Jobs Housing Nexus Study

Prepared for:
City of San Diego

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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 City of San Diego. The report has been prepared by Keyser Marston Associates, Inc. for the San Diego Housing Commission (SDHC), pursuant to a contract to prepare a nexus analysis and assist the City in updating its Housing Impact fee program.

Background

The City of San Diego Housing Impact Fee Ordinance was established in 1990 to address the affordable housing demand created by non-residential development. Keyser Marston Associates, Inc. (KMA) performed the nexus analysis in support of the impact fees. In 1996, the fees were reduced by approximately 50% to encourage economic development in San Diego. In 2002, the City Council declared a "State of Emergency Due to Severe Shortage of Affordable Housing in San Diego." As part of the response to the housing shortage, the City commissioned KMA to conduct a fully updated nexus analysis. The nexus study was completed in December 2004 but was never formally presented to SDHC or the City.

In 2008, KMA, at the request of the San Diego Housing Commission, reviewed and partially updated the 2004 report. Like the 2004 report, the 2008 review was never formally presented. In September 2009, the City Council's Land Use and Housing Committee recommended that the impact fee program be reviewed and evaluated and in October 2009, the City Council approved the Committee's recommendation. This study is one of two that were commissioned by SDHC in response to this recommendation. This study is focused on the housing impact fee while the other study is designed to identify other funding alternatives for affordable housing.

Purpose

The purpose of a nexus analysis is to document the linkages among construction of new workplace buildings (such as office, retail, hotel, etc.), 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.

The analysis is conducted to meet the requirements of several U. S. Supreme Court decisions and also California Code Section 66000 and following. Such analyses are called linkage, or nexus analyses.

Analysis Scope

This analysis examines seven types of workplace buildings per direction of City staff:

- Office
- Hotel/Resort and other lodging
- Retail/Entertainment
- Medical/Hospital
- Manufacturing / Industrial
- Warehouse / Storage
- Education

These categories are the same as were examined in 2004.

The following affordability levels are addressed in the analysis:

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

The 2004 analysis also included a fourth income tier covering households earning between 120% and 150% AMI. This income tier was not included in the 2008 update and is not included in the current analysis.

Process

In the course of this update, Housing Commission staff met with several community groups and affected parties, including the local chapters of the Building Industry Association and the Chamber of Commerce. SDHC also conducted two public Stakeholder meetings, at which KMA was present, the first at the outset of the study, and the second to present preliminary findings. Both meetings were designed to get public input on the major assumptions and methodology of the analysis.

Report Organization

The report is organized into five sections as follows:

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

also includes a discussion of the nexus concept and methodology in relation to the current economic recession.

- Section II – provides an overview of the historical and projected growth of jobs and housing in the City.

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

- Section IV – contains a summary of the costs of delivering housing units affordable to households at income levels under study, allocated to each square foot of building area.

- Section V – provides materials to assist policy makers in evaluating alternative fee levels, discusses possible indices for increasing or decreasing the level of the fee over time, and other program features that might be revised as part of the update program. The material in this section is not part of the nexus analysis.

- Appendix A – provides an overview of adjustments made to the analysis as a result of a critical review of the 2004 study (as updated in 2008).

- Appendix B – presents a summary matrix of key analysis assumptions and discussion of specific factors in relation to the nexus concept.

- Appendix C – Support Information: Worker Occupations and Incomes, Affordability Gap Calculations

Data Sources and Qualifications

The analyses in this report have been prepared using the best and most recent data available. Local data were used whenever possible. The major sources were the U. S. Census Bureau's 2006-2008 American Community Survey, the U.S. Bureau of Labor Statistics, the California Employment Development Department and San Diego Association of Governments (SANDAG). While we believe all sources utilized are sufficiently accurate for the purposes of the 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 the City of San Diego. The nexus analysis and discussion focus on the relationships among development, growth, employment, income of workers and demand for affordable housing. The analysis yields a connection between new construction of the 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 the amount of subsidy assistance needed to make the units affordable.

This section also provides a discussion of the current severe recession in relation to key nexus concepts and assumptions. The focus is on how the assumptions of the analysis hold up under these economic conditions and what adjustments are warranted in recognition of these conditions.

The Legal Basis and Context

The first housing linkage programs were adopted in the cities of San Francisco and Boston in the mid-1980s. To support the linkage, the City of San Francisco commissioned an 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 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.

Since the Sacramento case in 1991 there have been several additional court rulings reaffirming and clarifying the ability of California cities to adopt impact fees. A notable case was the San Remo Hotel v. the City and County of San Francisco, which upheld the impact fee levied by the City and County on the conversion of residence hotels to tourist hotels and other uses. The court found that a suitable nexus, or deleterious impact had been demonstrated. In 2009, in the Building Industry Association of Central California v. the City of Patterson, the Court invalidated the City's fee since the impact of the proposed project as related to the fee had not been demonstrated. The most recent ruling was this summer (2010) when the court upheld most of the impact fees levied by the City of Lemoore in Southern California. Of note relevant to Housing Impact Fees was the judges' opinion that a "fee" may be "established for a broad class of projects by legislation of general applicability…….the fact that specific construction plans are not in place does not render the fee unreasonable." In other words, cities do not have to identify specific affordable housing projects to be constructed at the time of adoption.

In summary, the case law at this time appears to be fully supportive of jobs housing impact fees such as the impact fee that has been in place in the City of San Diego since 1990 and is the subject of this update analysis.

The Nexus Methodology

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

To illustrate the micro nexus, very simply, we can walk through the major calculations of a building. We begin by assuming a prototypical building of some specific size and then make 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 and the number of workers by household size; 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/affordability level, are associated with the building and divide by the building size to arrive at coefficients of housing units per square foot of building area.

- In the last step, we multiply the number of lower income 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 (this is discussed further in Section II).

Critical Review of 2004 Study

One of the focuses of the work scope is to provide a critical review of the 2004 study (as updated in 2008) and identify areas where revisions are needed. As a result of this review, KMA identified several areas where modification to the previous methodology and assumptions is warranted. Adjustments reflected in the analysis as a result of this review are described in Appendix A.

The Relationship Between Job Growth and Population Growth

A major social issue driving this analysis is growth in lower and 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. Many 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, and some U.S. cities continued to lose population in more recent decades.

Not all population growth in San Diego is the result of new jobs in the region. Retirees, students, and others who are not part of the workforce all generate demand for housing. However non-

working households are not included in the analysis since the purpose is to demonstrate the linkage between new buildings, new workers, and demand for housing. Since only working households are part of this equation, the demand for housing generated by non-working households is excluded.

The Relationship Between Construction and Job Growth

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 and international levels. 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, 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 San Diego 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 for a sustained period of time. 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 Housing Element of the City of San Diego and the San Diego Housing Commission have clearly documented 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 that 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.

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

Substitution Factor

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

Indirect Employment and Multiplier Effects

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

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

Theoretically, a jobs-housing nexus analysis could consider multiplier effects although the potential for double-counting exists. The potential for double counting exists to the extent indirect and induced jobs are added in other new buildings in the City of San Diego subject to the linkage fee. KMA chooses to omit the multiplier effects (the indirect and induced employment impacts) to avoid potential double-counting and make the analysis more conservative.

In addition, the nexus analysis addresses direct “inside” employment only. In the case of an office building, for example, direct employment covers the various managerial, professional and clerical people that work in the building; it does not include the 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. In other words, any analysis that ties lower income housing to the number of workers inside buildings will continue to understate the demand. Thus, confining the analysis to the direct employees does not address all the low to moderate income workers associated with each type of building and understates the 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. In earlier nexus analyses, KMA would adjust the analysis to account for this. However, increases in participation rates by women have stabilized and even declined slightly and labor force participation rates for men have been on a downward trajectory since 1970. As such, an adjustment for increase in labor force participation is no longer warranted in a nexus analysis.

Relevance and Applicability of Nexus Methodology in Today's Economy

At the current time, the nation, regional, and local economy are all experiencing a severe recession. Unemployment in California is in excess of 12% and unemployment in San Diego County exceeds 10%. Some sectors have been particularly hard hit by the recession including Construction, which shed nearly 37,000 or 40% of total jobs. Retail Trade, Finance and Insurance, Real Estate, and others sectors are also affected as summarized in the table below. Overall, employment in San Diego County has declined about 7% from the peak in December 2008.

	Employment as of	Peak Employment (last 5 years)		Decline from Peak	
	June 2010	Total	Peak in	Total	Percent
Overall Employment in County	1,234,300	1,332,300	Dec-07	(98,000)	-7%
Industry Sectors Most Affected by Recent Job Losses*					
Construction	58,500	95,100	Jun-06	(36,600)	-38%
Transportation & Warehousing	18,900	23,300	Dec-06	(4,400)	-19%
Retail Trade	127,600	158,100	Dec-05	(30,500)	-19%
Finance and Insurance	42,500	54,100	Oct-05	(11,600)	-21%
Real Estate Rental and Leasing	25,500	31,100	Jun-06	(5,600)	-18%
Publishing Industries (except internet)	8,200	11,000	Nov-05	(2,800)	-25%
Administrative and Support Services	73,500	87,100	Sep-06	(13,600)	-16%

* Defined as loss of 15% or more of employment within last five years
Source: California Employment Development Department

In the context of the current recession, the question has been raised as to the relevance and applicability of the nexus methodology under these conditions. The question is whether the linkage between new work space buildings, the addition of net new jobs to the region, and the resulting demand for housing that is documented in the nexus holds under current economic conditions. This question relates only to technical methodology and is separate from the policy discussion around an appropriate fee level.

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

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

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

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

Discount for Changing Industries / Long-Term Declines in Employment

While short term declines in employment related to economic cycles do not warrant an adjustment in the nexus analysis for the reasons described above, long-term declines do warrant an adjustment and have been accounted for in a manner that factors in possible long-term effects that could result from the current severe recession.

It is general practice to examine 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. On the other hand, as discussed above, short term temporary declines in employment do not warrant an adjustment. In San Francisco, by way of example, there was 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.

San Diego's economy, like that of the U.S. as a whole, is constantly evolving. In recent years, the region's economy has become more diverse and less reliant upon military and defense industries. A few industry sectors in San Diego have experienced long term declines in employment as shown on Table I-1. Industry sectors experiencing long-term declines in employment include aerospace, banking, computer and electronics manufacturing, durable goods manufacturing, defense department civilian employment, and several others. These are jobs that, once lost, never return and so the workers are forced to find employment in other industries. Declining industries may occupy special purpose space not readily re-occupied by other types of industries or tenants and therefore be taken out of the supply. Over time, displaced workers will presumably find new work locally and thus some of the employment in new buildings would be for workers who would not be new to the City or County and who already have housing. Based on the data in Table I-1, an 11% downward adjustment to the findings of the analysis is made to account for permanent job losses and down-sizing in declining industries. The 11% adjustment factor is the equivalent of saying about one of every nine jobs added is filled by a worker that has been down-sized from a declining industry and already lives locally.

Severe economic recessions have been known to precipitate or accelerate economic shifts; jobs lost in a severe economic downturn are replaced, but not necessarily with the same types of jobs that were lost. The extent to which the current downturn will influence shifts in the City's economic base will probably not be well understood until some years into the future. However, in order to account for the potential for such structural changes, the adjustment for long-term declines is derived using current (2010) employment figures reflective of the economic downturn and recent job losses. This effectively treats recent job losses in declining industries as

permanent and produces a larger discount for declining industries than if two years with comparable unemployment rates (i.e. 1990 and 2007 as shown on Table I-1) are used.

Other City of San Diego Affordable Housing Programs

The City of San Diego is committed to creating new opportunities for affordable housing as well as preserving the existing affordable housing stock.

The San Diego Housing Commission was established by the City as a public agency dedicated to preserving and increasing affordable housing within the City of San Diego. Since 1981, SDHC has contributed more than $1 billion in loans and bond financing to projects that produced more than 20,600 housing units, of which 12,662 are affordable. The City has a comprehensive and multifaceted program that tackles the affordable housing shortage from many approaches. The Housing Impact Fee Program is but one of many financial resources that the City uses to increase the supply of affordable housing in San Diego.

TABLE I-1
SAN DIEGO COUNTY INDUSTRIES EXPERIENCING LONG TERM DECLINES IN EMPLOYMENT
JOBS HOUSING NEXUS STUDY
SAN DIEGO, CA

INDUSTRIES WITH LONG-TERM DECLINES IN EMPLOYMENT / SAN DIEGO COUNTY	1990 TOTAL EMPLOYMENT	2007[1] TOTAL EMPLOYMENT	2007[1] CHANGE SINCE 1990 Total	2007[1] CHANGE SINCE 1990 Percent	2010 TOTAL EMPLOYMENT	2010 CHANGE SINCE 1990 Total	2010 CHANGE SINCE 1990 Percent
Unemployment Rate in San Diego County (2)	4.6%	4.5%			11.0%		
Industries With Declining Long-Term Employment							
Aerospace Product & Parts Manufacturing	22,900	6,300	(16,600)	-72.5%	5,700	(17,200)	-75.1%
Credit Intermediation & Related Activities (banking)	26,600	24,600	(2,000)	-7.5%	18,800	(7,800)	-29.3%
Computer & Electronic Product Manufacturing	32,500	26,000	(6,500)	-20.0%	25,100	(7,400)	-22.8%
Durable Goods - other (subset of category)	37,000	36,500	(500)	-1.4%	31,000	(6,000)	-16.2%
Retailers / other (subset of category)	20,500	19,700	(800)	-3.9%	14,900	(5,600)	-27.3%
US Dept of Defense (includes civilian employment only)	23,700	18,600	(5,100)	-21.5%	21,000	(2,700)	-11.4%
Newspaper, Periodical, Book & Directory Publishers	6,900	6,400	(500)	-7.2%	4,300	(2,600)	-37.7%
Federal Government except Defense	25,500	22,300	(3,200)	-12.5%	23,100	(2,400)	-9.4%
Warehousing & Storage	3,200	3,100	(100)	-3.1%	2,700	(500)	-15.6%
Mining and Logging	600	400	(200)	-33.3%	300	(300)	-50.0%
Ship & Boat Building	7,300	7,100	(200)	-2.7%	7,100	(200)	-2.7%
INDUSTRIES WITH DECLINING EMPLOYMENT	206,700	171,000	(35,700)	-17.3%	154,000	(52,700)	-25.5%
GROWING and STABLE INDUSTRIES	770,700	1,148,700	378,000	49.0%	1,067,200	296,500	38.5%
TOTAL EMPLOYMENT IN SAN DIEGO COUNTY	977,400	1,319,700	342,300	35.0%	1,221,200	243,800	24.9%
Declines in employment as a percent of total 1990 Employment			-3.7%			-5.4%	
Number of years of employment data			17 Years			20 Years	
Assumed average useful life of buildings (3)			40 Years			40 Years	
Normalize to average useful life of a building			-8.6%			-10.8%	
Adjustment to analysis results to account for long-term economic changes and declining industries					round to	-11%	

(1) Selected as most recent year with comparable unemployment rate to 1990.

(2) As of March of each year.

(3) While many buildings may have longer useful lives than 40 years, the analysis could readily have used the midpoint in the life a building instead for purposes of making the adjustment; therefore use of a 40 year life is conservative. Selection of the higher rate of decline computed from 2010 employment figures which reflect an economic downturn is also conservative.

Source: California Employment Development Department.

Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Table I-1-declining industries.xls; long term decline in employment; 10/29/2010; dd

SECTION II – MACRO ECONOMIC JOBS HOUSING ANALYSIS

This section examines the relationships in San Diego that underlie the jobs housing linkage. In particular, the history of employment growth, housing production and affordable housing production are reviewed. The history of housing production, particularly affordable housing production, compared with the demand generated by new workers is also examined.

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

Employment History and Trends

SANDAG regularly publishes a regional employment inventory, including projections and other related data. According to SANDAG, "the purpose of the Demographic and Economic Forecasting Model is to forecast annually the size and structure of the region's economy and to produce a demographic forecast consistent with that future economy."[1] SANDAG is the most widely used data source by local planning agencies in the San Diego area. To capture the full range of business cycles, the time period between 1990 and 2008 is examined. According to SANDAG, employment growth in the City of San Diego since 1990 registered a net increase of 147,800 total jobs, an increase of 22%. See Table II-1.

Year	Jobs in San Diego
1990[2]	673,722
2008[3]	821,521
Growth	147,799

Characteristics of San Diego Employees and Their Households

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

[1] 2050 Regional Growth Forecast Process and Model Documentation, June 2010.
[2] SANDAG Regional Employment Inventory. 1994.
[3] SANDAG Cities/County Forecast 2050.

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

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

Workers per Worker Household

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

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

For the nexus analysis, the characteristic of most direct interest is the number of workers per worker household. Worker households are defined as those households with one or more persons with work related income, including the self-employed, as reported in the 2006-2008 American Community Survey (ACS). In other words, worker households are distinguished from total households in that the universe of worker households does not include elderly or other households in which members are retired or do not work for other reasons. Student households and unemployed households on public assistance are also excluded from worker households.

According to the 2006-2008 ACS, the number of workers per worker household in the County of San Diego was 1.73. Since workers in the City of San Diego live all over San Diego County, the County average is used in the analysis.

Wages and Salaries of San Diego Workers and Household Income

The average wage or salary of San Diego workers and the income of households formed by the 1.73 workers determines the household's ability to afford housing. The California Employment Development Department reports information on average wages and salaries paid to San Diego County workers, by occupation type.

A summary of the occupations associated with each building was developed from the 2009 National Industry-Specific Occupational Employment Estimates, produced by the Bureau of Labor Statistics, which cross references occupations by industry. Appendix C Part I – Tables 1, 3, 5, 7, 9, 11, and 13 present summaries for each building type.

The following is a summary table of the average salary levels for the three major occupation groups by building type. A detailed summary of wages and salaries for occupations in each building type is provided in Appendix C Part I – Tables 2, 4, 6, 8, 10, 12 and 14. The percentages refer to the share of employment within the building in the occupation group.

San Diego County Wages by Building Type

Building Type	Major Occupation Group	% of Employment in Building	Average Annual Income
Office	Office and administrative support occupations	31%	$36,600
	Business and financial operations occupations	11%	$74,100
	Computer and mathematical science occupations	9%	$81,100
Retail	Sales and related occupations	27%	$27,700
	Food preparation and serving related occupations	26%	$22,100
	Office and administrative support occupations	13%	$33,200
Hotel	Building and grounds cleaning and maintenance occupations	31%	$22,800
	Food preparation and serving related occupations	26%	$22,400
	Office and administrative support occupations	19%	$29,300
Medical	Healthcare practitioner and technical occupations	45%	$79,800
	Healthcare support occupations	19%	$26,600
	Office and administrative support occupations	13%	$36,100
Manufacturing	Production occupations	34%	$35,200
	Architecture and engineering occupations	11%	$84,200
	Office and administrative support occupations	10%	$38,000
Warehouse	Sales and related occupations	25%	$61,800
	Office and administrative support occupations	24%	$33,900
	Transportation and material moving occupations	22%	$30,800
Education	Education, training, and library occupations	59%	$58,900
	Office and administrative support occupations	11%	$36,200
	Management occupations	4%	$118,400

Source: California Employment Development Department, 2009 Occupational Employment Statistics Survey, Wages 1st Quarter 2010.

The occupations with the lowest compensation levels are in the retail and hotel industries, which are the industries associated with San Diego's important tourism sector.

Household Income

When workers in these occupations form households, their income, either alone or in combination with other workers, produce the household income. In addition, of course, there may be children and/or other household members who are not employed. According to HUD, as published by HCD, the annual median income of a four-person household in San Diego County for the year 2010 is $75,500. This analysis focuses on three classifications of household income:

Very Low-Income – up to 50% of Median Income
Low-Income – 50% to 80% of Median Income
Moderate-Income – 80% to 120% of Median Income

The upper limit of income classifications for two, three and four person households in San Diego County for 2010 appear in the table below.

Two Person HH	
Very Low Income	$31,400
Low Income	$50,250
Median Income	$60,400
Three Person HH	
Very Low Income	$35,350
Low Income	$56,550
Median Income	$67,950
Four Person HH	
Very Low Income	$39,250
Low Income	$62,800
Median Income	$75,500

Source: California Department of Housing and Community Development.

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

Commute Relationships and Trends

This section provides a brief summary of commute relationships and trends. The major relationship of interest in a nexus analysis is the share of San Diego jobs held by San Diego residents. The current relationship share serves as a starting point for a making a policy choice regarding the future share, or target, of all new jobs (and new worker households) to be able to live in the city.

The primary source of information regarding commute relationships is the U.S. Census Bureau. In San Diego, however, the Census Bureau's data does not provide a complete picture because it only covers jobs held by residents of the United States. San Diego's city limits extend to the U.S. – Mexico border and it is understood that there is cross-border commuting that occurs on a daily basis. Working with only Census data, the share of jobs in San Diego held by San Diego residents is 60.8 %

Since relying exclusively on US Census data could distort the share of San Diego's workforce that resides within the City, KMA estimated the number of jobs in San Diego that are held by residents of Mexico, and used this estimate to modify the Census derived commute adjustment. According to the Census or its updated version, the 2006-2008 American Community Survey (ACS), there were 451,625 San Diego residents who also worked in San Diego, not including San Diegans who work at home. For the same time period, ACS reports there were a total of 742,545 jobs in San Diego, excluding jobs held by residents of Mexico and San Diegans who work from home. (451,625 as a share of 742,545 is 60.8%.)

