employ workers primarily from three main occupation categories: building and grounds cleaning and maintenance (maid service, etc.), food preparation and serving related, and office and administrative support, which together make up 77% of hotel workers. Other hotel occupations include personal care, management, sales, maintenance and repair, production, and transportation.
- Retail/Restaurant/Entertainment employment is dominated by three main occupation groups: sales (34%), food preparation and serving (30%), and office and administrative support (11%). These three occupations together account for 75% of retail workers. The remaining 25% of retail workers are in occupations that include transportation, maintenance, and management.
- Winery employment is concentrated in production, transportation, and maintenance occupations, which account for 64% of employment. Office and administrative support occupations represent an additional 11% of employment. Management, sales, and other wine production related occupations together make up the remaining 25% of the total.
- Manufacturing/Industrial buildings “industrial” mix was tailored to the types of firms active in Napa County. Employment in these industries is a mix of construction occupations (33%), production occupations (24%), transportation (10%), maintenance (10%) and

other occupations that support the activities at the manufacturing facility (23%) including office and administrative, management, and related industrial occupations. Manufacturing types focus on various food products.

- Warehousing/Storage buildings "industrial" mix was tailored to represent both wholesalers and pure transportation and storage facilities. Primary occupations include transportation and material moving occupations (44%), office and administrative support (22%), and sales and related occupations (14%). The remaining 20% of employment is a mix of management, production, and other related occupations.

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 Napa County wage and salary information for the occupations associated with each building type. The wage and salary information indicated in Appendix Tables 2, 4, 6, 8, 10, and 12 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, 4, 6, 8, 10, and 12 were assumed to have the same income distribution as the major occupation categories.

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 County. The household size distribution utilized in the analysis is that of Napa County.

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 / tech / R&D, hotel, retail / restaurant / entertainment, winery, manufacturing / industrial, and warehousing/storage in our buildings of 100,000 square feet.

Summary by Income Level

Table III-2 indicates the results of the analysis for the other three additional income categories for the six 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 table below summarizes the percentage of total new worker households that fall into each income category. As indicated, over 90% of retail and hotel worker households are below the 120% of median income level. Office worker households have the highest incomes with only 5% of worker households below 50% of median and 42% earning greater than 120% of median. Winery, manufacturing, and warehouse worker households are in between these extremes with few workers in the very low-income category, but with a large share of employees in the low and moderate-income categories.

	<u>Percent of Worker Households by Income Category</u>			<u>Total</u>
	<u>Under 50%</u>	<u>50% to 80%</u>	<u>80% to 120%</u>	
Office / Tech / R&D	4.7%	23.1%	30.5%	58.3%
Hotel	40.0%	40.0%	12.7%	92.7%
Retail / Entertainment	36.2%	38.5%	16.4%	91.1%
Winery	13.0%	32.9%	33.2%	79.1%
Manufacturing / Industrial	7.8%	25.2%	30.9%	63.9%
Warehousing / Storage	16.6%	34.2%	31.0%	81.9%

Adjustment for Commute Relationship

Table III-3 indicates the results of the analysis both before and after an adjustment for commute relationship. As discussed in Section II, 74% of the jobs in Napa County are held by residents of Napa County. If the existing commute relationship were to hold for new employee households, 74% would be expected to reside in Napa County. 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 approximation (understates at the low end) 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
NAPA COUNTY, CA

Prototypical 100,000 Sq.Ft. Buildings						
	OFFICE / TECH / R&D	HOTEL	RETAIL / ENTRTMNT	WINERY	MANUFACTURING / INDUSTRIAL	WAREHOUSING / STORAGE
Step 1 - Estimate of Employees per 100,000 Sq. Ft. Employee Density Factor (per sq ft.)	500	500	400	3000	900	4000
Number of Employees	200	200	250	33	111	25
Step 2 - Adjustment for Changing Industries Replacement Factor (5%)	190	190	238	32	106	24
Step 3 - Adjustment for Number of Households (1.71)	111	111	139	18	62	14
Step 4 - Occupation Distribution ¹						
Management Occupations	9.8%	5.0%	3.6%	6.5%	5.0%	5.0%
Business and Financial Operations	16.2%	1.2%	0.7%	2.2%	1.7%	2.1%
Computer and Mathematical	5.0%	0.1%	0.3%	0.7%	0.3%	0.5%
Architecture and Engineering	9.0%	0.0%	0.1%	1.1%	1.2%	0.3%
Life, Physical, and Social Science	2.5%	0.0%	0.0%	1.1%	0.2%	0.1%
Community and Social Services	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Legal	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Education, Training, and Library	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Arts, Design, Entertainment, Sports, and Media	1.6%	0.4%	0.5%	0.7%	0.1%	0.7%
Healthcare Practitioners and Technical	0.7%	0.0%	1.1%	0.0%	0.0%	0.0%
Healthcare Support	0.1%	0.2%	0.3%	0.0%	0.0%	0.0%
Protective Service	0.2%	2.0%	0.4%	0.2%	0.1%	0.3%
Food Preparation and Serving Related	0.8%	29.1%	30.0%	1.0%	0.9%	0.8%
Building and Grounds Cleaning and Maint.	0.8%	30.2%	0.9%	1.0%	0.9%	1.0%
Personal Care and Service	0.1%	4.1%	2.0%	0.1%	0.0%	0.0%
Sales and Related	8.3%	2.4%	33.6%	7.7%	2.7%	13.8%
Office and Administrative Support	41.7%	17.2%	11.0%	11.2%	9.4%	22.0%
Farming, Fishing, and Forestry	0.0%	0.0%	0.1%	1.7%	0.2%	1.0%
Construction and Extraction	0.6%	0.2%	0.3%	0.7%	33.2%	0.3%
Installation, Maintenance, and Repair	1.0%	4.0%	5.4%	8.7%	9.9%	2.8%
Production	1.0%	2.3%	2.9%	30.7%	24.4%	5.8%
Transportation and Material Moving	0.4%	1.6%	6.9%	24.5%	9.8%	43.5%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Management Occupations	10.9	5.6	5.0	1.2	3.1	0.7
Business and Financial Operations	17.9	1.3	1.0	0.4	1.0	0.3
Computer and Mathematical	5.6	0.2	0.4	0.1	0.2	0.1
Architecture and Engineering	10.0	0.0	0.1	0.2	0.8	0.0
Life, Physical, and Social Science	2.8	0.0	0.0	0.2	0.1	0.0
Community and Social Services	0.2	0.0	0.0	0.0	0.0	0.0
Legal	0.7	0.0	0.0	0.0	0.0	0.0
Education, Training, and Library	0.2	0.0	0.1	0.0	0.0	0.0
Arts, Design, Entertainment, Sports, and Media	1.8	0.4	0.7	0.1	0.1	0.1
Healthcare Practitioners and Technical	0.8	0.0	1.5	0.0	0.0	0.0
Healthcare Support	0.1	0.2	0.4	0.0	0.0	0.0
Protective Service	0.2	2.3	0.5	0.0	0.0	0.0
Food Preparation and Serving Related	0.0	32.2	41.5	0.2	0.5	0.1
Building and Grounds Cleaning and Maint.	0.9	33.4	1.2	0.2	0.6	0.1
Personal Care and Service	0.1	4.5	2.8	0.0	0.0	0.0
Sales and Related	9.2	2.7	46.6	1.4	1.7	1.9
Office and Administrative Support	46.2	19.1	15.2	2.1	5.8	3.1
Farming, Fishing, and Forestry	0.0	0.0	0.1	0.3	0.2	0.1
Construction and Extraction	0.7	0.2	0.4	0.1	20.4	0.0
Installation, Maintenance, and Repair	1.1	4.4	7.5	1.6	6.1	0.4
Production	1.1	2.5	4.1	5.7	15.0	0.8
Transportation and Material Moving	0.5	1.8	9.5	4.5	6.1	6.0
Totals	111	111	139	18	62	14

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

¹ See Appendix Tables 1 through 12 for additional information from which the percentage distributions were derived.

TABLE III-1A
ESTIMATE OF QUALIFYING HOUSEHOLDS BY INCOME LEVEL
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY, CA

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

	OFFICE / TECH / R&D	HOTEL	RETAIL / ENTRTMNT	WINERY	MANUFACTURING / INDUSTRIAL	WAREHOUSING / STORAGE
Step 5, 6, & 7 - Households in Major Occupation Categories Earning Less than 50% Median ¹						
Management	0.00	0.00	0.00	0.00	0.00	0.00
Business and Financial Operations	0.00	0.00	0.00	0.00	0.00	0.00
Computer and Mathematical	0.02	0.00	0.00	0.00	0.00	0.00
Architecture and Engineering	0.00	0.00	0.00	0.00	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00	0.00	0.00	0.00
Community and Social Services	0.00	0.00	0.00	0.00	0.00	0.00
Legal	0.00	0.00	0.00	0.00	0.00	0.00
Education Training and Library	0.00	0.00	0.00	0.00	0.00	0.00
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00	0.00	0.00	0.00
Healthcare Practitioners and Technical	0.00	0.00	0.00	0.00	0.00	0.00
Healthcare Support	0.00	0.00	0.00	0.00	0.00	0.00
Protective Service	0.00	0.00	0.00	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	19.29	23.75	0.00	0.00	0.00
Building Grounds and Maintenance	0.00	12.31	0.00	0.00	0.00	0.00
Personal Care and Service	0.00	2.02	0.00	0.00	0.00	0.00
Sales and Related	1.20	0.00	15.86	0.18	0.00	0.18
Office and Admin	3.44	5.96	2.44	0.24	0.44	0.48
Farm, Fishing, and Forestry	0.00	0.00	0.00	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00	0.00	0.26	0.00
Installation Maintenance and Repair	0.00	0.14	0.22	0.05	0.54	0.00
Production	0.00	0.00	0.00	0.79	1.91	0.11
Transportation and Material Moving	0.00	0.00	3.05	0.88	1.26	1.30
Total HH earning less than 50% Median - Major Occupation	4.67	39.72	45.32	2.15	4.42	2.07
HH earning less than 50% Median - "all other" occupations	0.53	4.67	4.79	0.25	0.40	0.23
Total Households Earning Less than 50% of Median	5.2	44.4	50.1	2.4	4.8	2.3

¹ See Appendix Tables 1 through 12 for additional information on Major Occupation Categories

**TABLE III-2
WORKER HOUSEHOLDS BY AFFORDABILITY LEVEL
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY, CA**

Analysis for Households Before Commute Adjustment

Household Income Level	OFFICE / TECH / R&D	HOTEL	RETAIL / ENTRTMNT	WINERY	MANUFACTURING / INDUSTRIAL	WAREHOUSING / STORAGE
Under 50% Median Income	5.19	44.39	50.12	2.40	4.83	2.30
50% to 80% Median Income	25.59	44.32	53.35	6.08	15.54	4.75
80% to 120% Median Income	33.84	14.09	22.78	6.14	19.02	4.30
Total	64.62	102.79	126.25	14.62	39.39	11.35
Total New Worker Households	111	111	139	18	62	14
Under 50% Median Income	4.7%	40.0%	36.2%	13.0%	7.8%	16.6%
50% to 80% Median Income	23.1%	40.0%	38.5%	32.9%	25.2%	34.2%
80% to 120% Median Income	30.5%	12.7%	16.4%	33.2%	30.9%	31.0%
Total	58.3%	92.7%	91.1%	79.1%	63.9%	81.9%

Notes:

¹ Per 100,000 sq. ft. of building area. Before commute adjustment.