There is no readily available data source on the number of jobs in the City of San Diego that are held by people commuting across the border. As a surrogate, KMA utilized data on the annual number of north-bound border crossings, not including truck crossings, at the two relevant locations: San Ysidro and Otay Mesa. The data are compiled by the US Department of Transportation (USDOT). KMA then incorporated an upper-end assumption that 50% of all border crossings are commute trips to work. Adjusting the USDOT data to a daily figure from an annual figure, KMA estimated that up to approximately 80,000 workers may be crossing the border each day to work in the United States. Presumably not all of these workers are crossing the border for a job in the City of San Diego. Using SANDAG data, the City of San Diego accounts for 55% of all employment in the region. Applying this percentage to the 80,000 workers, it can be estimated that up to 45,000 jobs in San Diego may be held by residents of Mexico who commute over the border for work.

If the estimated 45,000 jobs in the city of San Diego held by residents of Mexico are added to the total held by U.S. residents (from the Census/ ACS source) the total number of jobs in the city becomes 787,545. Based on this estimate, commuters from Mexico may account for up to 5% of employment in the City (see Appendix C Part I Table 15.)

The adjusted share of San Diego residents who also worked in San Diego in 2008, becomes 57%, after adding the 45,000 Mexican resident workers to total jobs. (451,625 San Diego residents who also work in San Diego as a share of 787,545 total jobs in the City.)

An alternative commute relationship may be derived solely from SANDAG's own data on total employment in San Diego. The SANDAG total employment figures now appear to include Mexican workers. SANDAG's estimate of total jobs in 2008 in the City is 821,521. Using that

employment estimate, the 451,625 San Diegans who both live and work in the City result in a 55% share of total jobs.

To summarize, the three estimates using different data sources generate a range of between 55% and 60.8% as the share of all jobs in the City of San Diego that are held by San Diego residents. Since the KMA generated estimate represents something of a midpoint at 57%, the 57% share is utilized in the subsequent nexus analysis.

It is important to recognize that the commute share does not necessarily represent the demand for housing in San Diego. Taken to the extreme, one can hypothesize a city with very few workers living in it because there is very little housing or because few can afford to live there.

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

As stated at the outset of this section, the commute share can be a policy choice or target. The existing condition is merely a starting point for the analysis and serves as useful benchmark for reducing total demand to a local share.

As to long term trends, in San Diego as in most metropolitan regions, the share of jobs held by local residents has been declining for decades. As land is more available and affordable in outlying suburbs, the share of workers who reside outside the city is continually increasing, resulting in more commuting.

Housing

This section provides a brief summary of selected characteristics of the housing market that affect the ability of worker families to find housing in San Diego. This section also examines growth in housing units in San Diego to meet the demand of new worker households.

Housing Production

SANDAG and California Department of Finance data indicates that from 1990 through 2007, almost 82,000 new housing units were constructed. As shown in Table II-2 annual building activity greatly varied over the two decades. The high year was 1990 when almost 7,000 new units were added and the low year was 1995 when only 2,200 new units were added. Construction activity was very strong during the 2000s. On average, 4,550 units were constructed annually during the two decades.

As noted earlier, during this same time frame, SANDAG estimates that 147,799 new jobs were created in San Diego. Also discussed earlier, there are approximately 1.73 workers per worker

household, meaning that 147,799 new jobs can be equated to 85,433 households demanding housing somewhere within commuting distance to a job in San Diego.

It is important to note that housing demand generated by new employment is not equivalent to total housing demand. Each community experiences demand for its housing by people who work in other jurisdictions as well. In addition, there is a share of total demand attributable to non-working households. Every time the worker(s) in a household leaves the labor market, such as upon retirement, if the household remains in the same housing unit, the unit is removed from the pool of units for working households, thus resulting in demand for a new unit even though there is no employment growth.

To estimate the increase in housing demand generated by new retirees in the City, KMA relied on US Census and SANDAG data to calculate the increase in the population between age 65 and 85 between 1990 and 2008. KMA excluded households over 85, recognizing that a significant portion of this population will require other housing solutions, such as nursing care, living with adult children, etc. KMA adjusted this population growth to estimate the number of newly retired households in San Diego, using US Census data on employment rates and average household size, as shown in Table II-3. In total, KMA estimates that over the time period there were over 8,000 new non-working households between the ages of 65 and 85 in San Diego, thus increasing the total demand for new housing by that amount.

In total, KMA estimates that 85,400 new worker households and 8,300 new retirees created a demand for 93,800 new housing units. Since San Diego added 82,000 net new units over the period we can say that of the total new units in demand, the City production was sufficient to accommodate a significant portion of new housing demand (without consideration of affordability). Other ways of expressing the relationship are indicated below.

1990 through 2007	
Increase in Jobs (from Table II-1)	147,799
Increase in Worker Households (New Units in Demand) @ 1.73	85,433
Increase in Non-Working Households over age 65	8,345
Total New Housing Demand	93,788
Residential Construction in San Diego (from Table II-2)	81,894
Relationship of New Housing Units to New Worker Households	0.87:1
Deficit for 1:1 ratio	(11,884)

The households not accommodated in the City of San Diego presumably found housing elsewhere in the region within commuting distance.

Housing Production by Affordability Level

KMA estimated the level of affordable housing production over the past ten years to develop a sense of whether production has kept pace with demand. In the 2004 *Housing Impact Fee*

Nexus Analysis, Keyser Marston assembled data on affordable housing production for the period between 1999 and 2004. The data source was a Manager's report on the City's Comprehensive Affordable Housing Strategy dated July 31, 2002 that discussed historical production and estimated future production based on projects in the pipeline.

The City's Annual Housing Element Progress Report provides information on affordable units permitted in the past five years, between 2005 through 2009. Combining these two data sources allows us to estimate roughly the level of affordable housing production over a ten year period. Between 1999 and 2009, there were about 4,900 affordable units constructed or permitted for construction, not including market rate units that might be affordable. This represents approximately 11% of new dwelling units constructed, with the remaining new dwelling units available at market rates. See Table II-2 for more information. Not all of the affordable housing constructed or permitted during this time is likely to be available to new worker households, as some of it may be restricted to senior households, or other (typically) non-working populations.

The above analysis and discussion demonstrates that despite the notable accomplishments of the City of San Diego in the production of affordable housing, affordable units represent a small percentage of total units produced.

Future Projections

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

Employment Projections

SANDAG provides projections of employment for the entire San Diego region. The most recent available is the 2050 Regional Forecast, published in 2010. For the purposes of this analysis, KMA examined the changes between 2008 and 2030, to match approximately the historical time frame examined earlier. Employment projections for San Diego are estimated as follows:

Year	Total Jobs
2008	821,521
2030[4]	928,178
Total Increase	106,657

The SANDAG projection for the 2008 to 2030 time period envisions the City adding an average of about 4,800 jobs per year over the twenty-two year period. See Table II-4 for more

[4] SANDAG Cities/County Forecast 2050.

information. At 1.73 workers per worker household, these new jobs would generate approximately 61,651 new worker households (106,657 jobs divided by 1.73) that need housing in the San Diego region.

The SANDAG projections for residential construction in San Diego hold that 121,039 new units will be added. As discussed earlier, this housing would accommodate all households, not just worker households. Looking at demographic projections provided by SANDAG, it is clear that the city of San Diego expects significant increases in the number of non-working households over the forecasted timeframe. KMA estimated the increase in housing demand generated by new retirees in the City, and found it to be a significant source of future housing demand.

SANDAG anticipates that, with the aging of the baby boom, the number of San Diegans between the ages of 65 and 85 will more than double between 2008 and 2030, from 121,000 to almost 267,000. KMA excluded households over 85, recognizing that a significant portion of this population will require other housing solutions such as assisted living, nursing care, living with adult children, etc. KMA adjusted this population growth to estimate the number of newly retired households in San Diego, using US Census data on employment rates and average household size. In total, KMA estimates that there will be about 67,000 new non-working households over age 65 in San Diego, thus increasing the total demand for new housing by that amount. See Table II-4.

In total, KMA estimates that 61,651 new worker households and 67,000 new retiree households will create a demand for 128,500 new housing units. Since SANDAG projects that 121,000 net new units will be built over the period we can say that of the total new units in demand, the City production will fall short of accommodating new housing demand generated by new worker households and new retirees (without consideration of affordability) by about 7,500 units.

As with the period between 1990 and 2008 examined earlier, the worker households not accommodated in the City of San Diego will live elsewhere in the region within commuting distance.

Affordability

Finally, the ratio of total new units and new worker households and related discussion does not take into account the matter of affordability. Based on the findings of this nexus analysis, between 50% and 95% of new worker households will have incomes of 120% of median income or less (depending on the building type), the number of affordable units needed will far exceed affordable unit production under any likely scenario. During the ten years reviewed, approximately 4,900 affordable units, or roughly 11% of total units, were constructed. Even if this rate of affordable unit production were maintained, the supply of affordable housing to the new workforce would be far from adequate to meet new demand. A commercial linkage fee program would provide additional resources to improve affordable unit production for new worker households.

TABLE II-1
JOB GROWTH, 1990 - 2008
JOBS HOUSING NEXUS ANALYSIS
CITY OF SAN DIEGO

Total Jobs
City of San Diego

	1990[1]	2008[2]	Job Growth	% Change
Total	673,722	821,521	147,799	22%

[1] SANDAG Employment Estimates.

[2] SANDAG Cities/County Forecast, 2050.

Prepared by: Keyser Marston Associates, Inc.
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TABLE II-2
AFFORDABLE UNIT PRODUCTION
JOBS HOUSING NEXUS ANALYSIS
CITY OF SAN DIEGO

NET INCREASE IN HOUSING UNITS 1990-2007[1]

Year	Total
1990	6,921
1991	4,860
1992	4,570
1993	3,213
1994	2,912
1995	2,233
1996	2,394
1997	3,362
1998	5,646
1999	4,904
2000	3,952
2001	6,286
2002	4,704
2003	6,343
2004	5,755
2005	3,671
2006	4,563
2007	5,605
Total	**81,894**
Annual Avg (18 years	**4,550**

TOTAL UNITS BY AFFORDABILITY LEVEL, 1999-2009[2]

Affordability Level	Total Affordable	
	Units	% Share
Very Low: < 50% Median Income	2,587	53%
Low: 50 - 80% Median Income	1,881	39%
Moderate: 80 - 120% Median Income	415	8%
Total Affordable Units	**4,883**	**100%**
Annual Average	**488**	

Affordable Units as Share of Average Housing Unit Production Rate[3]	**11%**

[1] Source: California Department of Finance. Shows construction of housing units net of demolitions (net increase). Data for 2000 and 2001 from San Diego Housing Commission.

[2] Affordable unit count is based on two sources: 1999-2004 data represents completed and pipeline units included in the Manager's report dated July 31, 2002 regarding the status of the City's Comprehensive Affordable Housing Strategy. 2005-2009 data is based on permitted units included in the Annual Housing Element Progress Report for the 2009 calendar year. The total numbers are an estimate of affordable unit production in San Diego, based on the two data sources.

[3] Based on annual average affordable units 1999 through 2009 and annual average net increase in housing units 2000 through 2008.

TABLE II-3
HISTORICAL RELATIONSHIP: EMPLOYMENT GROWTH, RESIDENTIAL UNIT DEMAND
JOBS HOUSING NEXUS ANALYSIS
CITY OF SAN DIEGO

Housing Demand Generated by Working Households			
Job Growth - per SANDAG [1]			
1990		673,722	
2008		821,521	
Increase		147,799	jobs
Worker Households @ 1.73		85,433	worker households
Housing Demand Generated by Retiring Workers			
Population Aged 65 - 85:	1990[2,3]	103,292	
Population Aged 65 - 85:	2008[1,3]	121,396	
Increase		18,104	
Not in Labor Force[4]	85.20%	15,425	
New Households Not in Labor Force, age 65 and older @[5]	1.85	8,345	retired households
Total Housing Demand		**93,778**	
Growth in Housing Units - Per SANDAG [6]			
New Units 1990 - 2008		81,894	housing units
Deficit for 1:1 Ratio		0.87	:1

1 SANDAG 2050 Cities/County Forecast and SANDAG San Diego Profile based on US Census data.

2 1990 US Census.

3 Does not include San Diegans older than 85, recognizing that a significant portion of this population will require additional services such as assisted living, nursing care, living with children, etc.

4 2006-2008 American Community Survey.

5 Average household size, age 65 and older, San Diego County. 2006-2008 American Community Survey

6 See Table II-2.

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TABLE II-4
PROJECTION: EMPLOYMENT GROWTH, RESIDENTIAL UNIT DEMAND
JOBS HOUSING NEXUS ANALYSIS
CITY OF SAN DIEGO

I. SANDAG PROJECTIONS

Housing Demand Generated by Worker Households

Projected Job Growth - Per SANDAG [1]			
2008		821,521	
2030		928,178	
Increase		106,657	Jobs
Worker Households @ 1.73		61,651	Worker Households

Housing Demand Generated by Retiring Workers

Population Aged 65 - 85:	2008[1,2]	121,396	
Population Aged 65 - 85:	2030[1,2]	266,513	
Increase		145,117	
Not in Labor Force[3]	85.20%	123,640	
New Households Not in Labor Force, age 65 and older @[4]	1.85	66,890	
Total Housing Demand		**128,542**	

Projected Housing Units - Per SANDAG [1]			
2008		508,436	
2030		629,475	
Increase		121,039	Housing Units
Relationship Housing Units to New Households			
Deficit for 1:1 Ratio		0.94	

[1] SANDAG 2050 Cities/County Forecast.

[2] Does not include San Diegans older than 85, recognizing that a significant portion of this population will require additional services such as assisted living, nursing care, living with children, etc.

[3] 2006-2008 American Community Survey.

[4] Average household size, age 65 and older, San Diego County. 2006-2008 American Community Survey

SECTION III – MICRO ECONOMIC JOBS HOUSING ANALYSIS

This section presents a summary of the analysis of the linkage between four 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 between employment growth in San Diego and affordable housing demand.

The analysis approach is to examine the employment associated with the development of 100,000 square foot building modules. The building size is used solely to facilitate understanding of the analysis by being able to avoid cumbersome fractions. 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
- Hotel/Resort and other lodging
- Retail/Entertainment
- Medical/Hospital
- Manufacturing/Industrial
- Warehouse / Storage
- Education

Section II presented information on the income categories addressed in this analysis. For a four-person household, the maximum qualifying income levels for 2010 are:

- Median Income – $75,500
- Very Low Income – under 50% of Median (up to $39,250)
- Low Income – 50% to 80% of Median (between $39,250 and $62,800)
- Moderate Income – 80% to 120% of Median (between $62,800 and $90,600)

The analysis is conducted using a 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 seven 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. Average employment density factors are used to make the conversion. The density factors used in this analysis are:

- *Office* – 250 square feet per employee. This figure is right in the middle of 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.) The average is based on gross building area and takes into account the lobby, corridors, restrooms, etc.

- *Hotel* – 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 lobbies, restaurants, meeting space, etc.) is larger but the number of employees per room is higher.

- *Retail* – 350 square feet per employee. This category covers a broad range of experience from high service restaurants where densities are far greater than average to some retail uses, such as furniture stores, where densities are far lower.

- *Medical/Hospital* – 300 square feet per employee. This building type includes a range of facilities from specialized care facilities, where densities are low, to outpatient care centers, where hospital beds and living quarters are not present, and employment densities are higher.

- *Manufacturing/Industrial* – 500 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 appropriate for the San Diego economy including industrial parks, general light industrial uses, research and development, biotech manufacturing, machinery, electrical equipment, defense manufacturing and transportation equipment.

- *Warehousing / Storage* – 2,000 square feet per employee. This category covers a broad range of facility types incorporating higher employment density facilities engaged in wholesale trade to transportation and storage facilities that tend to have lower employment densities.

- *Educational* – 700 square feet per employee. This figure covers a range of facilities from colleges to elementary schools to training facilities. This average includes all the various components of an educational facility, such as classrooms, front office, gymnasiums, etc.

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 will house 400 employees; the hotel 200 employees, the retail 286 employees; hospital/medical 333 employees; manufacturing/industrial 200 employees; warehousing/storage 50 employees, and educational uses 143 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. As discussed in Sections I and II, an 11% adjustment is utilized to recognize the long-term shifts in employment occurring in San Diego.

For demolition of existing structures, an ordinance provision will provide for an offset to any impacts of the proposed construction. We understand the City has interpreted its existing ordinance to provide for a credit or offset to the fee when demolition of existing structures occurs as part of a project. The fee is only charged against net new space added by a project.

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 San Diego County average is 1.73 workers per worker households.

Step 4 – Occupational Distribution of Employees

The occupational breakdown of employees is the first step to arriving at income levels. Using the 2009 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 seven types of buildings. The occupations that reflect the expected mix of activities in the new buildings are presented in Appendix C Part I Tables 1, 3, 5, 7, 9, 11, and 13.

- Office buildings' "industry" mix has to be tailored to reflect the types of activities attracted to office space in San Diego. These industries represent a mix of professional service activities including business and financial operations, insurance, architecture and engineering, computer and mathematical, legal, management, healthcare and sales. Because there are significant regional differences in the composition of office building employment, KMA weighted the industry mix based on San Diego County employment levels to ensure that it is representative of San Diego's economic base. Office and administrative support occupations (i.e., clerical) comprise 31% 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 76% of hotel workers. Other hotel occupations include personal care, management, and maintenance and repair.

- Retail employment is dominated by three main occupation groups: sales (27%), food preparation and serving (26%), and office and administrative support (13%). These three occupations together account for 66% of retail workers. The remaining 44% of retail workers are in occupations that include transportation, cleaning, maintenance, and production.

- Medical employment is heavily concentrated in healthcare practitioner and technical occupations (46%), and healthcare support occupations (19%). Office and administrative support makes up an additional 13%. The remaining 23% of workers are in occupations that include community and social services, food preparation, cleaning and maintenance, and management occupations.

- Manufacturing employment is concentrated in production occupations (34%), architecture and engineering occupations (11%), office and administration occupations (10%). The remaining occupations include management, business and financial, computer and mathematical, and life, physical and social science occupations.

- Warehousing and storage occupations consist of sales and related occupations (25%), office and administrative support (24%), and transportation and material moving occupations (22%). The remaining 30% is made up of management, business and financial, computer and mathematical, maintenance and repair, and production occupations.

- Education employment is dominated by education, training and library occupations (59%). Additional employment occurs in office and administrative support (11%), building and grounds, food preparation, and management 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 San Diego 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, 12, and 14 provided the income inputs to the model. 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. In addition, the model recognizes that the number of workers is dependent upon household size, and includes a distribution of number of workers by household size. Employee households not falling into one of the major occupation categories per Appendix C Part I Tables 2, 4, 6, 8, 10, 12 and 14 were assumed to have the same income distribution as the major occupation categories.

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 and the State, as used by the City. The household size distribution utilized in the analysis is that of San Diego County since the City draws workers from throughout the county.

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

For this step the KMA model incorporates 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 income and household size level. This step is performed for each occupational category and multiplied by the number of households.

Table III-2 shows the result after completing Steps #5, #6, and #7. The calculated numbers of households that meet size and income criteria shown in Table III-2 are for the Very Low Income or under 50% of Median Income category. The methodology is repeated for each income tier (See Table III-3).

Summary by Income Level

Table III-3 indicates the results of the analysis for the additional income categories for the seven prototypical 100,000 square foot buildings. The table presents the number of households in each affordability category, the total number up to 120% of median, and the remaining households earning over 120% of median.

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 on average with only 12% of worker households below 50% of median and 47% earning greater than 120% of median. Medical, Warehouse, Manufacturing and Education worker households are in between these extremes with a moderate number of workers in the very low-income category, but a significant share of employees in the low and moderate-income categories.

Percent of Worker Households by Income Category

	Office	Hotel	Retail	Medical	Manufacturing / Industrial	Warehouse / Storage	Education
Very Low	12%	49%	47%	18%	15%	20%	22%
Low	21%	34%	35%	20%	21%	27%	31%
Moderate	21%	10%	12%	18%	19%	21%	19%
Total <120% AMI	53%	93%	94%	56%	55%	68%	72%

Adjustment for Commute Relationship

Table III-4 indicates the results of the analysis both before and after an adjustment for commute relationship. As discussed in Section II, 57% of the jobs in San Diego are estimated to be held by residents of the city. In other words, if the existing commute relationship were to hold for new employee households, 57% would be expected to reside in the City of San Diego, with the remainder distributed throughout the region, including across the border in Mexico. The estimates of households for each income category in a prototypical 100,000 square foot building are adjusted downwards by this commute factor. This adjustment is not technically required for

nexus purposes. The City could, for example, choose to include all housing demand in the nexus analysis. The City could also choose to use a factor other than the existing commute relationship that might incorporate policy considerations such as a goal to house a greater or lesser percentage of the workforce locally.

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 a 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-5).