**TABLE III-3
COMMUTE ADJUSTMENT
TOTAL HOUSING DEMAND BY AFFORDABILITY LEVEL
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY, CA**

PROTOTYPICAL 100,000 SQ. FT. BUILDING BEFORE COMMUTE ADJUSTMENT									
INCOME CATEGORY	Household Income Level	OFFICE / TECH / R&D	HOTEL	RETAIL / ENTRNTMNT	Number of Households¹			WAREHOUSING / STORAGE	
					WINERY	MANUFACTURING / INDUSTRIAL	WAREHOUSING / STORAGE		
Under 50% Median Income		5.19	44.39	50.12	2.40	4.83	2.30		
50% to 80% Median Income		25.59	44.32	53.35	6.08	15.54	4.75		
80% to 120% Median Income		<u>33.84</u>	<u>14.09</u>	<u>22.78</u>	<u>6.14</u>	<u>19.02</u>	<u>4.30</u>		
Total		64.62	102.79	126.25	14.62	39.39	11.35		
AFTER 74.00% Commute Adjustment									
INCOME CATEGORY	Household Income Level	OFFICE / TECH / R&D	HOTEL	RETAIL / ENTRNTMNT	Number of Households¹			WAREHOUSING / STORAGE	
					WINERY	MANUFACTURING / INDUSTRIAL	WAREHOUSING / STORAGE		
Under 50% Median Income		3.84	32.85	37.09	1.78	3.57	1.70		
50% to 80% Median Income		18.94	32.79	39.48	4.50	11.50	3.51		
80% to 120% Median Income		25.04	10.42	16.86	4.54	14.08	3.18		
Total		47.82	76.07	93.43	10.82	29.15	8.40		

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

TABLE III-4
HOUSING DEMAND NEXUS FACTORS PER SQ.FT. OF BUILDING AREA
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY, CA

WITH COMMUTE ADJUSTMENT AT 74.00%

	Number of Housing Units per Sq.Ft. of Building Area ¹					
	OFFICE / TECH / R&D	HOTEL	RETAIL / ENTRNTMNT	WINERY	MANUFACTURING / INDUSTRIAL	WAREHOUSING / STORAGE
Under 50% Median Income	0.00003842	0.00032850	0.00037086	0.00001775	0.00003572	0.00001703
50% to 80% Median Income	0.00018936	0.00032793	0.00039482	0.00004499	0.00011501	0.00003512
80% to 120% Median Income	0.00025040	0.00010425	0.00016858	0.00004543	0.00014077	0.00003181
Total	0.00047818	0.00076068	0.00093426	0.00010817	0.00029150	0.00008397

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 puts a cost on the units 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 Napa County. 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 various household sizes that meet HUD standards in three categories of median income: under 50%, 50% to 80%, and 80% to 120%.

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

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 townhome units are assumed for the 80% to 120% of median group. A two-bedroom unit was applied in the analysis. The average three-person household is assumed to be accommodated in a two-bedroom unit per local policy.

The top income of the qualifying households 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%. Were a more average income level for the category used (such as at 65% or 70% of median), affordability gaps would be larger yet.

Tables IV-1, IV-2 and IV-3 summarize the income levels and the affordable rent and purchase price analyses.

Development Costs

The cost of developing new residential units in Napa County was assembled from a number of sources. KMA has prepared similar analyses for other Napa County assignments. Napa Valley Community Housing has been particularly helpful in sharing cost experience for a range of affordable projects. Finally, 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.

KMA was able to draw from these sources and identify prototype project(s) in terms of density configuration, unit sizes, parking spaces per unit, etc. for use in this analysis.

From the above sources, KMA prepared a summary of total development costs, broken down into the major cost components: land, direct or construction costs, and indirect costs, such as design and engineering, all fees, financing, etc. Land costs were in the range of \$475,000 to \$600,000 per acre. Tables IV-4 and IV-6 present the costs for a two-bedroom apartment and town home unit. The apartment prototype assumes a 42-unit project at 19 dwelling units per acre. The town home project prototype assumes 10-unit project at 14 dwelling units per acre. Costs expressed on a per unit and per square foot basis are indicated below:

Apartments

Size	870 Sq. Ft.
Per Unit	\$186,000
Per Sq. Ft.	\$214

Townhomes

Size	1,200 Sq. Ft.
Per Unit (excludes profit)	\$335,560
Per Sq. Ft.	\$280

Housing development costs are intended as averages. This is a difficult time in the economic cycle to select averages for rents, sales prices and development costs. Therefore, to avoid using peak of the market for illustrative purposes, we have assumed the low end of ranges for this analysis.

Affordability Gap

The affordability gap is the difference between the cost of developing a residential unit and the amount a household can afford to pay. In affordable units, per HUD, State and local programs and policies, the amount affordable is governed by standards. The key standards in this analysis are:

- A three person household in a two bedroom unit;

-
- For rental units, 30% of monthly income available for rent and utilities;
 - For ownership units, 35% of monthly income available for mortgage, property taxes, insurance and homeowners association and;
 - For ownership units, the mortgage assumption is 10% down, 90% mortgage.

Tables IV-4 thru IV-7 summarize the affordability gap analyses for rental and ownership units, for various income levels. For apartments, assuming a three-person household in a two-bedroom unit as the illustrative model, the maximum monthly rent at the 50% and 80% affordability levels are \$761 and \$1,260, respectively.

The column entitled Supportable Unit Value expresses the value supported by the income per the above standards. In rental units, two additional assumptions are necessary to complete the analysis. Apartment buildings have operating costs to cover management, property taxes, and certain other expenses. An additional allowance for vacancy during turnover is in order. Based on our review of operating budgets for existing apartment properties in Napa County, the operating expense and vacancy allowance is estimated between \$4,100 and \$5,770 per unit per year. Finally, the annual net operating income (after operating expenses) from an apartment unit is an annual figure, which must be converted to a one time capital cost. To make the conversion, a 7% capitalization rate is used.

For the ownership units, the mortgage rate assumptions are a 6.5% interest rate, and as indicated above, at 90% of the unit purchase amount. The monthly condominium association charge and other utility costs are estimated at \$400 per month. Assuming a three-person household in a two-bedroom unit, the maximum affordable sale price is \$290,000.

The Total Development Cost column in Table IV-5 is drawn from Table IV-4. Total Development Cost for the for-sale units in Table IV-7 is drawn from Table IV-6. The Affordability Gap for each income category is indicated in the right hand column of the tables. The affordability gap conclusions used in the analysis are:

- \$114,600 for households in the under 50% of median income category.
- \$52,400 for household in the 50% to 80% of median income category.
- \$45,560 for households in the 80% to 100% of median Income category.

Again, the moderate income household is assumed to be accommodated in a for-sale unit while the lower income categories are in rental units.

Total Linkage Costs

The last step in the linkage fee analysis marries the findings on the numbers of households at each of the lower income ranges associated with the six types of buildings to the affordability gaps, or the costs of delivering or housing for them in Napa County.

Table IV-8 summarizes the analysis. The Affordability Gaps are drawn from the prior discussion. Demand for affordable units at each of the lower income ranges that is generated per square foot of building area is drawn from Table III-4 in the previous section. At the right the "Nexus Cost Per Square Foot" shows the results of the calculation: affordability gap times the number of units per square foot of building area. The top half of Table IV-8 shows Nexus cost prior to an adjustment for commuting patterns. The bottom half of the table shows the result after a 74% commute adjustment.

The total nexus costs for the six building types, after the commute adjustment, are as follows:

Office / Tech / R&D	\$25.73
Hotel	\$59.58
Retail/Entertainment	\$70.87
Winery	\$6.46
Manufacturing/Industrial	\$16.53
Warehousing/Storage	\$5.24

These costs express the total linkage or nexus costs for the six 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.

In establishing the total nexus cost many conservative assumptions were employed in the analysis that result in a total nexus cost that may be understated by a considerable amount. These conservative assumptions include:

- The upper end of the income range was utilized for determining the affordability gaps. In reality, not all households in the income category have incomes at the top end. For example, moderate income is defined as 80% to 120% of median. Most moderate income households do not have income at 120%; the average would be close to 100% of median.
- No census or other hard data were available to enable a distinction between the household size composition of office workers, hotel workers and retail sales people. Anecdotally one can observe that there are probably some significant differences.

-
- Using small households produces lower affordability gaps than larger households in larger units.
 - Affordability gaps are low compared to the experience of many public agencies and non-profit groups struggling to produce affordable housing in the greater Bay Area.
 - Only direct employees are counted in the analysis. Many indirect employees are also associated with each new workspace. Indirect employees in an office building, for example, include janitors, window washers, landscape maintenance people, delivery personnel, and a whole range of others. Hotels do have many of these workers on staff, but hotels also "contract out" a number of services that are not taken into account in the analysis.

In summary, many less conservative assumptions could be made that would result in higher linkage costs.

TABLE IV-1
INCOME RANGES AT VARYING HOUSEHOLD SIZES
2004 INCOME STANDARDS DISTRIBUTED BY HUD
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY

Household Size	Median	Very-Low Income 0%-50% of Median	Lower Income 51%-80% of Median ¹	Moderate Income 81%-120% of Median
1 Person	\$51,700	\$0	\$25,850	\$40,250
2 Person	59,100	0	29,550	46,000
3 Person	66,500	0	33,250	51,750
4 Person	73,900	0	36,950	57,500
5 Person	79,800	0	39,900	62,100
6 Person	85,700	0	42,850	66,700
7 Person	91,600	0	45,800	71,300
8 Person	97,500	0	48,750	75,900
				\$62,040
				70,920
				79,800
				88,680
				95,760
				102,840
				109,920
				117,000

¹ Set at lesser of 80% of County median income or 100% of National median income

TABLE IV-2
AFFORDABLE RENTS (STUDIOS - 3-BEDROOM UNITS)
VERY-LOW AND LOW INCOME HOUSEHOLDS
2004 INCOME STANDARDS DISTRIBUTED BY HUD
NAPA COUNTY

	Studios	1-Bdrm	2-Bdrm	3-Bdrm
I. Low Income¹				
Income @ 80% County Median	\$41,360	\$47,280	\$53,200	\$59,120
% of Income Allotted to Housing	30%	30%	30%	30%
Monthly Housing Expenses	\$1,034	\$1,182	\$1,330	\$1,478
(Less) Utilities Expenses ²	(43)	(54)	(70)	(86)
Monthly Rent	\$991	\$1,128	\$1,260	\$1,392
II. Very-Low Income				
Income @ 50% County Median	\$25,850	\$29,550	\$33,250	\$36,950
% of Income Allotted to Housing	30%	30%	30%	30%
Monthly Housing Expenses	\$646	\$739	\$831	\$924
(Less) Utilities Expenses ²	(43)	(54)	(70)	(86)
Monthly Rent	\$603	\$685	\$761	\$838

¹ For purpose of this analysis, rents set at 80% AMI

² Estimated utilities allowances to be confirmed by the Napa Housing Authority.

TABLE IV-3
SUPPORTABLE HOUSING PRICES (1-BEDROOM TO 4-BEDROOMS)
MODERATE INCOME HOUSEHOLDS
2004 INCOME STANDARDS DISTRIBUTED BY HUD
NAPA, CALIFORNIA

	1-Bdrm	2-Bdrm	3-Bdrm	4-Bdrm
Moderate Income				
Household Income @ 120% Median	\$70,920	\$79,800	\$88,680	\$95,760
Income Allotted to Housing @ 35% of Income	24,822	27,930	31,038	33,516
(Less) Ongoing Expenses ¹	(7,506)	(8,134)	(8,989)	(9,622)
Income Available for Mortgage	17,316	\$19,796	\$22,049	\$23,894
Maximum Purchase Price²	\$253,661	\$289,995	\$322,999	\$350,023

¹ Includes home owner association fees, insurance, utilities, maintenance and property taxes.

² Mortgage interest rate @ 6.5% with 10% down payment

**TABLE IV-4
APARTMENT PROJECT DEVELOPMENT COSTS
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY**

Assumptions

Units	42
Rentable SF	36,540
Avg. Unit Size (SF)	870
Land Area	2.25
Units/Acre	19
Building Type	Apartments
Parking	Carports
Spaces Required	1.50

	Total	Per SF Building Area	Per Unit
Land Acquisition ¹	\$1,125,000	\$31	\$27,000
Total Construction Costs ²	\$6,678,000	\$183	\$159,000
Total Development Costs	\$7,803,000	\$214	\$186,000

¹ Land cost between \$475,000 and \$700,000 per acre. This analysis assumes \$500,000 per acre.

² Construction cost estimate includes direct construction costs, indirect costs, financing costs and all other costs.

TABLE IV-5
UNIT VALUES SUPPORTED BY RENTS & AFFORDABILITY GAP
APARTMENT UNITS - TWO BEDROOMS
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY

Calculation of Unit Value Supported						
	Rent		Less Op Exp ¹	Net Operating Income	Unit Value Supported ²	
	Month	Year				
Affordable Units						
	80% of AMI	\$1,260 /Unit \$1.45 /SF	\$15,120	\$9,350	\$133,600	
	50% of AMI	\$761 /Unit \$0.88 /SF	\$9,100	\$5,000	\$71,400	
Calculation of Value Impact Per Rental Unit						
Affordable Units	Unit Value Supported ²	Total Development Cost		Affordability Gap		
	80% of AMI		(\$186,000)			(\$52,400)
	50% of AMI		(\$186,000)			(\$114,600)

¹ General operating expenses based on average operating expenses from similar size apartment projects in the market area. It is assumed for this analysis that units restricted to very-low income households will be exempt from property tax.

² Net operating income capitalized at 7%.

**TABLE IV-6
TOWNHOME PROJECT DEVELOPMENT COSTS
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY**

Development Program

Number of Units	10		
Number of Stories	2		
Site Size	0.71 acres	30,928 sq. ft.	\$18.20 land cost
Dwelling Units/Acre	14		
Construction Type	Wood		
Parking	2 car garage (above ground/under unit)		
Unit Mix & Size	Average 1,200 square feet		

Development Cost

	<u>Cost/Unit</u>	<u>Cost/BSF</u>
Land	\$40,000	\$33
Direct Construction Cost		
Building Shell	\$162,000	\$135
Parking (in shell)		
Indirects/Financing	\$100,000	\$83
Total Development Cost	\$302,000	\$252
Plus Profit (10%)	<u>\$33,560</u>	<u>\$28</u>
Estimated Market Sales Price	\$335,560	\$280

¹ Land cost between \$450,000 and \$700,000 per acre. This analysis assumes \$560,000 per acre.

² Construction cost estimate based on recently constructed projects, direct construction costs, indirect costs, financing costs and all other costs.

TABLE IV-7
TOWNHOME UNIT AFFORDABILITY GAP
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY

	Income Target % AMI	Two-Bedroom Unit/Three Person Household	
		Annual Household Income	Sales Price
Affordable Unit	120%	\$79,800	\$290,000
Total Development Cost (incl. Profit)			<u>\$335,560</u>
Gap			(\$45,560)

TABLE IV-8
TOTAL HOUSING NEXUS COSTS
JOB HOUSING NEXUS ANALYSIS
NAPA COUNTY, CA

INCOME CATEGORY	Affordability Gap ¹	Nexus Cost Per Sq. Ft.				
		OFFICE / TECH / R&D	HOTEL	RETAIL / ENTRTMNT	WINERY	MANUFACTURING / INDUSTRIAL
Household Income Level						WAREHOUSING / STORAGE
Under 50% Median Income ²	\$114,600	\$5.95	\$50.87	\$57.43	\$2.75	\$5.53
50% to 80% Median Income ²	\$52,400	\$13.41	\$23.22	\$27.96	\$3.19	\$8.14
80% to 120% Median Income ³	\$45,560	<u>\$15.42</u>	<u>\$6.42</u>	<u>\$10.38</u>	<u>\$2.80</u>	<u>\$8.67</u>
Total		\$34.77	\$80.51	\$95.77	\$8.73	\$22.34
AFTER 74.00% Commute Adjustment						
INCOME CATEGORY	Affordability Gap ¹	Nexus Cost Per Sq. Ft.				
		OFFICE / TECH / R&D	HOTEL	RETAIL / ENTRTMNT	WINERY	MANUFACTURING / INDUSTRIAL
Under 50% Median Income ²	\$114,600	\$4.40	\$37.65	\$42.50	\$2.03	\$4.09
50% to 80% Median Income ²	\$52,400	\$9.92	\$17.18	\$20.69	\$2.36	\$6.03
80% to 120% Median Income ³	\$45,560	<u>\$11.41</u>	<u>\$4.75</u>	<u>\$7.68</u>	<u>\$2.07</u>	<u>\$6.41</u>
Total		\$25.73	\$59.58	\$70.87	\$6.46	\$16.53

¹ Assume two-bedroom unit.

² Assumes households are housed in rental units

³ Assumes households are housed in ownership units.

SECTION V – MATERIALS TO ASSIST IN UPDATING THE FEE PROGRAM

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

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

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

Existing Fee Levels

The existing fee program was adopted in 1993 following a work program guided by an advisory group and a nexus analysis prepared in 1992. The fee levels adopted and unchanged since that time are as follows.

Office	\$1.00
Hotel	1.40
Retail/Restaurant/Entertainment	.80
Wine Production	0.50
Manufacturing/Industrial	.50
Warehousing/Storage	0.30/0.20
(under 100,000 sq.ft./over 100,000 sq.ft.)	

The updated nexus analysis has been prepared as a basis for updating these fee levels and making other revisions to the program.

A note on the Wine Production fee: It has been the practice of the County to examine all wine related structures and classify the various portions of the structure by the building type or

activity — such as warehouse, production, office, etc. The production component is manufacturing and the fee was intentionally set the same as other manufacturing. From application standpoint, this practice has worked well making the need for “Wine Production” as a separate category obsolete.

Thresholds, Exemptions and Geographic Area Variations

Before proceeding to the approaches and considerations for selecting fee levels, it can be helpful to recall that many programs employ thresholds, exemptions and other measures to adapt programs to specific situations and policy objectives. The existing Napa program does not utilize these tools, with the exception of the threshold applied to warehouse structures over 100,000 square foot. (The inclusionary program for residential construction does employ a minimum threshold.)

Briefly these tools or measures are:

- *Minimum Size Thresholds* – establishing a building size over which the fee applies. Sometimes the fee applies to the whole building over the threshold, and sometimes the fee applies only to the square foot area over the threshold.

The size threshold is usually keyed to the size of buildings in the jurisdiction. San Francisco used to have a 50,000 square foot level but lowered it to 25,000; some small cities have 10,000 square feet.

Thresholds are more frequently employed when fee levels are higher, as in over \$5 per square foot.

Thresholds are often employed to minimize costs for infill small projects in older commercial areas. There is also some savings in administrative costs. The disadvantage is lost revenue.