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 STUDY
CITY OF SAN DIEGO, CA

Prototypical 100,000 Sq.Ft. Buildings	OFFICE	HOTEL	RETAIL	MEDICAL	MANUF. / INDUSTRIAL	WAREHOUSE / STORAGE	EDUCATION
Step 1 - Estimate of Employees per 100,000 Sq.Ft.							
Employee Density Factor (sq.ft./emp)	250	500 *	350	300	500	2,000	700
Number of Employees	400	200	286	333	200	50	143
Step 2 - Adjustment for Changing Industries and Long Term Declines in Employment (11%)	356	178	254	297	178	45	127
Step 3 - Adjustment for Number of Households (1.73)	206	103	147	171	103	26	73
Step 4 - Occupation Distribution[1]							
Management Occupations	7.6%	4.0%	2.4%	3.5%	8.5%	5.9%	4.4%
Business and Financial Operations	11.5%	1.4%	1.2%	1.6%	5.8%	3.7%	1.9%
Computer and Mathematical	9.2%	0.1%	0.5%	0.8%	6.3%	3.2%	1.5%
Architecture and Engineering	5.6%	0.0%	0.2%	0.0%	11.4%	1.0%	0.2%
Life, Physical, and Social Science	1.6%	0.0%	0.1%	0.6%	8.8%	0.5%	1.4%
Community and Social Services	0.4%	0.0%	0.0%	3.6%	0.1%	0.0%	2.3%
Legal	2.9%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%
Education, Training, and Library	0.1%	0.0%	0.1%	0.4%	0.2%	0.0%	59.3%
Arts, Design, Entertainment, Sports, and Media	1.9%	0.4%	1.1%	0.2%	0.8%	1.0%	1.4%
Healthcare Practitioners and Technical	8.5%	0.0%	1.7%	45.5%	0.7%	0.3%	2.0%
Healthcare Support	4.5%	0.4%	0.5%	18.7%	0.2%	0.0%	0.3%
Protective Service	0.3%	2.1%	2.3%	0.7%	0.2%	0.1%	0.9%
Food Preparation and Serving Related	0.2%	26.4%	26.3%	4.3%	0.1%	0.1%	3.7%
Building and Grounds Cleaning and Maint.	1.3%	30.5%	5.1%	4.1%	0.5%	0.5%	4.3%
Personal Care and Service	0.3%	4.1%	2.0%	0.9%	0.0%	0.0%	1.7%
Sales and Related	7.0%	2.6%	26.9%	0.2%	2.7%	24.7%	0.3%
Office and Administrative Support	31.0%	19.4%	13.0%	12.7%	10.4%	23.8%	10.6%
Farming, Fishing, and Forestry	0.0%	0.0%	0.1%	0.0%	0.1%	0.7%	0.0%
Construction and Extraction	0.5%	0.2%	0.7%	0.2%	1.5%	0.4%	0.3%
Installation, Maintenance, and Repair	4.2%	4.6%	4.3%	1.1%	3.6%	7.3%	1.2%
Production	0.8%	2.1%	3.7%	0.7%	33.9%	5.1%	0.2%
Transportation and Material Moving	0.7%	1.4%	7.5%	0.3%	3.7%	21.6%	2.2%
Totals	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Management Occupations	15.6	4.1	3.6	5.9	8.8	1.5	3.2
Business and Financial Operations	23.7	1.4	1.8	2.7	6.0	1.0	1.4
Computer and Mathematical	19.0	0.1	0.8	1.4	6.4	0.8	1.1
Architecture and Engineering	11.4	0.0	0.3	0.1	11.8	0.3	0.1
Life, Physical, and Social Science	3.3	0.0	0.1	1.0	9.0	0.1	1.0
Community and Social Services	0.7	0.0	0.0	6.1	0.1	0.0	1.7
Legal	6.0	0.0	0.1	0.0	0.2	0.0	0.0
Education, Training, and Library	0.3	0.0	0.1	0.6	0.2	0.0	43.6
Arts, Design, Entertainment, Sports, and Media	4.0	0.4	1.7	0.3	0.8	0.3	1.0
Healthcare Practitioners and Technical	17.5	0.0	2.6	78.0	0.7	0.1	1.4
Healthcare Support	9.3	0.4	0.7	32.0	0.2	0.0	0.2
Protective Service	0.6	2.2	3.4	1.1	0.2	0.0	0.6
Food Preparation and Serving Related	0.4	27.2	38.6	7.4	0.1	0.0	2.7
Building and Grounds Cleaning and Maint.	2.6	31.4	7.6	7.0	0.5	0.1	3.2
Personal Care and Service	0.7	4.3	3.0	1.6	0.0	0.0	1.2
Sales and Related	14.4	2.7	39.6	0.4	2.8	6.4	0.2
Office and Administrative Support	63.7	20.0	19.1	21.7	10.7	6.1	7.8
Farming, Fishing, and Forestry	0.0	0.0	0.1	0.0	0.2	0.2	0.0
Construction and Extraction	1.0	0.3	1.0	0.3	1.6	0.1	0.2
Installation, Maintenance, and Repair	8.6	4.7	6.3	1.8	3.7	1.9	0.9
Production	1.6	2.2	5.5	1.2	34.9	1.3	0.1
Transportation and Material Moving	1.4	1.5	11.1	0.5	3.8	5.6	1.6
Totals	**206**	**103**	**147**	**171**	**103**	**26**	**73**

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

[1]See Tables in Appendix C for more information on how the percentages were derived.

TABLE III-2
ESTIMATE OF QUALIFYING HOUSEHOLDS BY INCOME LEVEL
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

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

	OFFICE	HOTEL	RETAIL	MEDICAL	MANUF. / INDUSTRIAL	WAREHOUSE / STORAGE	EDUCATION
Step 5, 6, & 7 - Households Earning Less than 50% Median [1]							
Management	0.13	0.04	0.00	0.00	0.00	0.00	0.00
Business and Financial Operations	0.14	0.00	0.00	0.00	0.05	0.01	0.00
Computer and Mathematical	0.14	0.00	0.00	0.00	0.03	0.01	0.00
Architecture and Engineering	0.09	0.00	0.00	0.00	0.08	0.00	0.00
Life, Physical and Social Science	0.00	0.00	0.00	0.00	0.18	0.00	0.00
Community and Social Services	0.00	0.00	0.00	0.88	0.00	0.00	0.00
Legal	0.00	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	8.42
Arts, Design, Entertainment, Sports, and Media	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Healthcare Practitioners and Technical	0.05	0.00	0.00	0.27	0.00	0.00	0.00
Healthcare Support	2.61	0.00	0.00	14.18	0.00	0.00	0.00
Protective Service	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Food Preparation and Serving Related	0.00	15.88	22.59	3.83	0.00	0.00	1.40
Building Grounds and Maintenance	0.00	17.18	3.55	3.71	0.00	0.00	1.44
Personal Care and Service	0.00	2.24	0.00	0.00	0.00	0.00	0.00
Sales and Related	2.57	0.00	19.60	0.00	0.00	0.62	0.00
Office and Admin	14.62	8.27	5.88	5.10	2.30	1.74	1.82
Farm, Fishing, and Forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Construction and Extraction	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Installation Maintenance and Repair	0.98	0.86	0.94	0.00	0.00	0.22	0.00
Production	0.00	0.00	2.25	0.00	10.40	0.41	0.00
Transportation and Material Moving	0.00	0.00	4.82	0.00	0.00	2.02	0.00
HH earning less than 50% Median - major occupations	21.33	44.47	59.64	27.97	13.04	5.03	13.08
HH earning less than 50% Median - all other occupations	2.65	5.47	8.97	2.34	2.27	0.24	2.81
Total Households Earning Less than 50% of Median	**24.0**	**49.9**	**68.6**	**30.3**	**15.3**	**5.3**	**15.9**

[1] See Tables in Appendix C for additional information on Major Occupation Categories

TABLE III-3
WORKER HOUSEHOLDS BY AFFORDABILITY LEVEL
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

Analysis for Households Before Commute Adjustment
Per 100,000 sq. ft. of building area.

	OFFICE	HOTEL	RETAIL	MEDICAL	MANUF. / INDUSTRIAL	WAREHOUSE / STORAGE	EDUCATION
NUMBER OF HOUSEHOLDS BY INCOME TIER							
Under 50% Median Income	24.0	49.9	68.6	30.3	15.3	5.3	15.9
50% to 80% Median Income	42.3	35.3	51.1	35.1	22.1	7.0	22.7
80% to 120% Median Income	42.6	10.5	18.2	30.5	19.1	5.3	14.2
Subtotal to 120% AMI	**108.8**	**95.7**	**137.9**	**95.9**	**56.5**	**17.6**	**52.8**
Above 120% Median	97.0	7.2	9.0	75.6	46.4	8.2	20.7
Total New Worker Households	**205.8**	**102.9**	**147.0**	**171.5**	**102.9**	**25.7**	**73.5**
PERCENTAGE OF HOUSEHOLDS BY INCOME TIER							
Under 50% Median Income	11.7%	48.5%	46.7%	17.7%	14.9%	20.5%	21.6%
50% to 80% Median Income	20.6%	34.3%	34.8%	20.4%	21.5%	27.2%	30.9%
80% to 120% Median Income	20.7%	10.2%	12.4%	17.8%	18.6%	20.6%	19.3%
Subtotal to 120% AMI	**52.9%**	**93.0%**	**93.9%**	**55.9%**	**54.9%**	**68.2%**	**71.9%**
Above 120% Median	47.1%	7.0%	6.1%	44.1%	45.1%	31.8%	28.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Notes:

[1] Before commute adjustment.

TABLE III-4
WORKER HOUSEHOLDS BY AFFORDABILITY LEVEL AFTER COMMUTE ADJUSTMENT
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

PROTOTYPICAL 100,000 SQ. FT. BUILDINGS

BEFORE COMMUTE ADJUSTMENT

	Number of Households[1]						
	OFFICE	**HOTEL**	**RETAIL**	**MEDICAL**	**MANUF. / INDUSTRIAL**	**WAREHOUSE / STORAGE**	**EDUCATION**
Under 50% of Median Income	24.0	49.9	68.6	30.3	15.3	5.3	15.9
50% to 80% of Median Income	42.3	35.3	51.1	35.1	22.1	7.0	22.7
80% to 120% of Median Income	42.6	10.5	18.2	30.5	19.1	5.3	14.2
Total	**108.8**	**95.7**	**137.9**	**95.9**	**56.5**	**17.6**	**52.8**

AFTER 57.40% Commute Adjustment

	Number of Households[1]						
	OFFICE	**HOTEL**	**RETAIL**	**MEDICAL**	**MANUF. / INDUSTRIAL**	**WAREHOUSE / STORAGE**	**EDUCATION**
Under 50% of Median Income	13.8	28.6	39.3	17.4	8.8	3.0	9.1
50% to 80% of Median Income	24.3	20.2	29.3	20.1	12.7	4.0	13.0
80% to 120% of Median Income	24.4	6.0	10.4	17.5	11.0	3.0	8.1
Total	**62.4**	**54.9**	**79.1**	**55.0**	**32.4**	**10.1**	**30.3**

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

TABLE III-5
HOUSING DEMAND NEXUS FACTORS PER SQ.FT. OF BUILDING AREA
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

WITH COMMUTE ADJUSTMENT AT 57.40%

	Number of Housing Units per Square Foot of Building Area[1]						
	OFFICE	**HOTEL**	**RETAIL**	**MEDICAL**	**MANUF. / INDUSTRIAL**	**WAREHOUSE / STORAGE**	**EDUCATION**
Under 50% Median Income	0.00013753	0.00028640	0.00039349	0.00017383	0.00008779	0.00003024	0.00009109
50% to 80% Median Income	0.00024252	0.00020231	0.00029333	0.00020111	0.00012673	0.00004006	0.00013031
80% to 120% Median Income	0.00024405	0.00006015	0.00010431	0.00017495	0.00010966	0.00003036	0.00008150
Total	**0.00062410**	**0.00054887**	**0.00079112**	**0.00054989**	**0.00032419**	**0.00010066**	**0.00030289**

[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 very low, low, and moderate income categories associated with each building type and identifies the total cost of assistance required to make housing affordable. This section puts a cost on the units 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 San Diego, known as the "affordability gap." The analysis uses a standard methodology consistent with the Housing Commission's policies to determine what households can afford, and compares that to the cost of providing additional housing. The analysis is conducted for various household sizes in three categories of Area Median Income: under 50% (very low income), 50% to 80% (low income), and 80% to 120% (moderate income). Income definitions for housing programs are established by HUD and the State for varying household sizes, as presented in Section II and summarized in Table IV-1.

For the purposes of the nexus analysis, rental housing is assumed for the very low and low income categories, while ownership units are assumed for the moderate income category.

Project Descriptions

In order to determine the affordability gap, there is a need to match a household at each income level with a unit type and size according to government regulations and policies. The prototypical projects for both rental and ownership units are designed to represent what the Housing Commission is most likely to assist in the future.

The Housing Commission has typically assisted two types of rental development: garden-style apartments and higher density stacked-flats over podium apartments. Similarly, with ownership units, the Housing Commission has assisted both lower density townhomes and higher density stacked-flat condominiums. "Greenfield" sites available for multi-family development are increasingly rare within the City of San Diego, and land values have risen significantly over the past decade as vacant sites have been absorbed. As a result, an increasing proportion of the affordable housing developments assisted by the Housing Commission will involve higher densities as well as structured parking. Therefore, the analysis has assumed that 40% of the affordable units will be developed as garden or townhome units, and 60% will be developed as stacked flat condominiums over podium parking. All units are assumed to have two bedrooms. The average three person household is assumed to be accommodated in a two bedroom unit, per local policy.

Detailed descriptions of the development prototypes, including development costs, affordable values, and the affordability gap calculations, can be found in the tables at the end of this section. A brief overview is presented here.

Project descriptions for the development prototypes can be summarized as follows:

- Garden-style apartments are assumed to be wood-frame construction, built at a density of 25 units to the acre, with two-bedroom 950-SF units. Parking is provided at two spaces per unit.

- Stacked-flat apartment units are built at a density of 50 units to the acre, with two-bedroom 800-SF units. The buildings are assumed to have four stories of wood-frame construction over a podium. Structured parking is provided at 1.75 spaces per unit.

- Townhome units are assumed to be 1,200-SF two-bedroom units, with two parking spaces in an attached garage. The units are built at a density of 20 units to the acre.

- The higher density condominium units are estimated at 1,000 square feet, with 1.75 spaces per unit of structured parking. The building is built at a density of 45 units to the acre, with wood-frame construction over a parking podium.

Maximum housing costs are determined based on the top end of the income categories. This is a conservative assumption, which produces a lower affordability gap average than reality since not all households have income at the top end of the range. For very low income households, rents are set to be affordable at 50% of median income and for low income households, at 80% of median income. For moderate income households, maximum sales prices are calculated based on 120% of median income, with 35% of income set aside for housing (as opposed to 30% for rental units).

Development Costs

The cost of developing new residential units in San Diego was assembled from a number of sources. Land costs were gathered from recent land sale data collected by KMA. KMA is also actively working on a number of rental and condominium projects at various locations in the San Diego area and has recent developer pro forma financial analyses from which to draw cost information.

From the above sources, KMA prepared a summary of total development costs, broken down into the major cost components: acquisition, direct or construction costs, indirect costs, and financing costs. Housing development costs are intended as averages and generally reflect the reductions in construction costs experienced since the peak of the real estate market in the 2005-2007 timeframe.

This is a difficult time in the economic cycle to select averages for rents, sales prices, and development costs. At the time of this writing, developers are achieving lower construction costs when compared to the exacerbated construction cost escalation at the peak of the market several years ago. However, current market rents and sales prices are generally not sufficient to

support new market-rate residential development. As a result, only a very limited amount of new development activity is proceeding. The KMA estimates of development costs used in the affordability gap analyses reflect the favorable construction costs generally available in the current market.

Affordability Gap

The KMA financial pro formas estimating the affordability gap for the above prototypes are presented in Appendix C Part II Tables 16-37. Each pro forma contains:

i. A project description;

ii. Estimates of development costs;

iii. Stabilized net operating income for the rental prototypes based on two affordability scenarios: (a) all units affordable to households at 50% AMI (Very Low Income); and (b) all units affordable to households at 80% AMI (Low Income);

iv. Maximum affordable sales price for the ownership prototypes based on all units affordable to households at 120% AMI (Moderate Income);

v. Estimates of maximum warranted investment for the rental prototypes, which include supportable debt and/or equity investment, and tax credit equity investment for the Very Low Income rental prototype; and

vi. The resulting financing gap generated by the development prototype reflective of the difference between warranted investment and development costs for rental units, and the difference between net sales proceeds and development costs for ownership units.

The inputs and assumptions used in the KMA pro formas are based on KMA's experience with comparable developments throughout San Diego. In particular, KMA notes the following:

- The cost estimates do not assume a prevailing wage requirement.

- The City of San Diego is diverse in terms of real estate market factors. Therefore, the KMA pro formas assumed land costs ranging from a low of $25 per square foot to a high of $50 per square foot of land, reflecting project location and achievable density.

- As specific sites have not been defined for this study, KMA assumed an allowance for off-site improvements ranging between $3 and $5 per square foot of site area, and an allowance for on-site improvements ranging from $10 to $15 per square foot of site area.

- It is assumed that very low income units will be financed with tax-exempt bonds combined with the 4% Low Income Housing Tax Credit. KMA did not assume that very low Income units could be financed with 9% Low Income Housing Tax Credits due to highly competitive nature of this funding source.

- Low and moderate income units are assumed to be financed using conventional debt and equity financing sources.

- The affordability gap conclusions resulting from the KMA pro forma analyses are summarized as follows:

Rental	Garden Apartments	Stacked Flats Over Podium Parking	Average Rental (1)
Very Low Income (50% AMI)	($130,000)	($174,000)	($156,000)
Low Income (80% AMI)	($111,000)	($190,000)	($158,000)

Ownership	Townhomes	Stacked Flats Over Podium Parking	Average Ownership (1)
Moderate (120% AMI)	($26,000)	($108,000)	($75,000)

(1) Assumes 40% of affordable units delivered in lower density developments (garden apartments) and 60% of affordable units delivered in higher density developments (stacked flats over podium parking).

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 seven types of buildings to the affordability gaps, or the costs of delivering or housing for them in San Diego.

Table IV-2 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-5 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 total nexus costs for the seven building types are as follows:

Office	$78.08
Hotel	$81.16
Retail	$115.55
Medical	$72.01
Manufacturing/Industrial	$41.94
Warehouse/Storage	$13.32
Education	$40.91

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

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:

- Using small households produces lower affordability gaps than larger households in larger units.

- The estimates of affordability gaps for units at 50% of Area Median Income assume the availability of tax-exempt financing and 4% Low Income Housing Tax Credits. This financial assistance is competitively allocated and the investment market for 4% tax credits has fluctuated widely. Incorporating this external funding source into the gap analysis results in lower gaps to be funded at the local level.

- 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 DEFINITIONS, 2010
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

INCOME - UPPER END FOR EACH CATEGORY

Family Size	Very Low Income 50% AMI	Low Income 80% AMI	Moderate Income 120% AMI
1 Person	$27,500	$44,000	$63,400
2 Persons	$31,400	$50,250	$72,500
3 Persons	$35,350	$56,560	$81,550
4 Persons	$39,250	$62,800	$90,600
5 Persons	$42,400	$67,840	$97,850

Source: San Diego Housing Commission, based on HUD and HCD
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Section IV and appendix C extra tables.xls; 10/29/2010; ema

TABLE IV-2
TOTAL HOUSING NEXUS COST
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

WITH COMMUTE ADJUSTMENT AT 57.40%

	Affordability Gap[2]	Nexus Cost Per Sq. Ft.						
INCOME CATEGORY		**OFFICE**	**HOTEL**	**RETAIL**	**MEDICAL**	**MANUF. / INDUSTRIAL**	**WAREHOUSE / STORAGE**	**EDUCATION**
Under 50% of Median Income[2]	$156,000	$21.45	$44.68	$61.38	$27.12	$13.70	$4.72	$14.21
50% to 80% of Median Income[2]	$158,000	$38.32	$31.97	$46.35	$31.78	$20.02	$6.33	$20.59
80% to 120% of Median Income[3]	$75,000	$18.30	$4.51	$7.82	$13.12	$8.22	$2.28	$6.11
Total		**$78.08**	**$81.16**	**$115.55**	**$72.01**	**$41.94**	**$13.32**	**$40.91**

1. Assumes two-bedroom units.
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 is to provide guidance to policy makers in setting fee levels and designing the program. A particular focus is devoted to facilitating an understanding of whether the existing linkage fees or proposed fee increases are likely to alter development decisions, or drive activity to other jurisdictions.

As indicated at the end of the previous section, the nexus analysis establishes maximum fee levels supported by the analysis. Recognizing a variety of City objectives, policy makers may set the fees at any level below the maximum, and may design other program features to meet local goals and objectives.

The materials in this section are not part of the nexus analysis. Instead, this section provides an assembly of materials that helps answer the questions frequently asked when designing or updating a fee program:

- How can the fee level be selected?
- What do other cities do in their programs?
- How do we evaluate when a fee will slow development?
- What are some of the options for indexing the fee over time?

Fee Levels

Existing Linkage Fee Levels

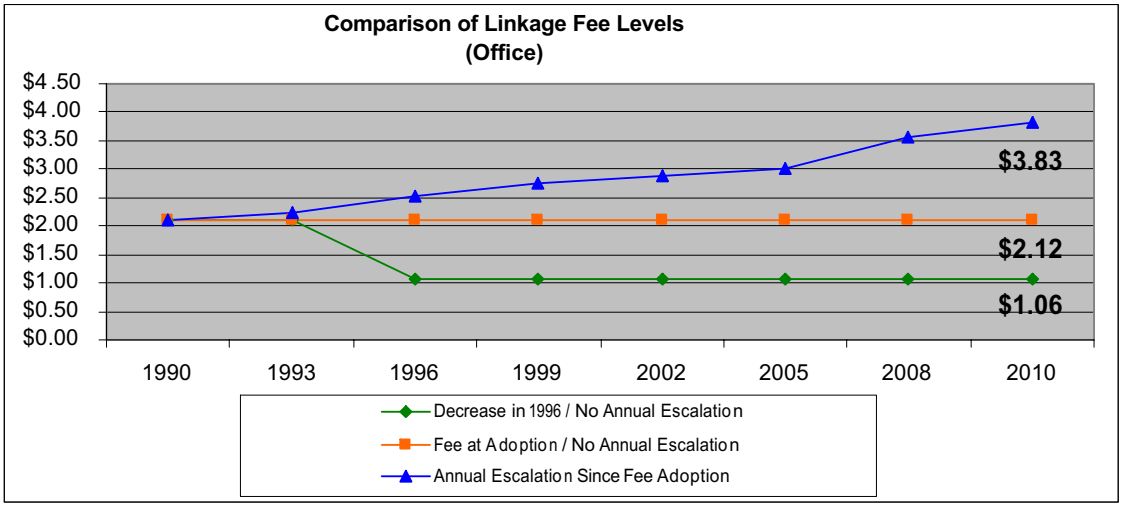
Before presenting approaches to fee revisions, it is useful to briefly review linkage fee levels since the original program was adopted. All non-residential building types are subject to the fee. The City's Department of Development Services determines the building type and the applicable fee. In 1996, the City Council reduced the fee by half to spur business development. The fee has not been adjusted since 1996.

	Fee at Adoption	Fee Since 1996
Retail	$1.28	$0.64
Office	$2.12	$1.06
Warehouse	$0.54	$0.27
Manufacturing	$1.28	$0.64
Research and Development	$1.60	$0.80
Hotel	$1.28	$0.64

As shown in Table V-I, KMA compared the actual linkage fee levels for the years 1990, 1996, and 2010 against: (1) the fee levels if no adjustment had been made in 1996; and (2) the fee

levels assuming an annual escalation of the fee based on the Construction ENR Building Cost Index, as allowed under the existing ordinance.

A graphic representation of the KMA comparison for the office fee appears below. As shown, the office fee at adoption was $2.12, the fee was decreased by half to $1.06 in 1996, and has remained the same over the past 14 years. Assuming the office fee was not reduced in 1996 and no other adjustments were made since adoption, the office fee at adoption would have remained constant at $2.12 per square foot between 1990 and 2010. Assuming the fee was subject to an annual escalation factor, as allowed in the ordinance, the fee would have increased from $2.12 per square foot in 1990 to $3.83 per square foot by 2010.



Historical Fee Collection

The linkage fee represents the primary source of funds for SDHC's Housing Trust Fund, accounting for 76% of the Housing Trust Fund's total revenues since Fiscal Year 1992. To date, SDHC has collected a total of $51.1 million in linkage fee revenues.

Fee revenue collected by SDHC can be examined by type of development. For example, over the past five years, SDHC has collected a total of $9.2 million in linkage fee revenues from 11.6 million SF of non-residential development. As shown below, the majority of the revenues came from office buildings (59%), followed by research & development buildings (10%), and retail buildings (9%).

Building Type	FY 2006 – FY 2010 Non-Residential Development (SF)	Linkage Fee Revenue
Office	4,989,000 SF	$5,288,000
R&D	1,152,000 SF	$922,000
Retail	1,310,000 SF	$838,000
Warehouse	1,800,000 SF	$486,000
School	556,000 SF	$445,000
Hotel	597,000 SF	$382,000
Manufacturing	504,000 SF	$323,000
Hospital	301,000 SF	$319,000
Care Facility	67,000 SF	$42,000
Auto Body	5,000 SF	$3,000
Total [1]	**11,587,000 SF**	**$9,170,000**

[1] Reflects totals after adjustments and credits.

Source: City of San Diego.

Estimate of Foregone Fee Revenue

As indicated previously, the linkage fee was reduced by half in 1996. For illustrative purposes, KMA estimated the amount of fee revenue foregone under two scenarios:

Test 1: Linkage fees collected assuming no adjustment to the fee in 1996; and

Test 2: Linkage fees collected assuming an annual escalation of the fee based on the Construction ENR Building Cost Index.

As presented in Table V-2, and summarized below, Test 1 yielded a total of $87.6 million in linkage fee revenues and Test 2 yielded a total of $113.1 million, differences of $36.4 million and $62.0 million, respectively, from the actual revenue amount collected.

As shown below, assuming a typical per-unit affordable housing subsidy of $100,000 for the period 1992-2010, an estimate of 364 additional units could have been developed under Test 1 (no adjustment made to the fee in 1996). Similarly, under Test 2 (annual escalation in the fee based on the construction cost index), an estimated additional 620 units could have been developed.

	Actual Collected	**Test 1:** No Adjustment in 1996	**Test 2:** No adjustment in 1996 + Escalation [1]
FY 1992 – 2010	$51.1 mm	$87.6 mm	$113.1 mm
Potential Number of Additional Units Developed @ Typical Subsidy of $100,000/unit [2]		364 units	620 units

[1] Based on annual McGraw Hill Construction ENR Building Cost Index History.

[2] Reflects historic estimate of typical financing gap amounts, 1992-2010.

Linkage Fee Levels in the Context of San Diego Development Economics

When considering fee levels, there are several economic or real estate factors that may be taken into account in recommending or enacting affordable housing requirements. A primary concern is that fee levels not be so onerous that they significantly constrain development.

County of San Diego Permit and Fee Estimates

As part of this study, KMA reviewed permit and fee estimates for jurisdictions in San Diego County, in order to gain perspective on how the City's current permit and fee charges compare to other jurisdictions within the County. This comparative fee data is based on the last such survey published by the Building Industry Association of San Diego for the period 2007-2008. While fee levels may have changed since that time, it is the KMA view that our general findings from this review – that some other cities in the region charge total fees comparable to the City of San Diego – are likely to remain valid.

The KMA findings are presented in Table V-3 and summarized below:

Total Permits & Fees [1]	**City of San Diego**	**Elsewhere in San Diego County** [2]		
Permits Fees	$0.40 /SF	$0.23 /SF	-	$0.44 /SF
Impact/Capacity Fees (excluding Linkage Fee)	$6.06 /SF	$1.39 /SF	-	$7.32 /SF
Linkage Fee	$0.72 / SF	$0.00 /SF	-	$0.00 /SF
Total Permits & Fees	**$7.47 /SF**	**$1.91 /SF**	**-**	**$7.59 /SF**

[1] Reflects median fee for a range of non-residential development building type.

[2] Reflects range of findings for the cities of Carlsbad, Chula Vista, Escondido, Oceanside, Poway, Vista, and unincorporated areas of San Diego County.

Source: Building Industry Association of San Diego County Fee Survey, 2007-2008.

As show above, the median permit and fee charge for non-residential development in the City of San Diego represents the upper end of the range among the jurisdictions surveyed by the BIA. For the City of San Diego, the median fee level of $7.47 per square foot includes the linkage fee. None of the other jurisdictions in the County charge a commercial linkage fee.

KMA also reviewed permits and fee estimates by building type. KMA's findings are presented in Table V-3 and summarized below:

Total Permits & Fees by Building Type	City of San Diego	Elsewhere in San Diego County [1]		
Retail	$9.28 /SF	$3.34 /SF	-	$19.23 /SF
Office	$7.66 /SF	$2.04 /SF	-	$8.46 /SF
Class A Multi-Tenant Office	$7.18 /SF	$2.07 /SF	-	$7.75 /SF
Industrial	$6.76 /SF	$1.65 /SF	-	$6.76 /SF
Multi-Tenant Industrial Building	$7.59 /SF	$1.65 /SF	-	$7.67 /SF
R & D	$7.36 /SF	$1.78 /SF	-	$7.36 /SF

[1] Reflects range of findings for the cities of Carlsbad, Chula Vista, Escondido, Oceanside, Poway, Vista, and unincorporated areas of San Diego County.

Source: Building Industry Association of San Diego County Fee Survey, 2007-2008.

As shown above, the City's permits and fees for each building type are at the high end of the range of fee levels found in other jurisdictions, but not necessarily the highest. In fact, similar fee levels are found in selected other jurisdictions in the County.

Survey of Linkage Fee Programs

As part of this study, KMA also reviewed linkage fee programs in approximately 25 other cities and counties in California ranging in population from 6,000 to 1.4 million. A relative perspective on how the City's existing linkage fee program compares with programs in other jurisdictions in California is presented in Table V-4 and summarized below:

Current Level of Fee per SF	City of San Diego	State of California (range of findings)		
Office	$1.06	$0.58	-	$19.96
Hotel	$0.64	$0.64 (1)	-	$17.06
R&D	$0.80	$0.57	-	$13.30
Retail	$0.64	$0.64	-	$18.62
Manufacturing	$0.64	$0.28	-	$17.06
Warehouse	$0.27	$0.26	-	$17.06
Thresholds	No minimum threshold	25,000 SF	-	No minimum threshold
Geographic Exemptions	Excludes some geographic areas (enterprise zones)	redevelopment areas, enterprise zones, port areas	-	No exemptions
Specific Use Exemptions	Development by government entities.	churches, educational facilities, hospitals, child care, non-profits, etc.	-	No exemptions
Build Option/ In-Lieu Alternative	Can dedicate land or air rights in lieu of fee	May contribute land for housing; provide affordable housing	-	No build option

(1) Excludes jurisdictions where fee paid on a per-room basis.

Note: The chart has been assembled to present an overview, and as a result, terms are simplified.

Ordinance or Program Features

A Housing Impact Fee Program often includes features to address a jurisdiction's policy objectives or specific concerns. The most common are:

- *Minimum Threshold Size* – A minimum threshold sets a building size over which fees are in effect. As shown above, San Diego does not have a minimum threshold, while other jurisdictions have thresholds as high as 25,000 SF. In general, the programs with the highest fees tend to have more significant thresholds. Programs with low fees often have no thresholds and all construction is subject to the fee.

- *Geographic Area Exemptions* – Some cities with linkage fee programs exclude specific areas such as redevelopment areas and enterprise and empowerment zones. San Diego's program allowed for the exemption of new businesses developed in San Diego's two enterprise zones: the Metro Zone (formerly the Southeast/Barrio Logan Enterprise Zone) established in 1983 and the South Bay Enterprise Zone established in 1991. These zones have since been incorporated into the San Diego Regional Enterprise Zone. Exemptions are still in effect in these areas.

- S*pecific Use Exemptions* – Cities may also choose to exempt specific uses. For example, these may include churches, hospitals, child care centers, and development by non-profits.

Linkage Fees as a Percent of Total Development Costs

Policy makers may establish linkage fees at any level below the maximum nexus cost for the building types addressed in the analysis. One approach to establishing fee levels is based on comparing the linkage fee against the development costs associated with each building. This approach facilitates an evaluation of whether the amount is likely to affect development decisions.

In a city as large as San Diego, there is a broad range of conditions and development "products" that might be built for various building types or land uses. For example, office buildings can range from minimal one-story structures with surface parking, to multiple story buildings with podium parking, to high-rises with subterranean parking. To cover the range, we have assembled prototypes for each of the major commercial and industrial building types.

KMA prepared base case project descriptions and development budgets for representative non-residential product types currently being developed in the San Diego market. The prototypes are used as a "starting point" on which to test the impact of potential linkage fees on development costs.

Tables V-5 through V-8 provide the development cost estimates for the prototypes analyzed by KMA, as follows:

- Retail Prototypes:
  - Strip Retail Center – 1 story, surface parking
  - Community Retail Center – 1 story, surface parking
  - Urban Retail Center – 1-2 stories, deck/structured parking

- Office Prototypes:
  - Garden Office – 3 stories, surface parking
  - Suburban Mid-Rise Office – 5 stories, deck/structured parking
  - Urban High-Rise Office – 15 stories, subterranean

- Industrial Prototypes:
  - Warehouse/Storage – 1 story, surface parking
  - Industrial Flex Space – 1–2 stories, surface parking
  - Research & Development / High-Tech Industrial – 2–3 stories, surface parking

- Hotel Prototypes:
  - Extended Stay Hotel – 3 story, surface parking
  - Full-Service Mid-Rise Hotel – 6 stories, structured parking
  - Full-Service High-Rise Hotel – 15+ stories, subterranean parking

KMA's experience with financial feasibility analyses for non-residential development proposals in San Diego were a major frame of reference in developing the prototypes and typical development cost estimates. The inputs and assumptions assumed by KMA are as follows (costs have been rounded):

- Acquisition costs were estimated on a per-SF basis. For each land use type, acquisition costs were estimated to range as follows (reflecting the multiple scenarios analyzed):

Acquisition Costs	Per SF Site Area
Retail	$25 - $50 /SF
Office	$25 - $300 /SF
Industrial	
- Warehouse	$15 /SF
- Manufacturing	$20 - $30 /SF
Hotel	$25 - $300 /SF

- Direct construction costs, including site improvements, parking, shell construction, tenant improvements, and furniture/fixtures/equipment, were estimated for each land use type as follows:

Direct Costs	Per SF Gross Building Area
Retail	$130 - $230 /SF
Office	$150 - $310 /SF
Industrial	
- Warehouse	$80 /SF
- Manufacturing	$105 - $150/SF
Hotel	$135 - $430 /SF

- Indirect and financing costs, including factors such as architecture and engineering, legal and accounting, taxes and insurance, developer overhead fee, marketing and lease-up, loan fees, and construction interest reserve – were combined and estimated as a percent of total direct costs:

Indirect and Financing Costs	% of Direct Costs
Retail	30.0% of Directs
Office	30.0% of Directs
Industrial	
- Warehouse	30% of Directs
- Manufacturing	30% of Directs
Hotel	30% - 35% of Directs

- Cost for public permits and fees were based on estimates from the Building Industry Association 2007-2008 Fee survey described above, as follows:

Permits and Fees	Per SF Gross Building Area
Retail	$10/SF
Office	$8/SF
Industrial	
- Warehouse	$8/SF
- Manufacturing	$8/SF
Hotel	$10/SF

Overall, total development costs per square foot of building area are summarized below for each non-residential development prototype (ranges in cost reflect multiple scenarios). The columns to the right illustrate possible fee levels calibrated as a percent of total development costs, ranging from a low of 0.5% to a high of 3.0%.

Non-Residential Building Type	Development Costs ($/SF GBA)	Fee Levels Per SF of Total Costs ($/SF GBA) @ 0.5%	1.0%	2.0%	3.0%
Retail	$270 - $410	$1.33 - $2.05	$2.67 - $4.10	$5.34 - $8.21	$8.00 - $12.31
Office	$260 - $490	$1.32 -$2.45	$2.64 - $4.89	$5.27 - $9.79	$7.91 - $14.68
Industrial					
- Warehouse	$150	$0.76	$1.52	$3.05	$4.57
- Manufacturing	$200 - $280	$1.01 - $1.38	$2.03 - $2.76	$4.05 - $5.51	$6.08 – $8.27
Hotel	$220 - $430	$1.08 - $2.15	$2.16 - $4.31	$4.32 - $8.62	$6.49 - $12.93

GBA = Gross Building Area

For comparison purposes, the current fee and the fee at adoption can also be compared to total development costs for each building type. As shown below, the current fee reflects between 0.2% and 0.4% of costs and the fee at adoption reflects between 0.3% and 0.8% of costs.

Non-Residential Building Type	Development Costs ($/SF GBA)	Current Fee $/SF	Current Fee % of Costs	Fee at Adoption $/SF	Fee at Adoption % of Costs
Retail	$270 - $410	$0.64	0.2%	$1.28	0.3% - 0.5%
Office	$260 - $490	$1.06	0.2% - 0.4%	$2.12	0.4% - 0.8%
Industrial					
- Warehouse	$150	$0.27	0.2%	$0.54	0.4%
- Manufacturing	$200 - $280	$0.80	0.3% - 0.4%	$1.60	0.6% - 0.8%
Hotel	$220 - $430	$0.64	0.2% - 0.3%	$1.28	0.3% - 0.6%

Fee as Percent of Nexus Cost

Policy makers may establish fees at any level below the maximum fee for the building types identified in the KMA analysis – office, hotel, retail/entertainment, medical/hospital, manufacturing/industrial, warehouse/storage, education – (1) in the same proportion to the nexus conclusions, or (2) independently selecting the fee for each building type based on weighing policy considerations separately for each building type.

When the City adopted housing impact fees initially, fees were set at between 5% and 20% of the calculated nexus costs (depending on land use), which included only very low and low income tiers, or up to 80% of Area Median Income. The current analysis assumes up to 120% of Area Median Income, resulting in higher total nexus costs. In the event the City wishes to continue using this approach, the nexus amounts are summarized below:

Non-Residential Building Type	Nexus Costs	Fee @ 10% of Nexus Cost
Retail	$115.55	$11.56
Office	$78.08	$7.81
Warehouse / Storage	$13.32	$1.33
Manufacturing / Industrial	$41.94	$4.19
Hotel	$81.16	$8.12
Medical	$72.01	$7.20
Education	$40.91	$4.09

The principal advantage of this approach lies in its simplicity and avoidance of addressing each fee independently. The disadvantage is that there could be a disproportionate burden on one building type. Alternately, there could be lost opportunity in not charging a fee on a building type that could sustain a higher fee level.

Impact of Fee on Development

This section reviews historic construction activity and employment growth in the City of San Diego since the linkage fee was adopted. It also provides a qualitative assessment of the likelihood of the fee preventing construction from occurring in San Diego, and/or redirecting development to other jurisdictions.

Overview of Construction Activity

Table V-9 summarizes construction activity by land use type for the City of San Diego, the balance of San Diego County, and the State of California for the period from 1990 through 2009. Construction activity can be measured in terms of building permit valuation data compiled by the Construction Industry Research Board. Since 1990, approximately $4.4 billion in hotel, office, retail, and industrial development has been permitted in the City of San Diego. This represents average annual permit valuation of $220 million. The largest category of permit valuation was office use, representing $2.0 billion in valuation during 1990-2009.

Within the balance of the County, approximately $4.1 billion in development valuation was permitted in these land use categories during 1990-2009, representing approximately $207 million in average annual permit valuation. The largest categories were retail ($1.6 billion) and industrial ($1.5 billion).

The measure of construction activity in the City of San Diego can also be compared to the balance of the County on a proportionate share basis. The table below summarizes total permit valuation in the City of San Diego as a percent of the County total (inclusive of the City):

Building Permit Valuation, 1990-2009 Total	City of San Diego	County of San Diego (including City)	City as Percent of County
Retail	$892.4 mm	$2,529.7 mm	35%
Office	$2,020.1 mm	$2,732.0 mm	74%
Industrial	$824.3 mm	$2,290.5 mm	36%
Hotel	$652.3 mm	$980.7 mm	67%
Total	**$4,389.2 mm**	**$8,533.1 mm**	**51%**

As shown in the table, the City accounted for the majority of office and hotel development in the County during the time period. This finding suggests that the City of San Diego has continued to capture a greater share of new office and hotel development than the rest of the County. On the

other hand, industrial and retail uses have developed more rapidly in the balance of the County than the City of San Diego. This trend is not surprising in light of the greater land availability which largely explains the significant expansion of business parks, as well as new residential communities with supporting retail uses, in suburban areas such as Carlsbad, San Marcos, and Chula Vista over the time period.

Overview of Employment Growth

Table V-10 summarizes trends in employment growth for the City of San Diego, the balance of San Diego County, and State of California for the period 1990 to 2008. To ensure a consistent data source for all three geographies, KMA relied on US Census data to calculate employment growth (note that the employment figures in Section II are slightly different as they are based on SANDAG estimates). As shown in the table, the rates of job growth in all three areas over the time period are relatively similar. Total civilian employment in the City of San Diego increased from 681,218 jobs in 1990 to 779,862 jobs in 2008. This represents a total increase of 98,644 jobs, and an average annual increase of 5,480 jobs or 0.8%.

The rates of employment growth in the balance of San Diego County and the State were slightly higher than, but similar to, the City's growth rate, as shown in the table below. It should be noted that population growth within the City of San Diego lagged behind population growth in the balance of the County by an even greater amount. In other words, the slightly lower employment growth rate for the City as versus the County is not meaningful when considered in context of the slower population growth occurring in the City during this same time period.

Change in Employment by Place of Work, 1990-2008	Average Annual Growth in Employment	Average Annual Growth in Population
City of San Diego	0.8%	2.3%
County of San Diego (excluding City)	1.1%	3.3%
State of California	1.0%	3.1%

Source: SANDAG, California Department of Finance

Potential Impacts of Fee on Construction and Development

In the previous sections, KMA presented a comparison of potential linkage fees with typical development costs, as well as the range of linkage fees charged in other jurisdictions. As noted above, the current linkage fee levels are less than 0.5% of typical development costs for each land use category. In the context of approximately 25 jurisdictions Statewide that charge commercial linkage fees, the San Diego fees are generally at the lower end of the scale. While total permits and fees charged on non-residential development in the City of San Diego are at the upper end of the range for the region, some of the other cities in the region – such as Chula Vista and Vista -- have comparable fee levels. Finally, the overviews of construction activity and employment growth presented above do not suggest that the San Diego linkage fee has

deterred new development from occurring within the City, or in fact, discouraged business formations or expansions.

Some stakeholders have cited the linkage fee as a disincentive to new development or business formation when compared to competing metropolitan areas in the Western United States. KMA reviewed published articles, studies, and reports regarding the role that various public policy decisions, private market factors, and other regional variables play in private sector decision-making regarding land development, business location and expansion, and job creation. The KMA review included economic development publications, recruitment industry literature, business group publications, and comparable demographic and economic measures. The major findings of our review are discussed below.