- *Thresholds for Fee Amount Adjustments.* The example of the Napa County’s reduced fee on warehouses over 100,000 sq. ft. is a good example. Some jurisdictions apply reduced fees on small projects and higher fees on larger projects.
- *Exemptions for Specific Building Types.* Some programs exempt all buildings owned by non-profit organizations such as churches, hospitals, and schools. A common exemption is child care centers of any kind.
- *Geographic Area Variation.* Some cities exempt redevelopment areas or other areas specifically targeted for growth and new investment. A geographic area variation can also be used to adjust the fee to jurisdictions where there is a broad difference in

economic health from one subarea to the next. As a general rule, geographic area variations should be applied to already existing special areas with firm boundaries. Geographic variation for the purpose of fees alone is not advisable.

One possible subarea of Napa County for which different fee levels might be considered is the Airport Industrial Area Specific Plan.

Fees as a Percent of the Nexus Amount

One approach used by many jurisdictions, particularly with the earlier programs, is to set fees as a percent of the analysis nexus conclusions. With this approach, a consistent percentage is applied to the nexus conclusion for each of the six building types.

For example, if the fees were set at 10% of the calculated nexus cost, results would be as follows:

	Nexus Cost	Fee @ 10%
Office/Tech/R&D	\$25.73	\$2.57
Hotel	59.58	5.96
Retail/Entertainment	70.87	7.09
Manufacturing/Industrial	16.53	1.65
Warehousing/Storage	5.24	0.52

The principal advantage of this approach lies in its simplicity and avoidance of addressing each fee independently. The disadvantage is that the result may not be appropriate or consistent with regards to other considerations like impact on total cost, or may result in a lost opportunity for charging a higher fee when the building type could clearly sustain a higher fee level due to unique economic conditions.

Fees as a Percent of Total Development Cost

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

Even within a County as small as Napa and a limited amount of new construction each year, there is still some range in what might be built for various building types. For retail, for example, there will be service retail built in the Airport Industrial Area that will probably be modest in amenity and architectural treatment. Freestanding restaurants at key locations, or wineries, may make the building itself part of the attraction and "branding" and spend substantial amounts

on design, construction and landscaping. Compared to large cities where there may be enormous differences in density and how parking is handled (underground garages vs. surface lots), the variations in Napa are relatively minor.

For Napa County, seven non-residential prototype projects were selected for review of total development cost range. The prototypes include three industrial/business park type buildings, two alternative retail structures, and two lodging facilities. In the selection of prototypes, it has been a goal to cover the lower end of the cost range. In all prototypes, costs could be considerably higher.

For each prototype, total site area, building area, number of parking spaces and other key development program components are identified. Then we developed cost figures for the major cost items — land, sitework, shell construction, tenant improvements, and indirect costs inclusive of all permits and fees. The cost estimates were developed from our firm's extensive work with real estate projects throughout the Bay Area. Fees and permits costs were reviewed and adjusted by County staff.

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

Flex Office	\$175-\$200 per sq.ft.
Retail – as in A.I.A.	\$200-\$250 per sq.ft.
Restaurant – as in Upvalley	\$300-\$500 per sq.ft.
Boutique Hotel	\$300-\$500 per sq.ft.
Business Hotel – as in A.I.A.	\$175-\$225 per sq.ft.
Light Industrial/R&D	\$150-\$175 per sq.ft.
Warehousing/Storage	\$110-\$125 per sq.ft.

KMA does not have good information available on development costs for wineries. Since total development costs typically include interior finishes and equipment, we would expect development costs to be at least as expensive as other Light Industrial buildings.

It is our understanding that some wineries are now constructing underground spaces or caves for storage, wine production and even banquet hall/entertainment uses. Costs are likely similar, if not higher, if parking above and below grade is any indicator. (From a purely nexus perspective, it is irrelevant whether work spaces are above or below the ground.)

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

Office/Tech/R&D	\$1.75-\$2.00 per sq.ft.
Retail/Restaurant/Entertainment	\$2.00-\$5.00 per sq.ft.
Hotel	\$1.75-\$5.00 per sq.ft.
Industrial/Manufacturing	\$1.50-\$1.75 per sq.ft.
Warehousing/Storage	\$1.10-\$1.25 per sq.ft.

Impact of Fees on Development Decisions

The foregoing discussion about examining fee levels in the context of total development costs has been presented because fees are sometimes accused of pushing up development costs and driving projects to other jurisdictions where costs are lower. It has been our experience as an observer and practitioner of housing impact fees for about fifteen years now, that fees at a modest level have virtually no bearing on development decisions. Other factors weigh so much more heavily, the fee component, if moderate, is of relatively little importance in the equation of locational selection.

Moderate level housing fees, in our view, are in the 2% range or less relative to total development costs.

The KMA work program to prepare a market analysis and set of projections for the Airport Industrial Area included tasks to examine the market strength of Napa compared to competitive jurisdictions such as the Fairfield Vacaville area and Sonoma County. Our finding is that on a pure cost basis, Napa is slightly more expensive than the Solano County alternatives and similar to the Sonoma County alternatives. As a result, Napa will never be highly competitive as a location for either the manufacture or warehousing the proverbial widgets. Rather Napa attracts industrial activity that has a reason to be in Napa, and only Napa.

The Napa County attraction for industrial development is first and foremost related to the wine industry. In addition, however, in recent years, Napa has become a desirable location for the production of other items, particularly those that can benefit from the Napa name, a phenomenon known as "lifestyle branding." Looking ahead, this branding appeal is expected become even more important in drawing industrial activity to Napa.

The other major reason businesses and industries are attracted to locating in Napa, is Napa's desirability as a place to live. Academic and industry studies for decades have long found that where senior management wants to live is a major determinant in the selection of where to locate a plant or office function. Some of Napa's most notable businesses (that are not wine related) came to Napa because somebody responsible for the decision wanted to live in Napa. The Doctor's Company is an example, as we understand the history.

In summary, business and industry will be primarily drawn to Napa for reasons that only Napa can deliver. In that sense, Napa does not compete "head to head" with any of the neighboring county industrial areas. A housing impact fee at any moderate level will not alter this condition.

Other Jurisdiction Housing Linkage Fee Programs

It is always of interest to policy makers to know what other jurisdictions have in place in the way of similar programs. As a generality, these programs are still relatively few in number, although many cities are considering them as a source of revenue for affordable housing, particularly since there is increasing attention at the State level on the strengthening of the Housing Element Law.

Table V-2 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 the few 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 jurisdictions with fees at mid-range or \$4 to \$9 per square foot. These jurisdictions include a number of Silicon Valley cities and some 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 also provides information on a number of program features in addition to the fee amount.

Summary

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

At the outset of Section V, the percent of total nexus cost fee setting was illustrated using 1%. Results were as follows:

Office/Tech/R&D	\$2.57
Retail/Restaurant/Entertainment	\$7.09
Hotel	\$5.96
Industrial/Manufacturing	\$1.65
Warehousing/Storage	\$0.52

This approach has the virtue of simplicity but pays no regard to relative development cost or market sensitivity.

The experience of other jurisdictions is often a powerful influence in approaching fee programs. The chart on other jurisdictions points to other places in the North Bay that now have or will soon have fees, such as Marin County and Petaluma, which are in \$7.00 and \$3.69, respectively, at the high end.

In our judgment, fee levels should be sensitive to market strength. The stronger the market, the higher the fees can be without altering decisions about where to build. Strong market conditions are reflected in land values. In this context, the less expensive locations in Napa County fall into a lower to mid range — far lower than Silicon Valley and San Francisco, and by and large, below the jurisdictions that have fees in the mid range or \$4-\$9 per square foot at the top. All of this would suggest to us that Napa County should consider fees at the high end of the low tier. Given the wide disparity among the building types in Napa County, particularly the very large warehouse/storage uses and wineries, we would suggest fee ranges for consideration bracketed as follows:

Office/Tech/R&D	\$2.00 to \$4.00
Retail/Restaurant/Entertainment	\$2.00 to \$4.00
Hotel	\$2.00 to \$5.00
Industrial/Manufacturing	\$1.00 to \$2.00
Warehousing/Storage	\$0.75 to \$1.50

The suggested fee range is around 1.5% or less of total development costs at the high end of the range, with a few exceptions.

Finally, policy makers are quite free to consider each fee independently and bring to bear other policy aspects that may not be addressed in this summary.

We believe that there is no single best approach to selecting fees beyond careful consideration of local policies and goals, and, of course, fairness to those affected.

TABLE V-1.

**DEVELOPMENT PROTOTYPES
HOUSING IMPACT FEE NEXUS ANALYSIS
NAPA COUNTY, CA**

<u>Project Description</u>	<u>Prototype 1</u>		<u>Prototype 2.</u>		<u>Prototype 3</u>	
	<u>Warehouse/Storage</u>		<u>Lt. Industrial/R&D</u>		<u>Flex Office</u>	
Site Size (Acres)	6.00		3.00		4.00	
Floor Area Ratio (FAR)	0.45		0.25		0.35	
Gross Building Area (GBA)	118,000		33,000		61,000	
Number of Stories	1		1 +		2	
Number of Rooms	N/A		N/A		N/A	
Parking Spaces	70		100		240	
Parking Ratio (per 1,000 SF)	0.6		3.0		4.0	
Type	Surface		Surface		Surface	
<u>Development Costs</u>						
Land	\$7 /SF	\$1,830,000	\$8 /SF	\$1,045,000	\$10 /SF	\$1,742,000
Sitework / Amenities						
Parking	\$5 /SF	\$1,307,000	\$5 /SF	\$653,000	\$5 /SF	\$871,000
Shell Construction	\$1,500 /Space	\$105,000	\$1,500 /Space	\$150,000	\$1,500 /Space	\$360,000
Tenant Improvements/FF&E	\$50 /SF GBA	\$5,900,000	\$60 /SF GBA	\$1,980,000	\$70 /SF GBA	\$4,270,000
Subtotal, Direct Costs	\$10 /SF GBA	\$1,180,000	\$15 /SF GBA	\$495,000	\$25 /SF GBA	\$1,525,000
	\$72 /SF GBA	\$8,492,000	\$99 /SF GBA	\$3,278,000	\$115 /SF GBA	\$7,026,000
Add: Indirects/Financing	35% of Directs	\$2,972,000	35% of Directs	\$1,147,000	35% of Directs	\$2,459,000
Total Development Costs	\$113 /SF GBA	\$13,294,000	\$166 /SF GBA	\$5,470,000	\$184 /SF GBA	\$11,227,000

TABLE V-1.