Development and business location and expansion decisions are influenced by numerous factors. These include: availability of land/buildings, concentration of similar employment, educational attainment of the local work force, adequacy of infrastructure, availability of affordable housing, taxes, and government regulation. The table below summarizes a national survey of public sector economic development professionals completed in 2009. Although survey respondents did not cite municipal fee charges as a barrier to economic development, cost of land, availability of land, and lack of building availability were among the most cited barriers.

Barriers to Economic Development Most Cited [(1)]	
	% Reporting
Cost of land	53.4%
Availability of land	52.4%
Lack of capital/funding	50.1%
Lack of building availability	37.3%
Limited number of major employers	34.0%
Inadequate infrastructure	28.4%
Citizen population	23.0%
Environmental regulations	22.7%
Taxes	20.2%
Lack of skilled labor	17.6%
Distance from major markets	16.2%
Traffic congestion	14.9%
High cost of housing	14.9%
Lengthy permit process	12.4%

(1) Survey of 3,283 municipalities with a population of over 10,000 and counties with population over 50,000.

Source: Economic Development 2009 Survey, International City/County Management Association (ICMA) and National League of Cities.

Forbes.com's 2010 ranking of the nation's largest cities in terms of business-friendly attributes is also instructive. Forbes.com, the web site to the business publishing and media company

Forbes, Inc., ranks the 200 largest cities in the nation against a series of economic measures, such as cost of doing business, job growth, and educational attainment. The table below summarizes San Diego's ranks on each measure. Of note, San Diego ranked 185th out of 200 (200 being the worst) for cost of doing business. Yet San Diego ranked 89th out of 200 in terms of overall ranking of best places for business and careers. This status results from the City's track record in job growth and educational attainment (ranked 93rd and 36th, respectively). In other words, a high cost of doing business is not necessarily the dominant factor considered by private sector participants in development and business location and expansion decisions.

Best Places for Business and Careers - Survey of 200 Cities	San Diego Ranking
Best Places for Business and Careers – Overall Ranking (1)	89
Cost of Doing Business (2)	185
Job Growth (3)	93
Educational Attainment (4)	36

(1) Index reflects costs (business and living), job growth (past and projected), income growth, educational attainment and projected economic growth.
(2) Index compares the cost of labor, energy, taxes, and office space.
(3) Based on three-year annualized figures.
(4) Based on share of population over the age of 25 with a bachelor's degree or higher.

Source: Forbes.com, April 14, 2010

The table below provides additional detail from the Forbes.com rankings for purposes of comparing the City of San Diego with typical competitor cities in the Western United States.

Best Places for Business and Careers	
Rank	**City**
6	Denver, CO
10	Austin, TX
18	Seattle, WA
19	Portland, OR
20	Salt Lake City, UT
25	Boise, ID
41	Albuquerque, NM
89	**San Diego, CA**
117	Phoenix, AZ
157	Las Vegas, NV

Survey of 200 cities, costs (business and living), job growth (past and projected), income growth, educational attainment, and projected economic growth.

Source: Forbes.com, April 14, 2010

Finally, the KMA review found that one of the obstacles to business development cited by economic development professionals and business advocacy groups is the lack of affordable housing within a metropolitan area. The lack of affordable housing makes employee recruitment

more difficult, and tends to increase labor costs for employers. The survey summarized below found that the San Diego region ranked 48th out of 50 metropolitan areas (50 being the worst) in terms of housing affordability. The table compares San Diego with typical competitor cities in the Western United States. According to bizjournals.com, an on-line version of the American City Business Journals, the average housing cost in San Diego is 66.5% of household income, substantially higher than in any of the competitor cities listed below.

Housing Affordability: Housing Costs as a % of Household Income		
Rank	**Metropolitan Area**	**%**
22	Austin, TX	26.8%
23	Salt Lake City, UT	27.2%
28	Denver, CO	31.8%
35	Phoenix, AZ	35.7%
37	Portland, OR	37.8%
39	Las Vegas, NV	41.9%
40	Seattle, WA	41.9%
48	**San Diego, CA**	66.5%

Survey of the 50 largest metro areas in the United States, comparing median home payment and median household incomes.

Source: bizjournals.com, March 10, 2008.

The Burden of Paying for Impact Fees

The question has also been raised regarding "who pays" the housing impact fee. For example, does the burden of paying the fee fall on the developer, the end user/tenant, or the landowner. Of course, the developer pays the fee at the time of building permit issuance. But some stakeholders question whether the fee is passed on to the end user or tenant, results in reduced developer profits, or results in a reduction in land value achieved by the landowner who sells a development site to a developer.

It is the KMA view based on our experience with real estate economics that an impact fee charged for affordable housing functions similarly to any other development exaction. In other words, it is absorbed over time into the market for buying and selling of development sites. Whether this is true in the case of every development project depends on economic cycles, timing of land acquisition and entitlement, and numerous other external factors. Obviously, if a proposed development site is already in use for another economically viable purpose, any increase in developer exactions will tend to delay the feasibility of implementing new development on the site.

Timing of Fee Payment

The question has been raised whether there is a measurable benefit to allowing the payment of the linkage fee to occur later than building permit issuance, e.g., at certificate of occupancy. The objective of this approach would be to offer an offsetting economic incentive to developers to help reduce the impact of the fee obligation. However, the reverse impact also holds – the City would receive the linkage fee revenue at a later date, and it would experience delays in implementing its affordable housing program.

The economic benefit to developer of paying a fee at certificate of occupancy rather than building permit issuance can be estimated in the form of savings in cost of funds or interest carrying costs. The chart below provides an illustration of the potential magnitude of interest carry savings to a developer for various fee levels. For this illustration, KMA has used an office building, ranging from a garden office to an urban high-rise. We have assumed construction periods ranging from a low of 12 months to a high of 24 months. In each case, we have assumed an annualized carrying cost of 9.0%, reflecting the blended cost of debt and equity needed for construction.

		Office		
		Garden	**Suburban Mid-Rise**	**Urban High-Rise**
Construction Period		12 months	18 months	24 months
Fee Level		**Potential Interest Carry Savings**		
Existing Fee @	$1.06 /SF	$0.10 /SF	$0.14 /SF	$0.19 /SF
Fee @ 1.0% of Costs	$2.64 - $4.89 /SF	$0.25 /SF	$0.42 /SF	$0.88 /SF
Fee @ 3.0% of Costs	$7.91 - $14.68 /SF	$0.71/SF	$1.26 /SF	$2.64 /SF

As shown above, depending on the type of office building, potential interest carry savings is estimated to range between $0.10/SF and $0.19/SF for the existing fee, $0.25/SF and $0.88/SF for a potential fee at 1.0% of costs, and between $0.71/SF and $2.64/SF for a potential fee at 3.0% of costs. As shown, the absolute savings for the existing fee is relatively minor because the existing fee itself is less than 0.5% of development costs.

In addition to the potential interest carry savings, it should also be recognized that the last dollars to raise in equity are often the most difficult to obtain and the most costly. As a result, for some projects the savings could be somewhat greater than that indicated above.

Method for Gathering and Analyzing Data for Cost/Benefit Assessment

The scope of work for this study includes identifying an approach for documenting the costs and benefits of the fee going forward. The following is a discussion of a potential approach:

Benefits

The core benefit of the program is the additional affordable housing produced as a result of the availability of impact fee revenues. In order to document these benefits, to the extent it has not already been done, we would recommend that SDHC develop a database of projects assisted with impact fee revenues.

Another beneficial element of the program is the leveraging of state, federal, and private dollars that is possible using fee revenue. We understand that fee revenue has typically been used to assist projects that leverage dollars from a number of other funding sources. The availability of fee revenue allows San Diego to compete more effectively for a limited pool of State and Federal funding for affordable housing such as 9% tax credits. In addition, these projects usually leverage private financing. The fee helps bring dollars into the City for affordable housing that may otherwise go to other cities or metropolitan areas. To the extent SDHC has not already documented this, we recommend compiling a database to do so.

To track the benefits of the impact fee, we recommend assembling a database of each project assisted which would include the following types of information:

- name of project,
- location, number of stories, description
- entities involved in development
- number of units by size, type, and affordability level,
- total cost of project
- funding sources – amount of funding by source including impact fees
- Description of how the fee revenue was used to help compete for other scarce funding sources at the State and Federal Level (9% tax credits, etc.)
- Date of project construction (or completion)

Costs

The economic costs of the housing impact fee program are the impact fees that are paid. We understand the City currently maintains a database of fee revenues collected for each individual project. This existing database should be maintained to help understand the fees paid by the private sector over time.

Another potential cost would be if particular projects and the jobs associated with those projects located elsewhere as a result of the presence of the fee in San Diego. As described earlier, the likelihood of the fee playing in important roll in decisions of this nature appears very low in our

evaluation. To the extent such effects such as this do occur, they would be un-detectable and virtually impossible to measure.

Discussion of Potential Indices for Fee Level Adjustment

The following table provides a discussion of potential indices that could be used to adjust fee levels in the future. Some objectives that could potentially be taken into consideration in selecting an appropriate index for the fee are as follows.

Administrative Objectives

- Simple and easily administered
- Clear and objective, not subject to interpretation
- Tied to readily accessible and neutral third party published source

Potential Policy Objectives

- Maintain ability to mitigate impacts / fund affordable housing over long-term
- Maintain consistent fee burden over long-term
- Respond to economic cycles: fee relief during economic downturn, increased fees with a strong economy.

Index	Concept / Description	Advantages	Disadvantages
A. Typical Indices for Linkage Fees			
1. Building Cost Index (BCI)	Fees go up or down based on building construction costs. Published by Engineering News Record (ENR). Index currently in place for San Diego's linkage fee (but subject to Council approval based on SDHC recommendation and has never been applied). Available as national average and for 20 Cities (not San Diego – L.A. nearest available).	Very well established. Consistent fee burden over time relative to construction cost	May not trend with changes in non-construction development cost components (land, other soft costs). May not trend with cost to produce affordable units.
2. Construction Cost Index (CCI)	Also published by ENR and similar to Building Cost Index but with different weighting of labor and material cost categories.	Same as above Building Cost Index probably more appropriate of the two ENR indices since more closely linked to commercial construction cost.	Same as above

Index	Concept / Description	Advantages	Disadvantages
3. Consumer Price Index (CPI)	Published by U.S. Bureau of Labor Statistics. Available for major metro areas including San Diego.	Very well established. Tracks with inflation generally Produced by neutral governmental agency	May not trend with: - commercial construction costs (consistent fee burden), or - cost to produce affordable units (consistent ability to mitigate impacts)
B. Other Potential Indices			
1. Housing affordability index (SDHC's Existing Inclusionary In-Lieu Fee Approach)	Metric tied to housing affordability. Fees go up as housing becomes less affordable and go down as it becomes more affordable. Based on what median household can afford versus median housing cost.	Already in place for in-lieu fee Maintains consistent level of mitigation Revenue increases as cost to produce units increases	Would not maintain consistent fee burden relative to non-residential construction costs over time. Requires special calculation by SDHC and not produced by a neutral third party
2. Bureau of Labor Statistics (BLS) Construction Indices	BLS publishes "producer price indices" for a long list of industries. Recently BLS has added indices specific to construction of warehouse, industrial, office, and school buildings.	Opportunity for index tied to specific types of construction. Produced by neutral governmental agency	Different indices for different uses somewhat more complicated. Not all categories covered (retail, hotel, medical not addressed).
C. Economic Indicators or "Triggers" – Concept would be to build in certain "triggers" or thresholds to make the fee responsive to economic cycles. Likely used in conjunction with one of the index options described in A. and B. above.			
1. Non-Residential Building Permits Number of Permits or Valuation.	Trigger based on Non-Residential Building Permits. Fee increases could be subject to certain thresholds. Decreases in construction activity trigger temporary reduction in fees or delay of increases. Data Source: Construction Industry Research Board (or Building Department) would need to select: a) Triggers - dollar values of permits over a certain number of months (6-months, a year?) b) Action to be taken in hot / cool economy	Building permits are direct indicator of health of non-residential construction sector. Data readily available Ability to differentiate between different uses / sectors	Specifics of formula potentially contentious / difficult to agree on Building permit valuation tied to cost of development; woulc require adjustments.

Index	Concept / Description	Advantages	Disadvantages
2. Employment	Trigger based on regional employment trends, the underlying source of demand for commercial and industrial construction. Increases / decreases in fee based upon employment thresholds (for example, get back to level of employment in 2007 before any increase, etc.). Data Source: EDD Would need to select: a) Employment levels / or conditions for triggers b) Action to be taken in rising / declining employment	Employment trends tie directly to health of economy and non-residential building market Data readily available and from neutral governmental agency	Specifics of formula potentially contentious / difficult to agree on.
3. Fixed Schedule	Phase in fee increase and / or application of an index over a period of years. Possibility of holding fees constant for one or more years given downturn. Could incorporate annual election to delay increase (if economy does not recover, etc.).	Simple Predictable Avoids potentially complex trigger formula	Not tied to economic cycle (but could build in process to delay any increases)
4. Vacancy Rates	Trigger based on vacancy thresholds Data Source: TBD (no good governmental source available) Would need to select: a) Vacancy levels for triggers b) Action to be taken with high / low vacancy	Good indicator of health of non-residential market Ability to differentiate between different uses / sectors	Specifics of formula potentially contentious / difficult to agree on. Selection of data source could be problematic. Probably a local brokerage firm. Could present issue of consistency over time if not produced in consistent manner or by same firm over long-term. Vacancy data may not be available for all non-residential categories and building sizes.

Recommendations

Commission staff asked KMA to present recommendations as to fee levels and potential indices for consideration by the Commission and the City. All the various criteria and considerations outlined previously in this section of the report have been considered in formulating the following recommendations:

Recommendation A: Apply an Annual Index

Application of an annual index to the fee level is necessary to maintain the ability to mitigate impacts over time. We recommend leaving in place the current index: the Building Cost Index for twenty cities published by ENR. However, we recommend the ordinance be modified to make application of the index automatic rather than subject to a discretionary action by the City Council each year. As noted earlier, the Building Cost Index is well established, readily available, and would provide for a consistent fee burden over time relative to construction cost.

Recommendation B: Maintain Current Fees Until the Economy Improves

We recommend maintaining current fees until economic conditions have improved. Once there is evidence the economy is recovering, we recommend adjusting the fee. This is probably best accomplished by including an economic indicator or trigger feature in the ordinance that provides for an automatic adjustment. We recommend employment as an indicator for purposes of such a trigger feature. The trigger can be designed so an adjustment to fee levels will only occur once there is evidence of a job-recovery.

The California Employment Development Department produces data on employment in San Diego County on a monthly basis. A threshold or employment-level hurdle would need to be selected to mark successful achievement of recovery. For example, return to the level of employment that existed from 2004 to 2006 prior to the current downturn. Average employment for a particular year within this period could be selected as the threshold. The fee increase would be triggered once employment is sustained at or above this level for a given period of time, say three to six months (more precise definition of the exact measure would be advisable).

Recommendation C: Range of Options for Increased Fees Once Economy Improves

KMA is recommending a range of potential fee levels for consideration by the Commission as shown in the table below. As noted above, our recommendation is to apply these increases once improved economic conditions are evident. In selecting these ranges, we have relied most heavily on selecting fee levels that bear a relationship to market strength and total development cost.

The top end of the recommended range would constitute a considerable increase over existing fee levels. The top end of the range establishes fees at approximately 1.0% of the total cost to

develop a given office, hotel, or retail building based on the estimates included earlier in this section[5]. At the time the fees were initially adopted in 1990, they were set at a level equivalent to approximately 1.5% of development costs. Therefore, the top-end of the recommended range reflects a fee burden that is roughly 33% lower in relationship to development costs than when the program was initially adopted in 1990.

The bottom end of the recommended range is generally based upon establishment of the fees in the range of 0.5% of development costs. This still represents a substantial increase over existing fee levels, although less than the fees as initially adopted in 1990 in several cases.

	Fee at Adoption in 1990 ($/SF)	Fee in Place Since 1996 ($/SF)	Recommended Fee Range (Once Economy Improves) ($/SF)		
Retail	$1.28	$0.64	$1.70	-----	$3.40
Office	$2.12	$1.06	$1.90	-----	$3.80
Warehouse	$0.54	$0.27	$0.80	-----	$1.50
Manufacturing	$1.28	$0.64	$1.20	-----	$2.40
R&D	$1.60	$0.80	*include under manufacturing**		
Hotel	$1.28	$0.64	$1.60	-----	$3.20
Education**	$1.60	$0.80	$1.20	-----	$2.40
Medical***	$2.12	$1.06	$1.90	-----	$3.80

*R&D uses fall under manufacturing within San Diego's land use code definitions.

**Currently no separate fee for Education. R&D fee is being applied.

***Currently no separate fee for Medical. Office fee is being applied.

While research and development currently has a separate fee, we are recommending it be folded into the manufacturing category consistent with the City's land use code.

Separate fee levels are not currently in place for Education and Medical. Education uses currently pay the fee at the same level as research and development (except buildings built by governmental entities, which are exempt). Medical uses pay the same fee as office. The above table assumes that this practice continues; however, presumably there are additional policy considerations that could be brought to bear with respect to these land uses.

The above range meets all the various criteria and considerations outlined previously in this section of the report. If fees at the higher end of the range are selected, the Commission may also wish to consider revised exemptions or modification for certain uses, such as hospitals, schools, or child care centers.

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

[5] Where a range of development costs for a particular land use has been provided, for example, with office separate estimates are provided for urban high-rise office, suburban mid-rise, and garden office; the midpoint of the cost range is used to calculate the fee as a percent of development cost.

Comparison to Other San Diego County Jurisdictions if City Adopts Fees within Recommended Range

The following summarizes how San Diego's total permits and fees would compare to other jurisdictions in San Diego County if fees were adopted within the recommended range. As with the comparison provided earlier in this section, the information is based upon the last fee survey published by the Building Industry Association of San Diego for the period 2007-2008. While fee levels may have changed since that time, in the absence of any update to the 2007-2008 survey, we have elected to show this information since we believe it likely still provides a useful comparison.

As shown in the table, if the City adopts fees at the low-end of the recommended range, the total fee burden for the surveyed building types in the City of San Diego will generally be at the upper end, or slightly higher than, the surveyed range for the County. If the City adopts fees at the high-end of the recommended range, then the total fee burden for the surveyed building types in the City of San Diego will be higher than the findings for the other surveyed cities, with the exception of retail buildings.

	City of San Diego Total Fees if Adopted:			
Total Permits & Fees by Building Type	**Low-end Recommended range**		**High-end Recommended range**	**Elsewhere in San Diego County** [(1)]
Retail	$10.34 /SF	-	$12.04 /SF	$3.34 /SF - $19.23 /SF
Office	$8.50 /SF	-	$10.40 /SF	$2.04 /SF - $8.46 /SF
Class A Multi-Tenant Office	$8.02 /SF	-	$9.92 /SF	$2.07 /SF - $7.75 /SF
Industrial	$7.32 /SF	-	$8.52 /SF	$1.65 /SF - $6.76 /SF
Multi-Tenant Industrial	$8.15 /SF	-	$9.35 /SF	$1.65 /SF - $7.67 /SF
R & D	$7.92 /SF	-	$9.12 /SF	$1.78 /SF - $7.36 /SF

[(1)] Reflects range of findings for the cities of Carlsbad, Chula Vista, Escondido, Oceanside, Poway, Vista, and unincorporated areas of San Diego County.

Source: Building Industry Association of San Diego County Fee Survey, 2007-2008.

TABLE V-1
LINKAGE FEE LEVELS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	1990	1996	2010
I. Decrease in 1996 / No Annual Escalation			
Retail	$1.28	$0.64	$0.64
Office	$2.12	$1.06	$1.06
Warehouse	$0.54	$0.27	$0.27
Manufacturing	$1.28	$0.64	$0.64
Research and Development	$1.60	$0.80	$0.80
Hotel	$1.28	$0.64	$0.64
II. Fee at Adoption / No Annual Escalation			
Retail	$1.28	$1.28	$1.28
Office	$2.12	$2.12	$2.12
Warehouse	$0.54	$0.54	$0.54
Manufacturing	$1.28	$1.28	$1.28
Research and Development	$1.60	$1.60	$1.60
Hotel	$1.28	$1.28	$1.28
III. Annual Escalation Since Fee Adoption [(1)]			
Retail	$1.28	$1.53	$2.31
Office	$2.12	$2.54	$3.83
Warehouse	$0.54	$0.59	$0.71
Manufacturing	$1.28	$1.53	$2.31
Research and Development	$1.60	$1.92	$2.89
Hotel	$1.28	$1.53	$2.31

(1) Source: McGraw Hill Construction ENR Building Cost Index.

TABLE V-2
TOTAL LINKAGE FEE REVENUES, FY 1992 - 2010
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	Linkage Fee Revenues			
Fiscal Year	Actual Collected	Test 1: No Adjustment in 1996		Test 2: No Adjustment in 1996 plus Escalation [1]
1992	$6,211,000	$6,211,000		$6,211,000
1993	$1,899,000	$1,899,000	1.8%	$1,933,000
1994	$1,432,000	$1,432,000	3.0%	$1,502,000
1995	$2,242,000	$2,242,000	5.7%	$2,485,000
1996	$2,885,000	$2,885,000	3.8%	$3,319,000
1997	$1,859,000	$3,718,000	0.0%	$4,277,000
1998	$3,283,000	$6,566,000	2.9%	$7,773,000
1999	$5,398,000	$10,796,000	5.0%	$13,419,000
2000	$4,953,000	$9,906,000	0.8%	$12,411,000
2001	$3,382,000	$6,764,000	1.9%	$8,636,000
2002	$2,425,000	$4,850,000	2.4%	$6,341,000
2003	$1,645,000	$3,290,000	1.0%	$4,344,000
2004	$1,448,000	$2,896,000	1.4%	$3,878,000
2005	$2,262,000	$4,524,000	1.9%	$6,172,000
2006	$3,520,000	$7,040,000	7.9%	$10,364,000
2007	$2,949,000	$5,898,000	5.5%	$9,160,000
2008	$2,389,000	$4,778,000	3.9%	$7,710,000
2009	$677,000	$1,354,000	2.7%	$2,244,000
2010	$256,000	$512,000	4.6%	$888,000
Total	**$51,115,000**	**$87,561,000**		**$113,067,000**
Potential Number of Additional Units Developed @ Typical Subsidy of $100,000 /Unit [2]		**364 Units**		**620 Units**

[1] Based on annual McGraw Hill Construction ENR Building Cost Index History.

[2] Reflects historic estimate of typical financing gap amounts, 1992-2010.

TABLE V-3
PERMITS AND FEES ESTIMATES, SAN DIEGO COUNTY
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	Total Permits & Fees [1]	San Diego	Carlsbad	Chula Vista	Escondido	Oceanside	Poway	Vista	County of San Diego (unincorporated areas)
I.	Permit Fees [2]	$0.40 /SF	$0.26 /SF	$0.27 /SF	$0.28 /SF	$0.23 /SF	$0.44 /SF	$0.24 /SF	$0.33 /SF
II.	Impact/Capacity Fees [3] (excluding Affordable Housing Linkage Fee)	$6.06 /SF	$3.87 /SF	$7.32 /SF	$5.33 /SF	$4.41 /SF	$1.39 /SF	$5.87 /SF	$2.70 /SF
III.	Affordable Housing Linkage Fee	$0.72 /SF	---	---	---	---	---	---	---
IV.	Total Permits and Fees	**$7.47 /SF**	**$4.13 /SF**	**$7.59 /SF**	**$5.67 /SF**	**$4.69 /SF**	**$1.91 /SF**	**$6.18 /SF**	**$3.03 /SF**
V.	Retail	$9.28 /SF	$5.32 /SF	$19.23 /SF	$6.93 /SF	$6.00 /SF	$3.34 /SF	$14.29 /SF	$5.12 /SF
VI.	Office	$7.66 /SF	$4.21 /SF	$8.46 /SF	$6.02 /SF	$4.88 /SF	$2.04 /SF	$7.93 /SF	$3.26 /SF
VII.	Class A Multi-Tenant Office	$7.18 /SF	$4.96 /SF	$7.52 /SF	$5.92 /SF	$4.77 /SF	$2.07 /SF	$7.75 /SF	$3.28 /SF
VIII.	Industrial	$6.76 /SF	$3.85 /SF	$6.76 /SF	$5.22 /SF	$3.87 /SF	$1.65 /SF	$4.44 /SF	$2.07 /SF
IX.	Multi-Tenant Industrial Building	$7.59 /SF	$4.06 /SF	$7.67 /SF	$5.43 /SF	$4.61 /SF	$1.65 /SF	$4.61 /SF	$2.80 /SF
X.	R&D	$7.36 /SF	$3.54 /SF	$6.97 /SF	$4.89 /SF	$3.87 /SF	$1.78 /SF	$4.44 SF	$2.21 /SF

[1] Reflects median fee for a range of non-residential development including: multi-tenant industrial, industrial, R&D, office, class A multi-tenant office, and retail.
[2] Includes permits fees for plan check, building permit, MPE permits, energy, and seismic.
[3] Includes impact/capacity fees for sewer, water, public facilities, traffic, parks, fire, drainage/flood, school, and other fees (i.e., art fee, accessibility fee, system capacity fee, water treatment fee).

Source: Building Industry Association of San Diego County Fee Survey, 2007-2008.

TABLE V-4
COMPARISON OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA
JOBS-HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

Jurisdiction	Yr. Adopted /Updated	Current Fee Levels per SF	Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
High Fee Cities						
City and County of San Francisco Population: 856,095	1981 Updated fees in 2002, 07	• Office $19.96 • Hotel $14.95 • Retail & Entertainment $18.62 • R&D $13.30	25,000 gross SF threshold Excludes: redevelopment areas and Port.	Yes, may contribute land for housing.	Very Substantial	Fee is adjusted annually based on the construction cost increases.
City of Palo Alto Population: 65,408	1984 Updated in March 2002.	• Commercial & Industrial $17.06	No minimum threshold Churches; colleges and universities; commercial recreation; hospitals, convalescent facilities; private clubs, lodges, fraternal organizations, private educational facilities; and public facilities are exempt.	Yes	Very Substantial	Fee is adjusted annually based on CPI.
City of Menlo Park Population: 32,185	1998	• Office & R&D $13.62 • All other commercial and industrial $7.40.	10,000 gross SF threshold Churches, private clubs, lodges, fraternal orgs, public facilities and projects with few or no employees are exempt.	Yes, preferred. May provide housing on- or off-site.	Very Substantial	Fee is adjusted annually based on CPI.
Medium Fee Cities						
County of Marin Population: 70,685	2003	• Office/R&D $7.19 • Retail/Rest. $5.40 • Warehouse $1.94 • Hotel/Motel $1,745/room • Manufacturing $3.74	No minimum threshold	Yes, preferred.	Substantial	
City of St. Helena Population: 6,010	2004	• Office $3.61 • Comm./Retail $4.57 • Hotel $3.33 • Winery/Industrial $1.11	Small childcare facilities, churches, non-profits, vineyards, and public facilities are exempt.	Yes, subject to City Council approval.	Substantial	
Town of Corte Madera Population: 9,816	2001	• Office $4.79 • R&D lab $3.20 • Light Industrial $2.79 • Warehouse $0.40 • Retail $8.38 • Com Services $1.20 • Restaurant $4.39 • Hotel $1.20 • Health Club/Rec $2.00 • Training facility/School $2.39	No minimum threshold	N/A	Substantial	

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

TABLE V-4
COMPARISON OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA
JOBS-HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

Jurisdiction	Yr. Adopted /Updated	Current Fee Levels per SF	Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
City of Santa Monica Population: 92,703	1984 Updated fees in 2002.	• Office only • $4.81 per square foot for first 15,000 SF • $10.68 per SF in excess of 15,000 SF.	15,000 SF exemption for new construction, 10,000 SF exemption for additions.	Yes	Very Substantial	Includes fee for open space as well. Fees adjusted quarterly based on CPI. No comprehensive update since adoption.
City of Sunnyvale Population: 140,450	1984 Updated in 2003.	• Industrial & Office $8.95	Applies only to the portion of the project that is in excess of allowable FAR (typically 0.35:1).	N/A	Very Substantial	
City of Mountain View Population: 75,787	2001	• Office/Industrial $6.80 • Hotel $2.26 • Retail $2.26	Fee is 50% less if building meets thresholds: Office <10,000 SF Hotel <25,000 SF Retail <25,000 SF	Yes	Very Substantial	
City of Walnut Creek Population: 66,584	2005	• Office, retail, hotel and medical $5.00	First 500 SF no fee applied.	Yes	Very Substantial	Reviewed every five years.
City of Oakland Population: 430,666	2002	• Office/ Warehouse $4.00	25,000 SF exemption	Yes - Can build units equal to total eligible SF times .0004	Moderate	Fee due in 3 installments. Fee adjusted with an annual escalator tied to residential construction cost increases.
City of Cupertino Population: 56,431	1993	• Office & Industrial $4.75.	No minimum threshold.	N/A	Very Substantial	Fee is adjusted annually based on CPI.
City of Berkeley Population: 108,119	1993	• All Commercial $4.00 • Industrial $2.00	7,500 SF threshold.	Yes	Substantial.	Fee has not changed since 1993; may negotiate fee downward based on hardship or reduced impact.
Low Fee Cities						
City of Napa Population: 78,791	1999	• Office $1.00 • Hotel $1.40 • Retail $0.80 • Industrial & Wine Pdn & small Warehouse $0.50 • Warehouse (30-100K) $0.30 • Warehouse (100K+) $0.20	No minimum threshold Non-profits are exempt	Units or land dedication; on a case by case basis.	Moderate/ Substantial	Fee has not changed since 1999.
County of Napa Population: 28,653	Updated 2004	• Office $2.00 • Hotel $3.00 • Retail $2.00 • Industrial $1.00 • Warehouse $0.80	No minimum threshold Non-profits are exempt	Units or land dedication; on a case by case basis.	Moderate/ Substantial	There is a companion fee of 1% of construction costs on all residential construction.

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

TABLE V-4
COMPARISON OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA
JOBS-HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

Jurisdiction	Yr. Adopted /Updated	Current Fee Levels per SF	Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
City of Petaluma Population: 58,401	2003	• Commercial $2.08 • Industrial $2.15 • Retail $3.59	Fee is 50% less if located in redevelopment project area. Schools and churches exempt	NA	Moderate/ Substantial	
County of Sonoma Population: 155,031	2005	• Office $2.08 • Hotel $2.08 • Retail $3.59 • Industrial $2.15 • R&D Ag Processing $2.15	First 2,000 SF exempt Non-profits, redevelopment areas exempt	Yes. Program specifies number of units per 1,000 SF.	Moderate	Fee adjusted annually by ENR construction cost index.
City of Cotati Population: 7,476	2006	• Commercial $2.08 • Industrial $2.15 • Retail $3.59	First 2,000 SF exempt Non-profits exempt.	Yes. Program specifies number of units per 1,000 SF	Moderate	Fee adjusted annually by ENR construction cost index.
City of Alameda Population: 75,409	1989	• Office $3.63 • Retail $1.84 • Warehouse $0.63 • Hotel/Motel $931 per room	No minimum threshold	Yes. Program specifies # of units per 100,000 SF	Moderate	Fee may be adjusted by CPI.
City of West Hollywood Population: 37,805	1986	• Non-residential $2.85	N/A	N/A	Substantial	Fees adjusted by CPI each year.
City of Pleasanton Population: 70,711		• Commercial, Office & Industrial $2.57	No minimum threshold	N/A	Moderate	Fee adjusted annually.
City of Sacramento Population: 486,189	1989 Most recent update, 2005.	• Office $1.99 • Hotel $1.89 • R&D $1.69 • Commercial $1.59 • Manufacturing $1.25 • Warehouse/Office $0.72 • Warehouse $0.54	No minimum threshold. Mortuary, parking lots, garages, RC Storage, Christmas tree lots, B&Bs, mini-storage, alcoholic beverage sales, reverse vending machines, mobile recycling, and small recyclable collection facilities.	Pay 20% fee plus build at reduced nexus. (Not meaningful given amount of fee).	Moderate	North Natomas area has separate fee structure.
City of San Diego Population: 1,376,173	1990 Fees reduced in 1996; have not been readjusted.	• Office $1.06 • Hotel $0.64 • R&D $0.80 • Retail $0.64 • Manufacturing $0.64 • Warehouse $0.27	No minimum threshold Development by government entities. No exempted uses. Does exclude some geographic areas (Enterprise Zones).	Can dedicate land or air rights in lieu of fee.	Substantial	Since 1990, $51 million raised.
City of Livermore Population: 85,312	1999	• Retail $0.90 • Service Retail $0.678 • Office $0.579 • Hotel $442 per room • Manufacturing $0.277 • Warehouse $0.080 • Business Park $0.574 • Heavy Industrial $0.285 • Light Industrial $0.180	No minimum threshold Church; private or public schools.	Yes; negotiated on a case-by-case basis.	Moderate	

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

TABLE V-4
COMPARISON OF JOBS HOUSING LINKAGE FEE PROGRAMS, CALIFORNIA
JOBS-HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

Jurisdiction	Yr. Adopted /Updated	Current Fee Levels per SF	Thresholds & Exemptions	Build Option/ Other	Market Strength	Comments
City of Folsom Population: 71,453	2002	• Office, Retail, Light Industrial, Heavy Industrial, and Manufacturing $1.20 • Up to 200,000 SF, 100% of fee. 200,000-250,000 SF, 75% of fee; 250,000 – 300,000 SF, 50% of fee; 300,000 and up, 25% of fee.	No minimum threshold Select nonprofits, small child care centers, churches, mini storage, parking garages, private schools, etc.	Yes, provide new or rehab housing affordable to very low and low income households. Also, land dedication.	Moderate/ Substantial	Fee is adjusted annually based on construction cost index.
County of Sacramento Population: 567,700	1989	• Office $0.97 • Hotel $0.92 • R & D $0.82 • Commercial $0.77 • Manufacturing $0.61 • Indoor Recreational Centers $0.50 • Warehouse $0.26	No minimum threshold Service uses operated by non-profits are exempt.	Pay 20% fee plus build at reduced nexus. (Not meaningful given amount of fee).	Moderate	Currently in the process of updating.
City of Elk Grove Population: 143,885	1988 (Inherited from County when incorporated)	• $30 flat fee plus: • Office $0.97 • Hotel $0.92 • R & D $0.82 • Commercial $0.77 • Manufacturing $0.61 • Indoor Rec. Centers $0.50 • Warehouse $0.26	No minimum threshold Membership organizations (churches, non-profits, etc.), mini-storage, car storage, marinas, car washes, private parking garages and agricultural uses exempt.	Pay 20% fee plus build at reduced nexus. (Not meaningful given amount of fee).	Moderate	City may update fee after County of Sacramento updates its fee. Rancho Cordova and Citrus Heights have identical or very similar fee structures.

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

TABLE V-5
NON-RESIDENTIAL DEVELOPMENT PROTOTYPES: RETAIL
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	Strip Retail Center		Community Retail Center		Urban Retail Center	
I. Project Description						
Site Size (Acres)	2.50 Acres		10.00 Acres		4.00 Acres	
Floor Area Ratio (FAR)	0.30		0.25		0.50	
Gross Building Area	33,000 SF		109,000 SF		87,000 SF	
Density						
Number of Stories	1 Stories		1 Stories		1 - 2 Stories	
Number of Rooms	N/A Rooms		N/A Rooms		N/A Rooms	
Parking Spaces	165 Spaces		545 Spaces		348 Spaces	
Parking Ratio	5.0 Spaces/1,000 SF		5.0 Spaces/1,000 SF		4.0 Spaces/1,000 SF	
Type	Surface		Surface		Deck / structured	
II. Development Costs						
Land Acquisition	$25 /SF	$2,723,000	$25 /SF	$10,890,000	$50 /SF	$8,712,000
Sitework	$5 /SF	$545,000	$5 /SF	$2,178,000	$8 /SF	$1,394,000
Parking	$1,500 /Space	$248,000	$1,500 /Space	$818,000	$15,000 /Space	$5,220,000
Shell Construction	$90 /SF	$2,970,000	$105 /SF	$11,445,000	$125 /SF	$10,875,000
Tenant Improvements/FF&E	$20 /SF	$660,000	$25 /SF	$2,725,000	$30 /SF	$2,610,000
Subtotal Direct Costs	$134 /SF	$4,423,000	$157 /SF	$17,166,000	$231 /SF	$20,099,000
Add: Indirect/Financing Costs [1]	30% of Directs	$1,327,000	30% of Directs	$5,150,000	30% of Directs	$6,030,000
Add: Permits and Fees [2]	$10 /SF	$330,000	$10 /SF	$1,090,000	$10 /SF	$870,000
Total Development Costs	$267 /SF	$8,803,000	$315 /SF	$34,296,000	$410 /SF	$35,711,000

(1) Includes architecture & engineering, legal & accounting, taxes & insurance, developer fee, marketing/leasing, and other indirects. Excludes permits and fees.

(2) Source: Building Industry Association, 2007-2008 Fee Survey.

TABLE V-6
NON-RESIDENTIAL DEVELOPMENT PROTOTYPES: OFFICE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	Garden Office		Suburban Mid-Rise Office		Urban High-Rise Office	
I. Project Description						
Site Size (Acres)	3.50 Acres		2.00 Acres		1.00 Acres	
Floor Area Ratio (FAR)	0.40		1.50		4.00	
Gross Building Area	61,000 SF		131,000 SF		174,000 SF	
Density						
Number of Stories	3 Stories		5 Stories		15 Stories	
Number of Rooms	N/A Rooms		N/A Rooms		N/A Rooms	
Parking Spaces	244 Spaces		524 Spaces		435 Spaces	
Parking Ratio	4.0 Spaces/1,000 SF		4.0 Spaces/1,000 SF		2.5 Spaces/1,000 SF	
Type	Surface		Deck / Structured		Subterranean	
II. Development Costs						
Land Acquisition	$25 /SF	$3,812,000	$50 /SF	$4,356,000	$300 /SF	$13,068,000
Sitework	$5 /SF	$762,000	$10 /SF	$871,000	$20 /SF	$871,000
Parking	$1,500 /Space	$366,000	$10,000 /Space	$5,240,000	$35,000 /Space	$15,225,000
Shell Construction	$100 /SF	$6,100,000	$125 /SF	$16,375,000	$180 /SF	$31,320,000
Tenant Improvements/FF&E	$30 /SF	$1,830,000	$35 /SF	$4,585,000	$40 /SF	$6,960,000
Subtotal Direct Costs	$148 /SF	$9,058,000	$207 /SF	$27,071,000	$313 /SF	$54,376,000
Add: Indirect/Financing Costs [1]	30% of Directs	$2,717,000	30% of Directs	$8,121,000	30% of Directs	$16,313,000
Add: Permits and Fees [2]	$8 /SF	$488,000	$8 /SF	$1,048,000	$8 /SF	$1,392,000
Total Development Costs	$264 /SF	$16,075,000	$310 /SF	$40,596,000	$489 /SF	$85,149,000

[1] Includes architecture & engineering, legal & accounting, taxes & insurance, developer fee, marketing/leasing, and other indirects. Excludes permits and fees.

[2] Source: Building Industry Association, 2007-2008 Fee Survey.

TABLE V-7
NON-RESIDENTIAL DEVELOPMENT PROTOTYPES: INDUSTRIAL
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	Warehouse / Storage		Industrial Flex Space		Research & Development High-Tech Industrial	
I. Project Description						
Site Size (Acres)	5.00 Acres		3.50 Acres		4.00 Acres	
Floor Area Ratio (FAR)	0.35		0.35		0.40	
Gross Building Area	76,000 SF		53,000 SF		70,000 SF	
Density						
Number of Stories	1 Stories		1 - 2 Stories		2 - 3 Stories	
Number of Rooms	N/A Rooms		N/A Rooms		N/A Rooms	
Parking Spaces	190 Spaces		212 Spaces		280 Spaces	
Parking Ratio	2.5 Spaces/1,000 SF		4.0 Spaces/1,000 SF		4.0 Spaces/1,000 SF	
Type	Surface		Surface		Surface	
II. Development Costs						
Land Acquisition	$15 /SF	$3,267,000	$20 /SF	$3,049,000	$30 /SF	$5,227,000
Sitework	$5 /SF	$1,089,000	$5 /SF	$762,000	$5 /SF	$871,000
Parking	$1,500 /Space	$285,000	$1,500 /Space	$318,000	$1,500 /Space	$420,000
Shell Construction	$50 /SF	$3,800,000	$60 /SF	$3,180,000	$90 /SF	$6,300,000
Tenant Improvements/FF&E	$10 /SF	$760,000	$25 /SF	$1,325,000	$40 /SF	$2,800,000
Subtotal Direct Costs	$78 /SF	$5,934,000	$105 /SF	$5,585,000	$148 /SF	$10,391,000
Add: Indirect/Financing Costs [1]	30% of Directs	$1,780,000	30% of Directs	$1,676,000	30% of Directs	$3,117,000
Add: Permits and Fees [2]	$8 /SF	$608,000	$8 /SF	$424,000	$8 /SF	$560,000
Total Development Costs	$152 /SF	$11,589,000	$203 /SF	$10,734,000	$276 /SF	$19,295,000

[1] Includes architecture & engineering, legal & accounting, taxes & insurance, developer fee, marketing/leasing, and other indirects. Excludes permits and fees.

[2] Source: Building Industry Association, 2007-2008 Fee Survey.

TABLE V-8
NON-RESIDENTIAL DEVELOPMENT PROTOTYPES: HOTEL
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	Extended Stay Hotel		Full-Service Mid-Rise Hotel		Full-Service High-Rise Hotel	
I. Project Description						
Site Size (Acres)	3.00 Acres		2.00 Acres		1.00 Acres	
Floor Area Ratio (FAR)	0.80		2.00		6.00	
Gross Building Area	105,000 SF		174,000 SF		261,000 SF	
Density						
Number of Stories	3 Stories		6 Stories		15+ Stories	
Number of Rooms	175 Rooms		230 Rooms		300 Rooms	
Parking Spaces	126 Spaces		174 Spaces		196 Spaces	
Parking Ratio	1.2 Spaces/Room		1.0 Spaces/Room		0.8 Spaces/Room	
Type	Surface		Structured		Subterranean	
II. Development Costs						
Land Acquisition	$25 /SF	$3,267,000	$50 /SF	$4,356,000	$300 /SF	$13,068,000
Sitework	$5 /SF	$653,000	$8 /SF	$697,000	$15 /SF	$653,000
Parking	$1,500 /Space	$189,000	$15,000 /Space	$2,610,000	$35,000 /Space	$6,851,000
Shell Construction	$110 /SF	$11,550,000	$150 /SF	$26,100,000	$200 /SF	$52,200,000
Tenant Improvements/FF&E	$10,000 /Room	$1,750,000	$25,000 /Room	$5,750,000	$40,000 /Room	$12,000,000
Subtotal Direct Costs	$135 /SF	$14,142,000	$202 /SF	$35,157,000	$275 /SF	$71,704,000
Add: Indirect/Financing Costs [1]	30% of Directs	$4,243,000	30% of Directs	$10,547,000	35% of Directs	$25,096,000
Add: Permits and Fees [2]	$10 /SF	$1,050,000	$10 /SF	$1,740,000	$10 /SF	$2,610,000
Total Development Costs	$216 /SF	$22,702,000	$298 /SF	$51,800,000	$431 /SF	$112,478,000

[1] Includes architecture & engineering, legal & accounting, taxes & insurance, developer fee, marketing/leasing, and other indirects. Excludes permits and fees.