**DEVELOPMENT PROTOTYPES
HOUSING IMPACT FEE NEXUS ANALYSIS
NAPA COUNTY, CA**

<u>Project Description</u>	<u>Prototype 4a.</u>		<u>Prototype 4b.</u>	
	<u>Retail (A.I.A./Similar)</u>		<u>Restaurant (Free-Standing)</u>	
Site Size (Acres)	1.00			1.00
Floor Area Ratio (FAR)	0.25			0.15
Gross Building Area (GBA)	11,000			7,000
Number of Stories	1			1
Number of Rooms	N/A			N/A
Parking Spaces	60			70
Parking Ratio (per 1,000 SF)	5.0			10.0
Type	Surface			Surface
<u>Development Costs</u>				
Land	\$15 /SF	\$653,000	\$25 /SF	\$1,089,000
Sitework / Amenities				
Parking	\$5 /SF	\$218,000	\$5 /SF	\$218,000
Shell Construction	\$1,500 /Space	\$90,000	\$1,500 /Space	\$105,000
Tenant Improvements/FF&E	\$60 /SF GBA	\$660,000	\$100 /SF GBA	\$700,000
Subtotal, Direct Costs	\$30 /SF GBA	\$330,000	\$75 /SF GBA	\$525,000
	\$118 /SF GBA	\$1,298,000	\$221 /SF GBA	\$1,548,000
Add: Indirects/Financing	35% of Directs	\$454,000	30% of Directs	\$464,000
Total Development Costs	\$219 /SF GBA	\$2,405,000	\$443 /SF GBA	\$3,101,000

TABLE V-1.

**DEVELOPMENT PROTOTYPES
HOUSING IMPACT FEE NEXUS ANALYSIS
NAPA COUNTY, CA**

<u>Project Description</u>	<u>Prototype 5a.</u>		<u>Prototype 5b.</u>	
	<u>Boutique/Luxury Hotel</u>		<u>Business Hotel (A.I.A.)</u>	
Site Size (Acres)	1.64			4.26
Floor Area Ratio (FAR)	0.35			0.35
Gross Building Area (GBA)	25,000			65,000
Number of Stories	2.5			3
Number of Rooms	50			73
Parking Spaces	60			73
Parking Ratio (per 1,000 SF)	1.2			1.0
Type	Surface		Spaces Per Room	Surface
<u>Development Costs</u>				
Land	\$35,000 /Room	\$1,750,000	\$25,000 /Room	\$1,825,000
Sitework / Amenities	\$8 /SF	\$572,000	\$8 /SF	\$1,486,000
Parking	\$1,500 /Space	\$90,000	\$1,500 /Space	\$110,000
Shell Construction	\$80,000 /Room	\$4,000,000	\$70,000 /Room	\$5,110,000
Tenant Improvements/FF&E	\$30,000 Per Room	\$1,500,000	\$15,000 Per Room	\$1,095,000
Subtotal, Direct Costs	\$246 /SF GBA	\$6,162,000	\$120 /SF GBA	\$7,801,000
Add: Indirects/Financing	40% of Directs	\$2,465,000	40% of Directs	\$3,120,000
Total Development Costs	\$415 /SF GBA	\$10,377,000	\$196 /SF GBA	\$12,746,000

**TABLE V-2
OTHER JOBS HOUSING LINKAGE PROGRAMS
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY**

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	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Oakland	2002	<ul style="list-style-type: none"> 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.
City of Berkeley	1993	<ul style="list-style-type: none"> 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.
Town of Corte Madera	2001	<ul style="list-style-type: none"> 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	
City of Sunnyvale	1984 Updated in 2003.	<ul style="list-style-type: none"> 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.

TABLE V-2 (cont'd)
OTHER JOBS HOUSING LINKAGE PROGRAMS
JOBS HOUSING NEXUS ANALYSIS
NAPA COUNTY

City of Santa Monica	1984 Updated fees in 2002	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Pleasanton		<ul style="list-style-type: none"> Commercial, Office & Industrial \$2.31 sq. ft. 	No Minimum Threshold	NA	Moderate	Fee increased in 2003.
City of Cupertino	1993	<ul style="list-style-type: none"> Office & Industrial \$2.13 	No Minimum Threshold.	NA	Very Substantial	Fee is adjusted annually based on CPI. Update in process.
City of Petaluma	2003	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.
City and County of Napa	County 1994 City 1999	<ul style="list-style-type: none"> Office \$1.00 Hotel \$1.40 R&D \$0.80 Industrial \$0.50 Warehouse \$0.20/0.30 Wine Production \$0.50 	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. Update in process
City and County of Sacramento	1989	<ul style="list-style-type: none"> Office \$0.99 Hotel \$0.94 R&D \$0.84 Commercial \$0.79 Manufacturing \$0.62 Warehouse/Office \$0.36 Warehouse \$0.27 	No Minimum Threshold. Service uses operated by non-profits are exempt.	Pay 20% fee plus build at reduced nexus. (No meaningful given amount of fee).	Moderate	Applies to all non-residential construction; alternate fees for North Natomas area. Since 1989, raised more than \$11 million.
City of Livermore	1999	<ul style="list-style-type: none"> Retail \$0.81 Service Retail \$0.61 Office \$0.52 Hotel \$397 per room Manufacturing \$0.25 Warehouse \$0.07 Business Park \$0.52 Heavy Industrial \$0.26 Light Industrial \$0.16 	No Minimum Threshold. Church; private or public schools.	Yes; negotiated on a case-by-case basis.	Moderate	

Programs Pending: San Mateo
San Rafael
Walnut Creek

APPENDIX TABLES

APPENDIX TABLE 1
 2002 NATIONAL OFFICE / TECH / R&D WORKER DISTRIBUTION BY OCCUPATION
 JOBS HOUSING LINKAGE ANALYSIS
 NAPA COUNTY

Major Occupations (3% or more)	2002 National Office Industry Occupation Distribution	
Management Occupations	758,740	9.8%
Business and Financial Operations Occupations	1,249,330	16.2%
Computer and Mathematical Science Occupations	387,110	5.0%
Architecture and Engineering Occupations	694,060	9.0%
Sales and Related Occupations	637,850	8.3%
Office and Administrative Support Occupations	3,219,870	41.7%
All Other Office Related Occupations	<u>781,640</u>	<u>10.1%</u>
INDUSTRY TOTAL	7,728,600	100.0%

APPENDIX TABLE 2
AVERAGE ANNUAL COMPENSATION, 2003
OFFICE / TECH / R&D WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Office Workers
<i>Management Occupations</i>			
Chief Executives	146,300	8.9%	0.9%
General and Operations Managers	93,900	23.6%	2.3%
Marketing Managers	87,800	4.5%	0.4%
Sales Managers	89,400	4.6%	0.4%
Administrative Services Managers	59,800	5.0%	0.5%
Computer and Information Systems Managers	89,700	5.8%	0.6%
Financial Managers	82,900	19.9%	2.0%
Engineering Managers	99,700	6.2%	0.6%
All Other Management Occupations	<u>74,300</u>	<u>21.5%</u>	<u>2.1%</u>
Weighted Mean Annual Wage	\$90,100	100.0%	9.8%
<i>Business and Financial Operations Occupations</i>			
Claims Adjusters, Examiners, and Investigators	\$44,400	14.0%	2.3%
Management Analysts	71,400	4.9%	0.8%
Accountants and Auditors	54,500	24.0%	3.9%
Insurance Underwriters	56,500	6.9%	1.1%
Loan Officers	52,400	13.7%	2.2%
Tax Preparers	63,900	4.2%	0.7%
All Other Business and Financial Operations Occupations (avg all categories)	<u>51,900</u>	<u>32.3%</u>	<u>5.2%</u>
Weighted Mean Annual Wage	\$53,300	100.0%	16.2%
<i>Computer and Mathematical Science Occupations</i>			
Computer Programmers	\$64,200	13.6%	0.7%
Computer Software Engineers, Applications	91,700	10.3%	0.5%
Computer Software Engineers, Systems Software	91,700	10.1%	0.5%
Computer Support Specialists	44,200	13.3%	0.7%
Computer Systems Analysts	59,000	19.5%	1.0%
Network and Computer Systems Administrators	66,500	8.6%	0.4%
Network Systems and Data Communications Analysts	50,800	5.4%	0.3%
All Other Computer and Mathematical Science Occupations (avg all categories)	<u>64,200</u>	<u>19.2%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$65,600	100.0%	5.0%
<i>Architecture and Engineering Occupations</i>			
Architects, Except Landscape and Naval	56,200	10.6%	1.0%
Surveyors	65,900	5.9%	0.5%
Civil Engineers	75,200	14.7%	1.3%
Electrical Engineers	79,300	5.5%	0.5%
Mechanical Engineers	60,400	5.9%	0.5%
Architectural and Civil Drafters	45,900	10.6%	0.9%
Civil Engineering Technicians	54,400	5.3%	0.5%
Surveying and Mapping Technicians	49,200	5.3%	0.5%
All Other Architecture and Engineering Occupations (avg all categories)	<u>60,900</u>	<u>36.1%</u>	<u>3.2%</u>
Weighted Mean Annual Wage	\$61,200	100.0%	9.0%

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Office Workers
<i>Sales and Related Occupations</i>			
First-Line Supervisors/Managers of Non-Retail Sales Workers	\$54,000	5.7%	0.5%
Retail Salespersons	23,900	6.1%	0.5%
Insurance Sales Agents	68,300	41.1%	3.4%
Securities, Commodities, and Financial Services Sales Agents	43,700	4.0%	0.3%
Real Estate Sales Agents	66,400	7.6%	0.6%
Telemarketers	24,800	4.8%	0.4%
All Other Sales and Related Occupations (avg all categories)	<u>29,700</u>	<u>30.7%</u>	<u>2.5%</u>
Weighted Mean Annual Wage	\$49,700	100.0%	8.3%
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors/Managers of Office and Administrative Support Workers	\$42,300	7.6%	3.2%
Bookkeeping, Accounting, and Auditing Clerks	31,900	7.2%	3.0%
Tellers	22,200	14.8%	6.2%
Customer Service Representatives	28,900	14.4%	6.0%
Executive Secretaries and Administrative Assistants	34,600	6.5%	2.7%
Secretaries, Except Legal, Medical, and Executive	29,500	6.1%	2.6%
Insurance Claims and Policy Processing Clerks	37,600	6.6%	2.8%
Office Clerks, General	25,900	9.1%	3.8%
All Other Office and Administrative Support Occupations (avg all categories)	<u>30,000</u>	<u>27.7%</u>	<u>11.5%</u>
Weighted Mean Annual Wage	\$30,200	100.0%	41.7%
			89.9%

¹ The methodology utilized by the California Employment Development Department (EDD) assumes that hourly paid employees are employed full-time. Annual compensation is calculated by EDD by multiplying hourly wages by 40 hours per work week by 52 weeks.

² Occupation percentages are based on the 2002 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2003. OES 2002 - Vallejo-Fairfield-Napa MSA includes Napa and Solano Counties.

³ including Occupations representing 4% or more of the major occupation group.

APPENDIX TABLE 3
 2002 NATIONAL HOTEL / RESORT / LODGING WORKER DISTRIBUTION BY OCCUPATION
 JOBS HOUSING LINKAGE ANALYSIS
 NAPA COUNTY, CA

Major Occupations (3% or more)	2002 National Hotel Industry Occupation Distribution	
Management Occupations	81,980	5.0%
Food Preparation and Serving Related Occupations	475,690	29.1%
Building and Grounds Cleaning and Maintenance Occupations	493,760	30.2%
Personal Care and Service Occupations	66,600	4.1%
Office and Administrative Support Occupations	281,830	17.2%
Installation, Maintenance, and Repair Occupations	65,080	4.0%
All Other Hotel Related Occupations	<u>172,290</u>	<u>10.5%</u>
INDUSTRY TOTAL	1,637,230	100.0%

APPENDIX TABLE 4
AVERAGE ANNUAL COMPENSATION, 2003
HOTEL / RESORT / LODGING WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY, CA

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Hotel Workers
<i>Management Occupations</i>			
General and Operations Managers	\$93,900	18.8%	0.9%
Sales Managers	\$89,400	10.8%	0.5%
Financial Managers	\$82,900	5.4%	0.3%
Food Service Managers	\$44,700	14.7%	0.7%
Lodging Managers	\$47,300	31.5%	1.6%
All Other Management Occupations	<u>\$74,300</u>	<u>18.8%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$67,200	100.0%	5.0%
<i>Food Preparation and Serving Related Occupations</i>			
First-Line Supervisors/Managers of Food Preparation and Serving Workers	\$28,600	4.2%	1.2%
Cooks, Restaurant	\$22,100	11.5%	3.3%
Food Preparation Workers	\$18,700	4.1%	1.2%
Bartenders	\$17,200	8.2%	2.4%
Waiters and Waitresses	\$18,300	29.3%	8.5%
Food Servers, Nonrestaurant	\$17,000	8.5%	2.5%
Dining Room and Cafeteria Attendants and Bartender Helpers	\$16,100	9.4%	2.7%
Dishwashers	\$16,900	8.3%	2.4%
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$16,300	4.6%	1.3%
Food Preparation and Serving Related Workers, All Other	<u>\$25,700</u>	<u>11.9%</u>	<u>3.5%</u>
Weighted Mean Annual Wage	\$19,400	100.0%	29.1%
<i>Building and Grounds Cleaning and Maintenance Occupations</i>			
First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	\$33,400	6.5%	2.0%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$21,900	9.9%	3.0%
Maids and Housekeeping Cleaners	\$19,800	78.7%	23.7%
All Other Building and Grounds Cleaning and Maintenance Workers	<u>\$25,800</u>	<u>4.9%</u>	<u>1.5%</u>
Weighted Mean Annual Wage	\$21,200	100.0%	30.2%
<i>Personal Care and Service Occupations</i>			
First-Line Supervisors/Managers of Personal Service Workers	\$25,500	5.0%	0.2%
Amusement and Recreation Attendants	\$19,300	12.6%	0.5%
Baggage Porters and Bellhops	\$17,900	36.1%	1.5%
Concierges	\$25,500	10.6%	0.4%
Fitness Trainers and Aerobics Instructors	\$43,200	4.4%	0.2%
Recreation Workers	\$22,200	4.8%	0.2%
Personal Care and Service Workers, All Other	<u>\$22,000</u>	<u>26.5%</u>	<u>1.1%</u>
Weighted Mean Annual Wage	\$21,700	100.0%	4.1%

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Hotel Workers
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors/Managers of Office and Administrative Support Workers	\$42,300	6.5%	1.1%
Switchboard Operators, Including Answering Service	\$23,900	4.1%	0.7%
Bookkeeping, Accounting, and Auditing Clerks	\$31,900	7.6%	1.3%
Hotel, Motel, and Resort Desk Clerks	\$18,900	58.1%	10.0%
Reservation and Transportation Ticket Agents and Travel Clerks	\$27,400	4.4%	0.8%
All Other Office and Admin. Support Occupations (avg all categories)	<u>\$30,000</u>	<u>19.2%</u>	<u>3.3%</u>
Weighted Mean Annual Wage	\$24,100	100.0%	17.2%
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	\$57,000	6.8%	0.3%
Maintenance and Repair Workers, General	\$36,200	82.3%	3.3%
Installation, Maintenance, and Repair Workers, All Other	<u>\$40,600</u>	<u>10.9%</u>	<u>0.4%</u>
Weighted Mean Annual Wage	\$38,100	100.0%	4.0%
			<hr/> <hr/> 89.5%

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 2002 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2003. OES 2002 - Vallejo-Fairfield-Napa MSA (Napa & Solano Counties).

³ including Occupations representing 4% or more of the major occupation group.

APPENDIX TABLE 5
 2002 NATIONAL RETAIL / RESTAURANT / ENTERTAINMENT WORKER DISTRIBUTION BY OCCUPATION
 JOBS HOUSING LINKAGE ANALYSIS
 NAPA COUNTY, CA

Major Occupations (3% or more)	2002 National Retail Industry Occupation Distribution	
Management Occupations	944,510	3.6%
Food Preparation and Serving Related Occupations	7,799,280	30.0%
Sales and Related Occupations	8,749,100	33.6%
Office and Administrative Support Occupations	2,857,710	11.0%
Installation, Maintenance, and Repair Occupations	1,403,040	5.4%
Transportation and Material Moving Occupations	1,786,870	6.9%
All Other Retail Related Occupations	<u>2,488,530</u>	<u>9.6%</u>
INDUSTRY TOTAL	26,029,040	100.0%

APPENDIX TABLE 6
AVERAGE ANNUAL COMPENSATION, 2003
RETAIL / RESTAURANT / ENTERTAINMENT WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY, CA

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Retail Workers
<i>Management Occupations</i>			
Chief Executives	\$146,300	5.2%	0.2%
General and Operations Managers	\$93,900	48.9%	1.8%
Sales Managers	\$89,400	7.2%	0.3%
Food Service Managers	\$44,700	20.6%	0.7%
All Other Management Occupations	<u>\$74,300</u>	<u>18.0%</u>	<u>0.7%</u>
Weighted Mean Annual Wage	\$82,600	100.0%	3.6%
<i>Food Preparation and Serving Related Occupations</i>			
First-Line Supervisors/Managers of Food Preparation and Serving Workers	\$28,600	6.5%	2.0%
Cooks, Fast Food	\$16,100	7.3%	2.2%
Cooks, Restaurant	\$22,100	7.9%	2.4%
Food Preparation Workers	\$18,700	6.7%	2.0%
Bartenders	\$17,200	4.2%	1.3%
Combined Food Preparation and Serving Workers, Including Fast Food	\$17,000	23.0%	6.9%
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$17,500	4.2%	1.2%
Waiters and Waitresses	\$18,300	22.8%	6.8%
Dishwashers	\$16,900	4.9%	1.5%
All Other Food Preparation and Serving Related Occupations	<u>\$25,700</u>	<u>12.5%</u>	<u>3.8%</u>
Weighted Mean Annual Wage	\$19,600	100.0%	30.0%
<i>Sales and Related Occupations</i>			
First-Line Supervisors/Managers of Retail Sales Workers	\$39,600	12.1%	4.1%
Cashiers	\$21,600	34.7%	11.7%
Retail Salespersons	\$23,900	41.2%	13.9%
All Other Sales and Related Occupations (avg all categories)	<u>\$29,700</u>	<u>11.9%</u>	<u>4.0%</u>
Weighted Mean Annual Wage	\$25,700	100.0%	33.6%
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors/Managers of Office and Administrative Support Workers	\$42,300	5.3%	0.6%
Bookkeeping, Accounting, and Auditing Clerks	\$31,900	9.4%	1.0%
Customer Service Representatives	\$28,900	8.6%	0.9%
Shipping, Receiving, and Traffic Clerks	\$27,500	6.4%	0.7%
Stock Clerks and Order Fillers	\$22,500	35.6%	3.9%
Office Clerks, General	\$25,900	9.8%	1.1%
All Other Office and Administrative Support Occupations (avg all categories)	<u>\$30,000</u>	<u>25.0%</u>	<u>2.7%</u>
Weighted Mean Annual Wage	\$27,500	100.0%	11.0%
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	\$57,000	7.9%	0.4%
Automotive Body and Related Repairers	\$43,100	11.5%	0.6%
Automotive Service Technicians and Mechanics	\$40,500	40.1%	2.2%
Tire Repairers and Changers	\$21,500	5.1%	0.3%
Maintenance and Repair Workers, General	\$36,200	5.2%	0.3%
All Other Installation, Maintenance, and Repair Occupations (avg all categories)	<u>\$41,500</u>	<u>30.2%</u>	<u>1.6%</u>
Weighted Mean Annual Wage	\$41,200	100.0%	5.4%
<i>Transportation and Material Moving Occupations</i>			
Driver/Sales Workers	\$29,900	10.4%	0.7%
Truck Drivers, Heavy and Tractor-Trailer	\$37,500	4.0%	0.3%
Truck Drivers, Light Or Delivery Services	\$26,300	15.9%	1.1%
Parking Lot Attendants	\$19,400	4.1%	0.3%
Service Station Attendants	\$20,500	4.8%	0.3%
Cleaners of Vehicles and Equipment	\$21,100	13.0%	0.9%
Laborers and Freight, Stock, and Material Movers, Hand	\$21,500	17.7%	1.2%
Packers and Packagers, Hand	\$21,000	16.3%	1.1%
All Other Transportation and Material Moving Occupations (avg all categories)	<u>\$28,000</u>	<u>13.8%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$24,400	100.0%	6.9%
			90.4%

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 2002 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2003. OES 2002 - Vallejo-Fairfield-Napa MSA (Napa & Solano Counties).