[2] Source: Building Industry Association, 2007-2008 Fee Survey.

TABLE V-9
NON-RESIDENTIAL BUILDING PERMIT VALUATION - TRENDS BY LAND USE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

(in millions)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Average Annual
City of San Diego																						
Retail [1]	$98.7	$16.2	$40.2	$27.5	$24.5	$46.1	$34.9	$29.6	$36.5	$95.4	$113.5	$82.4	$41.5	$18.5	$43.2	$43.1	$20.5	$35.0	$36.7	$8.3	$892.4	$44.6
Office	$100.8	$46.5	$14.9	$8.7	$9.8	$1.1	$67.1	$102.0	$137.7	$191.0	$126.4	$127.7	$73.5	$72.7	$196.3	$225.5	$142.9	$266.1	$107.6	$2.0	$2,020.1	$101.0
Industrial	$53.8	$27.0	$61.2	$9.5	$16.0	$33.0	$38.7	$51.9	$62.7	$52.2	$47.0	$47.3	$24.9	$53.2	$62.1	$68.8	$66.7	$38.1	$10.1	$0.0	$824.3	$41.2
Hotel	$48.8	$29.6	$6.2	$5.7	$0.0	$0.0	$0.5	$8.0	$25.8	$41.8	$43.7	$56.7	$95.7	$12.9	$28.6	$61.1	$133.9	$24.8	$28.5	$0.0	$652.3	$32.6
Total, City	$302.1	$119.3	$122.4	$51.5	$50.2	$80.2	$141.2	$191.6	$262.7	$380.3	$330.6	$314.1	$235.6	$157.3	$330.3	$398.4	$364.1	$364.0	$182.9	$10.3	$4,389.2	$219.5
Percent Change	N/A	-60.5%	2.6%	-57.9%	-2.4%	59.6%	76.1%	35.7%	37.1%	44.8%	-13.1%	-5.0%	-25.0%	-33.2%	109.9%	20.6%	-8.6%	0.0%	-49.7%	-94.4%		
County of San Diego - Excl. City																						
Retail [1]	$85.7	$79.2	$48.5	$86.9	$57.6	$73.7	$73.7	$78.8	$102.4	$58.0	$65.9	$63.0	$102.3	$179.2	$91.7	$96.5	$132.2	$74.0	$75.2	$12.8	$1,637.3	$81.9
Office	$47.1	$48.8	$5.9	$6.2	$4.5	$68.4	$8.4	$28.8	$57.0	$31.5	$27.2	$41.7	$49.0	$37.3	$40.5	$41.1	$50.2	$54.3	$43.4	$20.6	$711.9	$35.6
Industrial	$57.9	$44.5	$21.1	$14.4	$17.6	$25.2	$63.0	$133.8	$209.2	$141.4	$118.0	$42.9	$103.2	$77.8	$55.0	$101.4	$86.7	$80.3	$47.0	$25.7	$1,466.2	$73.3
Hotel	$40.6	$33.3	$4.1	$0.0	$0.5	$8.4	$10.9	$22.9	$17.5	$12.0	$34.4	$15.6	$1.5	$8.7	$11.4	$8.1	$64.3	$18.2	$12.3	$3.8	$328.4	$16.4
Total, County - Excl. City	$231.3	$205.8	$79.6	$107.5	$80.1	$175.8	$156.0	$264.3	$386.1	$242.9	$245.6	$163.2	$256.0	$302.9	$198.6	$247.2	$333.4	$226.8	$177.9	$62.9	$4,143.9	$207.2
Percent Change	N/A	-11.0%	-61.3%	35.1%	-25.5%	119.5%	-11.3%	69.4%	46.1%	-37.1%	1.1%	-33.5%	56.9%	18.3%	-34.4%	24.4%	34.9%	-32.0%	-21.5%	-64.7%		
Total	$533.4																					
City as % of County																						
State of California																						
Retail [1]	$2,161.0	$1,512.2	$1,460.6	$1,210.0	$1,308.8	$1,334.2	$1,488.8	$1,751.2	$1,959.2	$2,269.0	$2,325.0	$2,229.4	$2,611.8	$2,306.3	$2,621.9	$2,984.9	$3,019.1	$3,328.9	$2,811.5	$936.0	$41,629.6	$2,081.5
Office	$1,931.9	$1,178.0	$647.1	$624.8	$479.1	$619.6	$772.5	$1,655.3	$1,922.6	$1,927.5	$3,185.9	$2,551.4	$1,387.6	$1,132.6	$1,626.6	$1,881.9	$2,661.1	$3,384.8	$2,014.4	$511.0	$32,095.9	$1,604.8
Industrial	$1,591.4	$892.0	$626.0	$489.2	$649.6	$732.9	$1,140.6	$1,598.4	$2,466.5	$2,256.2	$2,206.2	1548.119	$1,216.8	$1,320.2	$1,456.3	$1,693.4	$1,756.6	$1,446.1	$938.1	$359.9	$26,384.5	$1,319.2
Hotel	$441.9	$294.7	$83.7	$73.9	$63.3	$49.6	$120.1	$341.4	$516.8	$561.7	$723.4	$664.5	$540.8	$218.4	$273.2	$384.4	$829.2	$894.1	$604.7	$120.1	$7,800.1	$390.0
Total, State	$6,126.2	$3,877.0	$2,817.4	$2,397.9	$2,500.9	$2,736.3	$3,521.9	$5,346.3	$6,865.1	$7,014.4	$8,440.5	$6,993.4	$5,757.0	$4,977.5	$5,978.0	$6,944.6	$8,266.0	$9,053.9	$6,368.6	$1,927.0	$107,910.1	$5,395.5
Percent Change	N/A	-36.7%	-27.3%	-14.9%	4.3%	9.4%	28.7%	51.8%	28.4%	2.2%	20.3%	-17.1%	-17.7%	-13.5%	20.1%	16.2%	19.0%	9.5%	-29.7%	-69.7%		

(1) Includes Stores and Other Merchandise and Service Stations.

Source: Construction Industry Research Board
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\SDHC_Tables_Section V_Appendix.xls; 10/29/2010; ema

TABLE V-10
EMPLOYMENT BY PLACE OF WORK, TRENDS BY LAND USE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

			1990 - 2008		
	1990	2008	Total Change	Average Annual Change	Average Annual Rate of Increase
City of San Diego	681,218	779,862	98,644	5,480	0.8%
County of San Diego (excluding City of San Diego)	534,540	645,142	110,602	6,145	1.1%
State of California	12,499,800	14,981,400	2,481,600	137,867	1.0%

Source: U.S. Census
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\SDHC_Tables_Section V_Appendix.xls; 10/29/2010; ema

APPENDIX A

CRITICAL REVIEW OF 2004 STUDY AND ADJUSTMENT OF KEY ASSUMPTIONS

The work scope for this study included providing a critical review of the 2004 study (as updated in 2008) to identify areas where revisions to methodology and assumptions are needed. This review was undertaken at the outset of the analysis prior to initiating an updated nexus analysis. The findings of this review were discussed with Commission staff early in the process and the results have been incorporated into the body of this report and the underlying analyses. The following is a summary of areas where modification to the methodology and assumptions utilized in the 2004 study was determined to be warranted:

1. Recognition of Severe Recessionary Conditions

The current severe recession has resulted in large job losses particularly in certain sectors. Conditions such as these are recognized historically as having caused or accelerated permanent shifts in national and regional economies. While short term / temporary job losses do not warrant an adjustment in the analysis for reasons described below; the potential for long-term changes does need to be recognized. This potential for long-term shifts in employment in certain industries was recognized in the 2004 study using a 5% adjustment factor; however, we now believe it is prudent to incorporate an adjustment approximately double this amount. The revised adjustment factor at 11% incorporates recent job losses in industries experiencing long term declines in employment and for which job losses have the potential to remain permanent. This factor and its derivation are described in the main body of the report (in Section I under the heading Discount for Changing Industries / Long-Term Declines in Employment).

2. Affordability Gap / Cost to Develop Affordable units

The 2008 nexus study update was based on providing affordable units solely in a stack-flat over podium parking configuration. This is more expensive than providing units in lower density configurations such as garden apartments or townhomes. Since SDHC is unlikely to use fee revenues exclusively for the more expensive unit type, we are now recommending that SDHC use a blend of higher and lower cost unit types. A detailed discussion of the affordability gap analysis is provided in Section IV.

3. Commuters from Mexico

The 2004 analysis makes a downward adjustment to housing needs to account for those likely to commute from outside the City. However, the 2004 analysis relies on data that does not account for workers commuting from Mexico. For this update, KMA relies on US Department of Transportation data to estimate the number of workers commuting to San Diego from Mexico. Including these workers in the commute adjustment analysis results in a larger reduction in the

fee amounts supported by the nexus study. In other words, it makes the analysis more conservative. A detailed description of this adjustment can be found in Section II.

4. Updates to the Nexus Model

One of the primary updates to our nexus model implemented since the 2004 study has been to incorporate new data on the number of workers in households of various size. Previously our model relied upon an average number of workers across all household sizes. The revised methodology recognizes that larger households tend to have more workers than smaller households. Under the prior methodology, the dollar amounts supported by the nexus tended to be understated. More information on the distribution of the number of workers per worker household can be found in Section III.

Evaluation of Overall Methodology and Approach

The methodology employed in the 2004 report remains valid and appropriate for documenting the nexus between new non-residential construction and demand for affordable housing. The methodology is fundamentally the same as the approach upheld by the Courts in the *City of Sacramento* case. Since then, it has been reviewed and approved by the legal counsel of numerous jurisdictions throughout California.

APPENDIX B – ADDITIONAL DISCUSSION OF NEXUS CONCEPTS AND ASSUMPTIONS

Matrix of Key Nexus Analysis Concepts and Assumptions

For ease of reference, we have organized the major assumptions of the nexus analysis into a matrix format with a brief description of each.

	Key Assumption	*Description*
A. Employment		
1.	Relationship Between Construction and Job Growth	Construction of new work space buildings results in new jobs added to the region.
2.	Substitution Factor	Although some / all jobs in a given new building may be relocated from elsewhere in the region, this relocation makes other space available so that somewhere in the chain new jobs are added.
3.	Multiplier Effects	Multiplier effects are not included in the analysis. This is one of many conservative assumptions we make in the analysis.
4.	Adjustment for Declining Industries	Long-term shifts in the regional economy can result in declines in employment in certain industries even as other industries add jobs. An adjustment is included to account for this. The adjustment made is designed to recognize possible long term effects of the current recession.
5.	Unemployment / Excess Labor Force Capacity	Current conditions of high unemployment / excess labor force capacity are temporary. This temporary condition does not undermine the underlying assumption that new work space buildings accommodate added jobs over the long term. Long-term changes in employment are recognized under item 4 above.
6.	Labor Force Participation	Labor force participation rates are assumed to be stable for purposes of the analysis. This is a conservative assumption given labor force participation rates for men have been on a downward trajectory since 1970 while increases in participation rates by women have stabilized recently and even declined slightly.
7.	Employment Density	The analysis is based upon assumptions about employment density or the number of square feet of building area per employee (Table III-1).
B. Worker Occupation and Compensation Level		
1.	Worker Occupations	Worker occupations are based on U.S. Bureau of Labor Statistics data. For uses such as office and manufacturing, it is necessary to identify a mix of industries representative of San Diego's economic base in order to arrive at occupational distribution. (See Appendix C for more information)
2.	Compensation Levels	Compensation levels are based on 2010 data from the California Employment Development Department (EDD). The EDD data assumes hourly employees have full-time employment (another conservative assumption). (See Appendix C for more information)
C. Households		
1.	Population and household growth is linked to employment growth	Workers would not come to the area if they could not expect to find a job. Existing workers would not stay in the region over the long term without jobs.
2.	Non-working Households are Excluded	Only population growth arising from new employment is included in the analysis. Non-working households such as retirees and students are not included.

	Key Assumption	*Description*
3.	Existing Housing Needs	The analysis does not address existing housing needs. Only housing needs arising from employment growth is included.
4.	Multiple Earner Households	Given most households have more than one worker, the analysis uses a distribution of workers by household size based on 2006-2008 Census data (American Community Survey). Workers in multiple earner households are assumed to have similar incomes. While there are many exceptions to this, demographic studies in recent years have shown this to be the trend.
5.	Household size distribution	Household size distribution is based on 2006-2008 Census data (American Community Survey).
6.	Variations in income by household size	No distinction is made between the incomes of workers in different size households. This assumption likely understates the number of households falling into the lower income tiers. Census data indicates average household income for five and six person households is actually less than three and four person households.
7.	Commute Adjustment	The results of the nexus are adjusted downward to reflect existing commute patterns. Including an estimate of workers commuting from Mexico. Only households likely to seek housing in the City are included based on the existing commute pattern. This existing relationship is influenced by the availability of affordable housing in the City.
D. Affordability Gaps		
1.	Rents and Sale Prices	Affordable rents and sale prices are based upon the top of each income range. For example, units for Very Low Income households (0% to 50% AMI), have rents based on 50% of AMI. This is another one of the conservative assumptions incorporated into the analysis.
2.	Rental Unit Prototype	Very Low and Low Income households are assumed to be housed in rental units. Approximately half the affordable rental units are assumed to be provided as garden apartments and half as stacked flats over podium parking. Tax credits (4%) are assumed for Very Low Income units.
3.	Ownership Prototype	Moderate Income households are assumed to be housed in for sale units. Approximately half the affordable units are assumed to be provided as townhomes and half as stacked flats over podium parking.

Discussion of Specific Factors in Relation to the Nexus Concept

The scope of work for the nexus study identifies several specific factors that are to be discussed in relationship to the nexus concept. In addition to these, we have incorporated some additional items based upon stakeholder feedback received at the September 9, 2010 meeting. Many of these factors are also addressed in the main body of the report.

1. Multiplier Effects

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

are generated by suppliers to the businesses located in the new workspace buildings. Finally, induced jobs are generated by local spending on goods and services by employees.

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

Theoretically, a jobs-housing nexus analysis could consider multiplier effects although the potential for double-counting exists. The potential for double counting exists to the extent indirect and induced jobs are added in other new buildings in the City of San Diego subject to the linkage fee. KMA chooses to omit the multiplier effects (the indirect and induced employment impacts), as it avoids potential double-counting and makes the analysis more conservative.

2. Population Growth Resulting from Non-Employment Factors

Not all population growth in San Diego is the result of new jobs in the region. Retirees, students, and others who are not part of the workforce all generate demand for housing. However non-working households are not included in the analysis since the purpose is to demonstrate the linkage between new buildings, new workers and new worker households, and demand for housing. Since only working households are part of this equation, non-working households are excluded.

SANDAG projections anticipate significant growth in the population over the age of 65 over the next twenty years; retired households are expected to represent a significant component of future household growth and overall housing demand in the region.

3. Likelihood of Different Job Categories to Attract New Population from Outside the Region

An underlying concept in the analysis is that there is a relationship between job growth and population growth. Workers from outside the region would not come without an expectation that they could find a job. People born locally and entering the workforce, or for example, who came to attend college, would not stay without jobs. However, the analysis does not assume employers are recruiting from outside the region to fill specific jobs or job categories. The analysis also does not assume workers are relocating to fill specific openings.

4. Differences in Number of Workers and Household Size by Occupation Category

The analysis accounts for multiple earner households based on Census data. The Census provides data on the number of workers in households of different sizes. The Census does provide data to show whether there are differences in this pattern by occupational category. Given this data constraint, the model does not differentiate by occupational category when

incorporating information on the distribution of household sizes and number of workers per household.

Anecdotally one can observe some workers at the lower end of the pay scale address the issue of housing affordability by means of shared living situations. However we can also find examples of workers at the lower end of the pay-scale with larger household sizes. If these examples could be quantified, they would tend to push the results of the nexus in opposite directions (the first would drive the results down while the second would drive them up). The relative importance of these two factors cannot be determined based on the data available.

5. Accounting for Demolition of Existing Buildings

For demolition of existing structures, some programs provide an offset to any impacts of the proposed construction; however, we understand that San Diego's ordinance does not provide such an exemption. Buildings are charged the fee once during their useful lives in order to mitigate the impacts. The affordable units that are assisted also have a limited useful life and eventually need to be rehabbed or replaced. Replacing older or obsolete employment space "renews" the impacts over the life of a new building and collecting the fee on the new building "renews" the mitigation of those impacts.

6. Consistency with SANDAG projections

The nexus analysis methodology is consistent with the approach SANDAG uses in their projections. The nexus assumes employment growth is a key driver of growth in the number of working households. Similarly, one of the key features of SANDAG's models is the integration of demographic projections with economic models and job growth forecasts in recognition of the linkage that exists.[6]

7. Upward Mobility of Workers

New employment spaces add jobs across a distribution of occupational categories. Over time, some workers will move up the career ladder, for example into managerial occupations. However, not all workers will "move up" and those that do leave a position that is usually filled by a new worker. Occupational and income composition are not affected in the aggregate by the upward mobility of particular workers.

8. Housing new worker households in existing housing units

The analysis assumes that the existing housing stock in San Diego is needed to meet the housing needs of the existing population. New worker households, including those needing affordable housing, will need to be accommodated by adding to the existing housing stock.

[6] 2050 Regional Growth Forecast Process and Model Documentation, SANDAG, June 10, 2010.

APPENDIX C PART 1

Worker Occupations and Incomes

Housing Impact Fee Nexus Study

APPENDIX C TABLE 1
2009 NATIONAL OFFICE WORKER DISTRIBUTION BY OCCUPATION
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Major Occupations (4% or more)	2009 National Office Industry Occupation Distribution	
Management occupations	1,605,001	7.6%
Business and financial operations occupations	2,427,263	*11.5%*
Computer and mathematical science occupations	1,948,299	*9.2%*
Architecture and engineering occupations	1,174,065	*5.6%*
Healthcare practitioner and technical occupations	1,791,168	*8.5%*
Healthcare support occupations	949,861	*4.5%*
Sales and related occupations	1,476,828	*7.0%*
Office and administrative support occupations	6,536,900	*31.0%*
Installation, maintenance, and repair occupations	879,628	*4.2%*
All Other Office Related Occupations	2,329,917	*11.0%*
INDUSTRY TOTAL	21,118,930	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Office 7-29-10.xls; Major Occupations Matrix; 10/29/2010; dd