³ Including Occupations representing 4% or more of the major occupation group.

APPENDIX TABLE 7
 2002 NATIONAL WINE PRODUCTION WORKER DISTRIBUTION BY OCCUPATION
 JOBS HOUSING LINKAGE ANALYSIS
 NAPA COUNTY, CA

Major Occupations (3% or more)	2002 National Wine Production Industry Occupation Distribution	
Management Occupations	15,330	6.5%
Sales and Related Occupations	18,110	7.7%
Office and Administrative Support Occupations	26,320	11.2%
Installation, Maintenance, and Repair Occupations	20,480	8.7%
Production Occupations	71,910	30.7%
Transportation and Material Moving Occupations	57,320	24.5%
All Other Wine Production Related Occupations	<u>24,770</u>	<u>10.6%</u>
INDUSTRY TOTAL	234,240	100.0%

APPENDIX TABLE 8
AVERAGE ANNUAL COMPENSATION, 2003
WINE PRODUCTION WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY, CA

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Winery Workers
<i>Management Occupations</i>			
Chief Executives	\$146,300	5.1%	0.3%
General and Operations Managers	\$93,900	25.9%	1.7%
Marketing Managers	\$87,800	6.7%	0.4%
Sales Managers	\$89,400	13.3%	0.9%
Financial Managers	\$82,900	7.5%	0.5%
Industrial Production Managers	\$89,700	16.2%	1.1%
Transportation, Storage, and Distribution Managers	\$72,000	5.2%	0.3%
All Other Management Occupations	<u>\$74,300</u>	<u>20.2%</u>	<u>1.3%</u>
Weighted Mean Annual Wage	\$89,000	100.0%	6.5%
<i>Sales and Related Occupations</i>			
First-Line Supervisors/Managers of Non-Retail Sales Workers	\$54,000	8.9%	0.7%
Cashiers	\$21,600	5.7%	0.4%
Retail Salespersons	\$23,900	13.7%	1.1%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$52,600	53.4%	4.1%
Demonstrators and Product Promoters	\$26,300	5.6%	0.4%
All Other Sales and Related Occupations (avg all categories)	<u>\$29,700</u>	<u>12.7%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$42,600	100.0%	7.7%
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors/Managers of Office and Administrative Support Workers	\$42,300	5.8%	0.6%
Bookkeeping, Accounting, and Auditing Clerks	\$31,900	11.9%	1.3%
Customer Service Representatives	\$28,900	5.4%	0.6%
Shipping, Receiving, and Traffic Clerks	\$27,500	8.5%	1.0%
Stock Clerks and Order Fillers	\$22,500	19.6%	2.2%
Executive Secretaries and Administrative Assistants	\$34,600	8.7%	1.0%
Secretaries, Except Legal, Medical, and Executive	\$29,500	5.5%	0.6%
Office Clerks, General	\$25,900	9.9%	1.1%
All Other Office and Administrative Support Occupations (avg all categories)	<u>\$30,000</u>	<u>24.6%</u>	<u>2.8%</u>
Weighted Mean Annual Wage	\$29,200	100.0%	11.2%
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	\$57,000	7.0%	0.6%
Bus and Truck Mechanics and Diesel Engine Specialists	\$45,000	5.5%	0.5%
Industrial Machinery Mechanics	\$46,200	17.1%	1.5%
Maintenance and Repair Workers, General	\$36,200	32.6%	2.9%
Maintenance Workers, Machinery	\$43,700	7.5%	0.7%
Coin, Vending, and Amusement Machine Servicers and Repairers	\$29,000	16.0%	1.4%
All Other Installation, Maintenance, and Repair Occupations	<u>\$40,600</u>	<u>14.3%</u>	<u>1.2%</u>
Weighted Mean Annual Wage	\$39,900	100.0%	8.7%
<i>Production Occupations</i>			
First-Line Supervisors/Managers of Production and Operating Workers	\$48,200	10.2%	3.1%
Team Assemblers	\$26,900	6.8%	2.1%
Food Batchmakers	\$26,600	4.4%	1.3%
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	\$34,100	6.8%	2.1%
Mixing and Blending Machine Setters, Operators, and Tenders	\$29,100	5.4%	1.7%
Inspectors, Testers, Sorters, Samplers, and Weighers	\$31,000	4.4%	1.3%
Packaging and Filling Machine Operators and Tenders	\$24,700	36.7%	11.3%
Helpers--Production Workers	\$24,000	6.5%	2.0%
All Other Production Occupations (avg all categories)	<u>\$30,500</u>	<u>18.8%</u>	<u>5.8%</u>
Weighted Mean Annual Wage	\$29,500	100.0%	30.7%

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Winery Workers
<i>Transportation and Material Moving Occupations</i>			
Driver/Sales Workers	\$29,900	16.5%	4.0%
Truck Drivers, Heavy and Tractor-Trailer	\$37,500	17.8%	4.4%
Truck Drivers, Light Or Delivery Services	\$26,300	12.0%	2.9%
Industrial Truck and Tractor Operators	\$33,200	15.9%	3.9%
Laborers and Freight, Stock, and Material Movers, Hand	\$21,500	18.2%	4.5%
Packers and Packers, Hand	\$21,000	7.1%	1.7%
All Other Transportation and Material Moving Occupations (avg all categories)	<u>\$28,000</u>	<u>12.4%</u>	<u>3.0%</u>
<i>Weighted Mean Annual Wage</i>	<i>\$29,000</i>	<i>100.0%</i>	<i>24.5%</i>
			<hr/> <hr/> 89.4%

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 2002 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2003. OES 2002 - Vallejo-Fairfield-Napa MSA (Napa & Solano Counties).

³ Including Occupations representing 4% or more of the major occupation group.

APPENDIX TABLE 9
2002 NATIONAL INDUSTRIAL / MANUFACTURING WORKER DISTRIBUTION BY OCCUPATION
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY, CA

Major Occupations (3% or more)	2002 National Industrial / Manufact. Industry Occupation Distribution	
Management Occupations	177,600	5.0%
Office and Administrative Support Occupations	335,880	9.4%
Construction and Extraction Occupations	1,185,260	33.2%
Installation, Maintenance, and Repair Occupations	354,160	9.9%
Production Occupations	870,530	24.4%
Transportation and Material Moving Occupations	351,030	9.8%
All Other Industrial / Manufacturing Related Occupations	<u>298,920</u>	<u>8.4%</u>
INDUSTRY TOTAL	3,573,380	100.0%

APPENDIX TABLE 10
AVERAGE ANNUAL COMPENSATION, 2003
INDUSTRIAL / MANUFACTURING WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY, CA

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Industrial Workers
<i>Management Occupations</i>			
Chief Executives	\$146,300	7.9%	0.4%
General and Operations Managers	\$93,900	40.4%	2.0%
Sales Managers	\$89,400	4.0%	0.2%
Financial Managers	\$82,900	6.7%	0.3%
Industrial Production Managers	\$89,700	9.5%	0.5%
Construction Managers	\$79,000	15.7%	0.8%
All Other Management Occupations	<u>\$74,300</u>	<u>15.7%</u>	<u>0.8%</u>
Weighted Mean Annual Wage	\$91,300	100.0%	5.0%
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors/Managers of Office and Administrative Support Workers	\$42,300	6.9%	0.6%
Bookkeeping, Accounting, and Auditing Clerks	\$31,900	16.3%	1.5%
Shipping, Receiving, and Traffic Clerks	\$27,500	7.6%	0.7%
Stock Clerks and Order Fillers	\$22,500	4.1%	0.4%
Executive Secretaries and Administrative Assistants	\$34,600	7.5%	0.7%
Secretaries, Except Legal, Medical, and Executive	\$29,500	16.1%	1.5%
Office Clerks, General	\$25,900	16.7%	1.6%
All Other Office and Administrative Support Occupations (avg all categories)	<u>\$30,000</u>	<u>24.8%</u>	<u>2.3%</u>
Weighted Mean Annual Wage	\$30,200	100.0%	9.4%
<i>Construction and Extraction Occupations</i>			
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	\$67,600	5.8%	1.9%
Electricians	\$66,800	34.7%	11.5%
Plumbers, Pipefitters, and Steamfitters	\$43,800	25.5%	8.4%
Sheet Metal Workers	\$44,000	8.4%	2.8%
Helpers--Electricians	\$31,000	7.4%	2.4%
Helpers--Pipefitters, Plumbers, Pipefitters, and Steamfitters	\$30,900	5.3%	1.7%
All Other Construction and Extraction Occupations (avg all categories)	<u>\$47,100</u>	<u>13.0%</u>	<u>4.3%</u>
Weighted Mean Annual Wage	\$52,000	100.0%	33.2%
<i>Installation, Maintenance, and Repair Occupations</i>			
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	\$57,000	6.3%	0.6%
Security and Fire Alarm Systems Installers	\$27,200	4.2%	0.4%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$34,500	31.5%	3.1%
Industrial Machinery Mechanics	\$46,200	4.8%	0.5%
Maintenance and Repair Workers, General	\$36,200	14.2%	1.4%
Millwrights	\$55,300	4.5%	0.4%
Telecommunications Line Installers and Repairers	\$40,600	8.3%	0.8%
Helpers--Installation, Maintenance, and Repair Workers	\$34,200	5.6%	0.6%
All Other Installation, Maintenance, and Repair Occupations	<u>\$40,600</u>	<u>20.6%</u>	<u>2.0%</u>
Weighted Mean Annual Wage	\$39,100	100.0%	9.9%
<i>Production Occupations</i>			
First-Line Supervisors/Managers of Production and Operating Workers	\$48,200	7.2%	1.8%
Team Assemblers	\$26,900	9.6%	2.3%
Bakers	\$26,700	5.7%	1.4%
Machinists	\$41,900	8.6%	2.1%
Inspectors, Testers, Sorters, Samplers, and Weighers	\$31,000	4.4%	1.1%
Packaging and Filling Machine Operators and Tenders	\$24,700	6.4%	1.6%
Helpers--Production Workers	\$24,000	5.9%	1.4%
All Other Production Occupations (avg all categories)	<u>\$30,500</u>	<u>52.2%</u>	<u>12.7%</u>
Weighted Mean Annual Wage	\$31,500	100.0%	24.4%

Occupation ³	2003 Avg, Compensation ¹	% of Total Occupation Group ²	% of Total Industrial Workers
<i>Transportation and Material Moving Occupations</i>			
Truck Drivers, Heavy and Tractor-Trailer	\$37,500	24.4%	2.4%
Truck Drivers, Light Or Delivery Services	\$26,300	7.0%	0.7%
Industrial Truck and Tractor Operators	\$33,200	12.1%	1.2%
Laborers and Freight, Stock, and Material Movers, Hand	\$21,500	19.6%	1.9%
Machine Feeders and Offbearers	\$23,900	6.5%	0.6%
Packers and Packagers, Hand	\$21,000	17.6%	1.7%
All Other Transportation and Material Moving Occupations (avg all categories)	<u>\$28,000</u>	<u>12.9%</u>	<u>1.3%</u>
<i>Weighted Mean Annual Wage</i>	\$28,100	100.0%	9.8%
			<hr/> <hr/> 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 2002 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2003. OES 2002 - Vallejo-Fairfield-Napa MSA (Napa & Solano Counties)

³ Including Occupations representing 4% or more of the major occupation group

APPENDIX TABLE 11
 2002 NATIONAL WAREHOUSING AND STORAGE WORKER DISTRIBUTION BY OCCUPATION
 JOBS HOUSING LINKAGE ANALYSIS
 NAPA COUNTY, CA

Major Occupations (3% or more)	2002 National Warehousing & Storage Industry Occupation Distribution	
Management Occupations	65,860	5.0%
Sales and Related Occupations	183,040	13.8%
Office and Administrative Support Occupations	292,220	22.0%
Production Occupations	77,280	5.8%
Transportation and Material Moving Occupations	576,280	43.5%
All Other Warehousing & Storage Related Occupations	<u>131,620</u>	<u>9.9%</u>
INDUSTRY TOTAL	1,326,300	100.0%

APPENDIX TABLE 12
AVERAGE ANNUAL COMPENSATION, 2003
WAREHOUSING AND STORAGE WORKER OCCUPATIONS
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY, CA

Occupation ³	2003 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Warehouse / Storage Workers
<i>Management Occupations</i>			
Chief Executives	\$146,300	6.4%	0.3%
General and Operations Managers	\$93,900	36.9%	1.8%
Sales Managers	\$89,400	14.9%	0.7%
Financial Managers	\$82,900	6.3%	0.3%
Purchasing Managers	\$75,300	4.3%	0.2%
Transportation, Storage, and Distribution Managers	\$72,000	11.4%	0.6%
All Other Management Occupations	<u>\$74,300</u>	<u>19.8%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$88,700	100.0%	5.0%
<i>Sales and Related Occupations</i>			
First-Line Supervisors/Managers of Non-Retail Sales Workers	\$54,000	8.9%	1.2%
Cashiers	\$21,600	7.0%	1.0%
Retail Salespersons	\$23,900	5.9%	0.8%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$52,600	64.2%	8.9%
All Other Sales and Related Occupations (avg all categories)	<u>\$29,700</u>	<u>13.9%</u>	<u>1.9%</u>
Weighted Mean Annual Wage	\$45,700	100.0%	13.8%
<i>Office and Administrative Support Occupations</i>			
First-Line Supervisors/Managers of Office and Administrative Support Workers	\$42,300	5.5%	1.2%
Bookkeeping, Accounting, and Auditing Clerks	\$31,900	6.0%	1.3%
Customer Service Representatives	\$28,900	6.2%	1.4%
Order Clerks	\$29,500	4.4%	1.0%
Shipping, Receiving, and Traffic Clerks	\$27,500	15.9%	3.5%
Stock Clerks and Order Fillers	\$22,500	30.2%	6.7%
Office Clerks, General	\$25,900	8.7%	1.9%
All Other Office and Administrative Support Occupations (avg all categories)	<u>\$30,000</u>	<u>23.2%</u>	<u>5.1%</u>
Weighted Mean Annual Wage	\$27,700	100.0%	22.0%
<i>Production Occupations</i>			
First-Line Supervisors/Managers of Production and Operating Workers	\$48,200	9.0%	0.5%
Team Assemblers	\$26,900	8.1%	0.5%
Bakers	\$26,700	5.9%	0.3%
Butchers and Meat Cutters	\$38,500	6.1%	0.4%
Meat, Poultry, and Fish Cutters and Trimmers	\$21,500	8.7%	0.5%
Inspectors, Testers, Sorters, Samplers, and Weighers	\$31,000	9.5%	0.6%
Packaging and Filling Machine Operators and Tenders	\$24,700	19.0%	1.1%
All Other Production Occupations (avg all categories)	<u>\$30,500</u>	<u>33.6%</u>	<u>2.0%</u>
Weighted Mean Annual Wage	\$30,200	100.0%	5.8%
<i>Transportation and Material Moving Occupations</i>			
Driver/Sales Workers	\$29,900	11.8%	5.1%
Truck Drivers, Heavy and Tractor-Trailer	\$37,500	15.3%	6.6%
Truck Drivers, Light Or Delivery Services	\$26,300	9.1%	4.0%
Industrial Truck and Tractor Operators	\$33,200	16.8%	7.3%
Laborers and Freight, Stock, and Material Movers, Hand	\$21,500	30.8%	13.4%
Packers and Packagers, Hand	\$21,000	7.9%	3.4%
All Other Transportation and Material Moving Occupations (avg all categories)	<u>\$28,000</u>	<u>8.3%</u>	<u>3.6%</u>
Weighted Mean Annual Wage	\$27,800	100.0%	43.5%
			90.1%

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 2002 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages have been updated to 3rd Quarter 2003. OES 2002 - Vallejo-Fairfield-Napa MSA (Napa & Solano Counties).

³ Including Occupations representing 4% or more of the major occupation group.

APPENDIX TABLE 13
OCCUPATIONS INCLUDED IN ANALYSIS
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY, CA

The occupational breakdown of employment by land use is based on the
2002 National Industry-Specific Occupational Employment and Wage Estimates
For these Industries/North American Industry Classification System (NAICS) codes:

Office / High Tech / R&D

General Industry Categories:

Information
Finance and Insurance
Real Estate and Rental and Leasing
Professional, Scientific, and Technical Services

Specific North American Industry Classification System (NAICS) codes:

517200 - Wireless Telecommunications Carriers (except Satellite)

522100 - Depository Credit Intermediation
522200 - Nondepository Credit Intermediation
524100 - Insurance Carriers
531200 - Offices of Real Estate Agents and Brokers
541200 - Accounting, Tax Preparation, Bookkeeping, and Payroll Services
541300 - Architectural, Engineering, and Related Services
541700 - Scientific Research and Development Services
541400 - Specialized Design Services

Hotel

Specific North American Industry Classification System (NAICS) codes:

721100 - Traveler Accommodation
(gambling related occupations excluded)

Wine Production

Specific North American Industry Classification System (NAICS) codes:

312100 - Beverage Manufacturing
311200 - Grain and Oilseed Milling

Manufacturing / Industrial

General Industry Categories:

Construction
Manufacturing

Specific North American Industry Classification System (NAICS) codes:

238200 - Building and Equipment Contractors
311400 - Fruit and Vegetable Preserving and Specialty Food Manufacturing
311800 - Bakeries and Tortilla Manufacturing
311900 - Other Food Manufacturing
321900 - Other Wood Product Manufacturing
327100 - Clay Product and Refractory Manufacturing
327200 - Glass and Glass Product Manufacturing
327300 - Cement and Concrete Product Manufacturing
332200 - Cutlery and Handtool Manufacturing
332700 - Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing

Warehousing and Storage

General Industry Categories:

Wholesale Trade
Transportation and Warehousing

Specific North American Industry Classification System (NAICS) codes:

424400 - Grocery and Related Product Wholesalers
424800 - Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers
493100 - Warehousing and Storage

APPENDIX TABLE 13
OCCUPATIONS INCLUDED IN ANALYSIS
JOBS HOUSING LINKAGE ANALYSIS
NAPA COUNTY, CA

Retail / Restaurant / Entertainment

General Industry Categories:

Retail Trade
Real Estate and Rental and Leasing
Accommodation and Food Services
Other Services

Specific North American Industry Classification System (NAICS) codes:

441100 - Automobile Dealers
441200 - Other Motor Vehicle Dealers
441300 - Automotive Parts, Accessories, and Tire Stores
442100 - Furniture Stores
442200 - Home Furnishings Stores
443100 - Electronics and Appliance Stores
444100 - Building Material and Supplies Dealers
444200 - Lawn and Garden Equipment and Supplies Stores
445100 - Grocery Stores
445200 - Specialty Food Stores
445300 - Beer, Wine, and Liquor Stores
446100 - Health and Personal Care Stores
447100 - Gasoline Stations
448100 - Clothing Stores
448200 - Shoe Stores
448300 - Jewelry, Luggage, and Leather Goods Stores
451100 - Sporting Goods, Hobby, and Musical Instrument Stores
451200 - Book, Periodical, and Music Stores
452100 - Department Stores
452900 - Other General Merchandise Stores
453100 - Florists
453200 - Office Supplies, Stationery, and Gift Stores
453300 - Used Merchandise Stores
453900 - Other Miscellaneous Store Retailers

532100 - Automotive Equipment Rental and Leasing
532200 - Consumer Goods Rental
532300 - General Rental Centers
532400 - Commercial and Industrial Machinery and Equipment Rental and Leasing

561600 - Travel Arrangement and Reservation Services

722100 - Full-Service Restaurants
722200 - Limited-Service Eating Places
722300 - Special Food Services
722400 - Drinking Places (Alcoholic Beverages)

811100 - Automotive Repair and Maintenance
811200 - Electronic and Precision Equipment Repair and Maintenance
811400 - Personal and Household Goods Repair and Maintenance
812100 - Personal Care Services
812200 - Death Care Services
812300 - Drycleaning and Laundry Services
812900 - Other Personal Services