APPENDIX C TABLE 2
AVERAGE ANNUAL COMPENSATION, 2010
OFFICE WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers
Management occupations			
Chief executives	$200,600	5.1%	0.4%
General and operations managers	$125,400	24.6%	1.9%
Marketing managers	$123,900	5.0%	0.4%
Sales managers	$112,400	5.2%	0.4%
Administrative services managers	$85,500	4.2%	0.3%
Computer and information systems managers	$123,000	9.8%	0.7%
Financial managers	$126,600	13.7%	1.0%
Engineering managers	$138,900	4.7%	0.4%
Property, real estate, and community association managers	$62,600	9.4%	0.7%
Managers, all other	$112,500	5.5%	0.4%
All Other Management occupations (Avg. All Categories)	$113,900	12.9%	1.0%
Weighted Mean Annual Wage	***$119,300***	**100.0%**	**7.6%**
Business and financial operations occupations			
Claims adjusters, examiners, and investigators	$58,000	5.6%	0.6%
Management analysts	$94,900	13.2%	1.5%
Business operations specialists, all other	$66,900	11.5%	1.3%
Accountants and auditors	$71,200	23.6%	2.7%
Financial analysts	$91,900	6.7%	0.8%
Personal financial advisors	$72,300	5.6%	0.6%
Loan officers	$69,300	7.3%	0.8%
All Other Business and financial operations occupations (Avg. All Categories)	$70,100	26.5%	3.0%
Weighted Mean Annual Wage	***$74,100***	**100.0%**	**11.5%**
Computer and mathematical science occupations			
Computer programmers	$80,700	12.0%	1.1%
Computer software engineers, applications	$96,400	17.9%	1.7%
Computer software engineers, systems software	$96,200	13.1%	1.2%
Computer support specialists	$49,100	13.7%	1.3%
Computer systems analysts	$81,500	16.0%	1.5%
Network and computer systems administrators	$73,800	9.6%	0.9%
Network systems and data communications analysts	$86,700	7.9%	0.7%
All Other Computer and mathematical science occupations (Avg. All Categories)	$79,900	9.8%	0.9%
Weighted Mean Annual Wage	***$81,100***	**100.0%**	**9.2%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Office 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 2
AVERAGE ANNUAL COMPENSATION, 2010
OFFICE WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers
Architecture and engineering occupations			
Architects, except landscape and naval	$95,400	10.3%	0.6%
Surveyors	$77,900	4.5%	0.3%
Civil engineers	$87,500	16.2%	0.9%
Electrical engineers	$96,500	5.3%	0.3%
Electronics engineers, except computer	$99,700	5.4%	0.3%
Mechanical engineers	$86,200	6.9%	0.4%
Architectural and civil drafters	$50,100	9.9%	0.6%
Civil engineering technicians	$61,900	4.6%	0.3%
Electrical and electronic engineering technicians	$61,700	4.1%	0.2%
Surveying and mapping technicians	$57,300	4.9%	0.3%
All Other Architecture and engineering occupations (Avg. All Categories)	$81,400	27.9%	1.5%
Weighted Mean Annual Wage	***$79,800***	**100.0%**	**5.6%**
Healthcare practitioner and technical occupations			
Dentists, general	$147,700	4.8%	0.4%
Physicians and surgeons, all other	$218,700	8.8%	0.7%
Registered nurses	$82,100	16.1%	1.4%
Physical therapists	$81,600	4.1%	0.3%
Dental hygienists	$91,600	9.9%	0.8%
Licensed practical and licensed vocational nurses	$47,900	5.9%	0.5%
All Other Healthcare practitioner and technical occupations (Avg. All Categories)	$86,400	50.5%	4.3%
Weighted Mean Annual Wage	***$98,300***	**100.0%**	**8.5%**
Healthcare support occupations			
Dental assistants	$36,400	30.9%	1.4%
Medical assistants	$31,200	41.0%	1.8%
Veterinary assistants and laboratory animal caretakers	$39,200	6.4%	0.3%
Healthcare support workers, all other	$35,800	4.7%	0.2%
All Other Healthcare support occupations (Avg. All Categories)	$30,500	17.0%	0.8%
Weighted Mean Annual Wage	***$33,400***	**100.0%**	**4.5%**
Sales and related occupations			
First-line supervisors/managers of non-retail sales workers	$69,700	4.3%	0.3%
Counter and rental clerks	$26,700	5.8%	0.4%
Retail salespersons	$26,100	6.2%	0.4%
Advertising sales agents	$60,500	4.1%	0.3%
Insurance sales agents	$79,900	13.8%	1.0%
Securities, commodities, and financial services sales agents	$81,400	8.2%	0.6%
Sales representatives, services, all other	$61,400	18.3%	1.3%
Sales representatives, wholesale and manufacturing, technical and scientific prod	$79,200	5.9%	0.4%
Sales representatives, wholesale and manufacturing, except technical and scientif	$65,300	4.8%	0.3%
Real estate sales agents	$57,700	10.5%	0.7%
Telemarketers	$26,100	4.5%	0.3%
All Other Sales and related occupations (Avg. All Categories)	$37,700	13.5%	0.9%
Weighted Mean Annual Wage	***$57,700***	**100.0%**	**7.0%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Office 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 2
AVERAGE ANNUAL COMPENSATION, 2010
OFFICE WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Office Workers
Office and administrative support occupations			
First-line supervisors/managers of office and administrative support workers	$54,500	7.3%	2.3%
Bookkeeping, accounting, and auditing clerks	$38,200	8.2%	2.5%
Tellers	$26,900	5.8%	1.8%
Customer service representatives	$37,500	12.4%	3.8%
Receptionists and information clerks	$28,500	7.9%	2.5%
Executive secretaries and administrative assistants	$45,400	7.0%	2.2%
Medical secretaries	$33,500	4.9%	1.5%
Secretaries, except legal, medical, and executive	$35,400	7.5%	2.3%
Office clerks, general	$30,400	11.0%	3.4%
All Other Office and administrative support occupations (Avg. All Categories)	$36,300	27.9%	8.6%
Weighted Mean Annual Wage	***$36,600***	**100.0%**	**31.0%**
Installation, maintenance, and repair occupations			
First-line supervisors/managers of mechanics, installers, and repairers	$65,000	6.7%	0.3%
Telecommunications equipment installers and repairers, except line installers	$60,400	25.0%	1.0%
Maintenance and repair workers, general	$37,700	40.3%	1.7%
Telecommunications line installers and repairers	$48,800	17.8%	0.7%
All Other Installation, maintenance, and repair occupations (Avg. All Categories)	$45,400	10.2%	0.4%
Weighted Mean Annual Wage	***$48,000***	**100.0%**	**4.2%**
			89.0%

[1] Including occupations representing 4% or more of the major occupation group

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

[3] Occupation percentages are based on the 2009 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2009 Occupational Employment Survey data for San Diego County updated by the California Employment Development Department to 2010 wage levels.

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Office 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 3
2009 NATIONAL HOTEL WORKER DISTRIBUTION BY OCCUPATION
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Major Occupations (3% or more)	2009 National Hotel Industry Occupation Distribution	
Management occupations	66,530	4.0%
Food preparation and serving related occupations	440,340	*26.4%*
Building and grounds cleaning and maintenance occupations	508,260	*30.5%*
Personal care and service occupations	68,850	*4.1%*
Office and administrative support occupations	323,420	*19.4%*
Installation, maintenance, and repair occupations	76,250	*4.6%*
All Other Hotel Related Occupations	182,640	*11.0%*
INDUSTRY TOTAL	1,666,290	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\hotel 7-29-10.xls Major Occupations Matrix; 10/29/2010; dd

APPENDIX C TABLE 4
AVERAGE ANNUAL COMPENSATION, 2010
HOTEL WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Hotel Workers
Management occupations			
General and operations managers	$125,400	16.5%	0.7%
Sales managers	$112,400	9.4%	0.4%
Financial managers	$126,600	5.0%	0.2%
Food service managers	$52,000	11.6%	0.5%
Lodging managers	$60,600	41.8%	1.7%
All Other Management occupations (Avg. All Categories)	$113,900	15.7%	0.6%
Weighted Mean Annual Wage	***$86,900***	**100.0%**	**4.0%**
Food preparation and serving related occupations			
First-line supervisors/managers of food preparation and serving workers	$31,800	4.8%	1.3%
Cooks, restaurant	$25,800	13.1%	3.5%
Bartenders	$21,700	8.0%	2.1%
Waiters and waitresses	$21,200	29.4%	7.8%
Food servers, nonrestaurant	$22,400	8.5%	2.3%
Dining room and cafeteria attendants and bartender helpers	$19,500	9.4%	2.5%
Dishwashers	$19,700	7.0%	1.9%
All Other Food preparation and serving related occupations (Avg. All Categories)	$22,200	19.8%	5.2%
Weighted Mean Annual Wage	***$22,400***	**100.0%**	**26.4%**
Building and grounds cleaning and maintenance occupations			
First-line supervisors/managers of housekeeping and janitorial workers	$39,500	5.6%	1.7%
Janitors and cleaners, except maids and housekeeping cleaners	$25,700	9.4%	2.9%
Maids and housekeeping cleaners	$21,200	81.7%	24.9%
All Other Building and grounds cleaning and maintenance occupations (Avg. All Cat	$26,400	3.3%	1.0%
Weighted Mean Annual Wage	***$22,800***	**100.0%**	**30.5%**
Personal care and service occupations			
First-line supervisors/managers of personal service workers	$40,100	4.6%	0.2%
Amusement and recreation attendants	$20,900	13.9%	0.6%
Baggage porters and bellhops	$25,100	34.9%	1.4%
Concierges	$26,300	14.1%	0.6%
Recreation workers	$24,000	5.7%	0.2%
Personal care and service workers, all other	$28,300	5.9%	0.2%
All Other Personal care and service occupations (Avg. All Categories)	$26,000	20.8%	0.9%
Weighted Mean Annual Wage	***$25,700***	**100.0%**	**4.1%**
Office and administrative support occupations			
First-line supervisors/managers of office and administrative support workers	$54,500	7.6%	1.5%
Bookkeeping, accounting, and auditing clerks	$38,200	6.6%	1.3%
Hotel, motel, and resort desk clerks	$23,200	65.0%	12.6%
All Other Office and administrative support occupations (Avg. All Categories)	$36,300	20.8%	4.0%
Weighted Mean Annual Wage	***$29,300***	**100.0%**	**19.4%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\hotel 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 4
AVERAGE ANNUAL COMPENSATION, 2010
HOTEL WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Hotel Workers
Installation, maintenance, and repair occupations			
First-line supervisors/managers of mechanics, installers, and repairers	$65,000	8.2%	0.4%
Maintenance and repair workers, general	$37,700	85.1%	3.9%
All Other Installation, maintenance, and repair occupations (Avg. All Categories)	$45,400	6.7%	0.3%
Weighted Mean Annual Wage	***$40,400***	**100.0%**	**4.6%**
			89.0%

[1] Including occupations representing 4% or more of the major occupation group

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

[3] Occupation percentages are based on the 2009 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2009 Occupational Employment Survey data for San Diego County updated by the California Employment Development Department to 2010 wage levels.

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\hotel 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 5
2009 NATIONAL MEDICAL WORKER DISTRIBUTION BY OCCUPATION
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Major Occupations (3% or more)	2009 National Medical Industry Occupation Distribution	
Management occupations	270,220	3.5%
Community and social services occupations	279,380	*3.6%*
Healthcare practitioner and technical occupations	3,549,650	*45.5%*
Healthcare support occupations	1,458,280	*18.7%*
Food preparation and serving related occupations	335,000	*4.3%*
Building and grounds cleaning and maintenance occupations	320,700	*4.1%*
Office and administrative support occupations	988,320	*12.7%*
All Other Medical Related Occupations	603,500	*7.7%*
INDUSTRY TOTAL	7,805,050	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Medical 7-29-10.xls; Major Occupations Matrix; 10/29/2010; dd

APPENDIX C TABLE 6
AVERAGE ANNUAL COMPENSATION, 2010
MEDICAL WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Medical Workers
Management occupations			
General and operations managers	$125,400	12.1%	0.4%
Administrative services managers	$85,500	6.3%	0.2%
Financial managers	$126,600	4.7%	0.2%
Medical and health services managers	$104,000	53.4%	1.9%
Managers, all other	$112,500	5.4%	0.2%
All Other Management occupations (Avg. All Categories)	$113,900	18.1%	0.6%
Weighted Mean Annual Wage	***$108,700***	**100.0%**	**3.5%**
Community and social services occupations			
Substance abuse and behavioral disorder counselors	$35,200	9.6%	0.3%
Mental health counselors	$55,600	12.8%	0.5%
Medical and public health social workers	$59,000	23.5%	0.8%
Mental health and substance abuse social workers	$42,200	13.3%	0.5%
Health educators	$39,700	5.8%	0.2%
Social and human service assistants	$30,400	14.4%	0.5%
All Other Community and social services occupations (Avg. All Categories)	$49,000	20.6%	0.7%
Weighted Mean Annual Wage	***$46,700***	**100.0%**	**3.6%**
Healthcare practitioner and technical occupations			
Registered nurses	$82,100	50.2%	22.8%
Licensed practical and licensed vocational nurses	$47,900	11.4%	5.2%
All Other Healthcare practitioner and technical occupations (Avg. All Categories)	$86,400	38.4%	17.5%
Weighted Mean Annual Wage	***$79,800***	**100.0%**	**45.5%**
Healthcare support occupations			
Home health aides	$22,700	4.8%	0.9%
Nursing aides, orderlies, and attendants	$25,200	71.8%	13.4%
Medical assistants	$31,200	6.3%	1.2%
Healthcare support workers, all other	$35,800	4.7%	0.9%
All Other Healthcare support occupations (Avg. All Categories)	$30,500	12.4%	2.3%
Weighted Mean Annual Wage	***$26,600***	**100.0%**	**18.7%**
Food preparation and serving related occupations			
First-line supervisors/managers of food preparation and serving workers	$31,800	7.0%	0.3%
Cooks, institution and cafeteria	$28,600	24.9%	1.1%
Food preparation workers	$21,600	25.2%	1.1%
Combined food preparation and serving workers, including fast food	$20,500	10.1%	0.4%
Food servers, nonrestaurant	$22,400	22.4%	1.0%
All Other Food preparation and serving related occupations (Avg. All Categories)	$22,200	10.5%	0.5%
Weighted Mean Annual Wage	***$24,200***	**100.0%**	**4.3%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Medical 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 6
AVERAGE ANNUAL COMPENSATION, 2010
MEDICAL WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Medical Workers
Building and grounds cleaning and maintenance occupations			
First-line supervisors/managers of housekeeping and janitorial workers	$39,500	5.8%	0.2%
Janitors and cleaners, except maids and housekeeping cleaners	$25,700	27.9%	1.1%
Maids and housekeeping cleaners	$21,200	64.0%	2.6%
All Other Building and grounds cleaning and maintenance occupations (Avg. All Cat	$26,400	2.3%	0.1%
Weighted Mean Annual Wage	***$23,600***	**100.0%**	**4.1%**
Office and administrative support occupations			
First-line supervisors/managers of office and administrative support workers	$54,500	6.1%	0.8%
Billing and posting clerks and machine operators	$36,600	5.6%	0.7%
Bookkeeping, accounting, and auditing clerks	$38,200	4.2%	0.5%
Interviewers, except eligibility and loan	$35,600	10.1%	1.3%
Receptionists and information clerks	$28,500	7.2%	0.9%
Executive secretaries and administrative assistants	$45,400	5.6%	0.7%
Medical secretaries	$33,500	14.3%	1.8%
Secretaries, except legal, medical, and executive	$35,400	8.4%	1.1%
Office clerks, general	$30,400	13.3%	1.7%
All Other Office and administrative support occupations (Avg. All Categories)	$36,300	25.2%	3.2%
Weighted Mean Annual Wage	***$36,100***	**100.0%**	**12.7%**
			92.3%

[1] Including occupations representing 4% or more of the major occupation group

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

[3] Occupation percentages are based on the 2009 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2009 Occupational Employment Survey data for San Diego County updated by the California Employment Development Department to 2010 wage levels.

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Medical 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 7
2009 NATIONAL RETAIL WORKER DISTRIBUTION BY OCCUPATION
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Major Occupations (3% or more)	2009 National Retail Industry Occupation Distribution	
Food preparation and serving related occupations	9,145,670	26.3%
Building and grounds cleaning and maintenance occupations	1,788,220	*5.1%*
Sales and related occupations	9,368,220	*26.9%*
Office and administrative support occupations	4,513,390	*13.0%*
Installation, maintenance, and repair occupations	1,501,180	*4.3%*
Production occupations	1,300,900	*3.7%*
Transportation and material moving occupations	2,622,060	*7.5%*
All Other Retail Related Occupations	4,547,750	*13.1%*
INDUSTRY TOTAL	34,787,390	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\retail 7-29-10.xls; Major Occupations Matrix; 10/29/2010; dd

APPENDIX C TABLE 8
AVERAGE ANNUAL COMPENSATION, 2010
RETAIL WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Retail Workers
Food preparation and serving related occupations			
First-line supervisors/managers of food preparation and serving workers	$31,800	7.1%	1.9%
Cooks, fast food	$19,600	5.8%	1.5%
Cooks, restaurant	$25,800	8.7%	2.3%
Food preparation workers	$21,600	6.5%	1.7%
Bartenders	$21,700	4.1%	1.1%
Combined food preparation and serving workers, including fast food	$20,500	26.4%	6.9%
Counter attendants, cafeteria, food concession, and coffee shop	$20,900	4.2%	1.1%
Waiters and waitresses	$21,200	22.1%	5.8%
Dishwashers	$19,700	4.6%	1.2%
All Other Food preparation and serving related occupations (Avg. All Categories)	$22,200	10.4%	2.7%
Weighted Mean Annual Wage	***$22,100***	**100.0%**	**26.3%**
Building and grounds cleaning and maintenance occupations			
Janitors and cleaners, except maids and housekeeping cleaners	$25,700	51.3%	2.6%
Maids and housekeeping cleaners	$21,200	7.0%	0.4%
Landscaping and groundskeeping workers	$27,200	28.1%	1.4%
All Other Building and grounds cleaning and maintenance occupations (Avg. All Cat	$26,400	13.6%	0.7%
Weighted Mean Annual Wage	***$25,900***	**100.0%**	**5.1%**
Sales and related occupations			
First-line supervisors/managers of retail sales workers	$41,000	10.8%	2.9%
Cashiers	$21,700	34.4%	9.3%
Retail salespersons	$26,100	42.1%	11.3%
All Other Sales and related occupations (Avg. All Categories)	$37,700	12.7%	3.4%
Weighted Mean Annual Wage	***$27,700***	**100.0%**	**26.9%**
Office and administrative support occupations			
First-line supervisors/managers of office and administrative support workers	$54,500	5.6%	0.7%
Bookkeeping, accounting, and auditing clerks	$38,200	7.3%	0.9%
Customer service representatives	$37,500	12.8%	1.7%
Shipping, receiving, and traffic clerks	$29,600	5.1%	0.7%
Stock clerks and order fillers	$25,000	29.9%	3.9%
Secretaries, except legal, medical, and executive	$35,400	4.6%	0.6%
Office clerks, general	$30,400	11.3%	1.5%
All Other Office and administrative support occupations (Avg. All Categories)	$36,300	23.4%	3.0%
Weighted Mean Annual Wage	***$33,200***	**100.0%**	**13.0%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\retail 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 8
AVERAGE ANNUAL COMPENSATION, 2010
RETAIL WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Retail Workers
Installation, maintenance, and repair occupations			
First-line supervisors/managers of mechanics, installers, and repairers	$65,000	8.1%	0.4%
Automotive body and related repairers	$42,800	8.2%	0.4%
Automotive service technicians and mechanics	$43,200	34.4%	1.5%
Tire repairers and changers	$26,800	5.7%	0.2%
Maintenance and repair workers, general	$37,700	7.9%	0.3%
All Other Installation, maintenance, and repair occupations (Avg. All Categories)	$45,400	35.6%	1.5%
Weighted Mean Annual Wage	***$44,300***	**100.0%**	**4.3%**
Production occupations			
Team assemblers	$25,800	10.9%	0.4%
Assemblers and fabricators, all other	$30,400	4.6%	0.2%
Bakers	$25,900	6.5%	0.2%
Butchers and meat cutters	$30,800	8.2%	0.3%
Laundry and dry-cleaning workers	$20,700	9.0%	0.3%
Pressers, textile, garment, and related materials	$21,900	4.0%	0.2%
Helpers--production workers	$23,000	9.0%	0.3%
Production workers, all other	$29,300	4.4%	0.2%
All Other Production occupations (Avg. All Categories)	$33,600	43.3%	1.6%
Weighted Mean Annual Wage	***$29,100***	**100.0%**	**3.7%**
Transportation and material moving occupations			
Driver/sales workers	$25,700	7.1%	0.5%
Truck drivers, heavy and tractor-trailer	$42,600	4.6%	0.3%
Truck drivers, light or delivery services	$33,300	16.4%	1.2%
Cleaners of vehicles and equipment	$21,700	8.8%	0.7%
Laborers and freight, stock, and material movers, hand	$25,800	32.6%	2.5%
Packers and packagers, hand	$20,600	12.5%	0.9%
All Other Transportation and material moving occupations (Avg. All Categories)	$32,000	18.2%	1.4%
Weighted Mean Annual Wage	***$27,900***	**100.0%**	**7.5%**
			86.9%

[1] Including occupations representing 4% or more of the major occupation group

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

[3] Occupation percentages are based on the 2009 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2009 Occupational Employment Survey data for San Diego County updated by the California Employment Development Department to 2010 wage levels.

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\retail 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 9
2009 NATIONAL MANUFACTURING WORKER DISTRIBUTION BY OCCUPATION
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Major Occupations (4% or more)	2009 National Manufacturing Industry Occupation Distribution	
Management occupations	369,559	8.5%
Business and financial operations occupations	253,373	*5.8%*
Computer and mathematical science occupations	271,050	*6.3%*
Architecture and engineering occupations	495,106	*11.4%*
Life, physical, and social science occupations	380,004	*8.8%*
Office and administrative support occupations	452,275	*10.4%*
Production occupations	1,468,900	*33.9%*
All Other Manufacturing Related Occupations	641,254	*14.8%*
INDUSTRY TOTAL	4,331,520	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: Manufacturing 7-29-10.xls; Major Occupations Matrix; 10/29/2010; dd

APPENDIX C TABLE 10
AVERAGE ANNUAL COMPENSATION, 2010
MANUFACTURING WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Manufacturing Workers
Management occupations			
Chief executives	$200,600	4.2%	0.4%
General and operations managers	$125,400	20.1%	1.7%
Marketing managers	$123,900	5.6%	0.5%
Sales managers	$112,400	4.7%	0.4%
Computer and information systems managers	$123,000	7.0%	0.6%
Financial managers	$126,600	6.5%	0.6%
Industrial production managers	$94,600	10.8%	0.9%
Engineering managers	$138,900	13.7%	1.2%
Natural sciences managers	$152,800	7.4%	0.6%
Managers, all other	$112,500	8.4%	0.7%
All Other Management occupations (Avg. All Categories)	$113,900	11.6%	1.0%
Weighted Mean Annual Wage	***$125,900***	**100.0%**	**8.5%**
Business and financial operations occupations			
Purchasing agents, except wholesale, retail, and farm products	$65,200	17.4%	1.0%
Compliance officers, except agriculture, construction, health and safety, and transpo	$62,100	5.0%	0.3%
Logisticians	$79,700	5.1%	0.3%
Management analysts	$94,900	9.7%	0.6%
Business operations specialists, all other	$66,900	22.5%	1.3%
Accountants and auditors	$71,200	15.1%	0.9%
Financial analysts	$91,900	5.1%	0.3%
All Other Business and financial operations occupations (Avg. All Categories)	$70,100	20.0%	1.2%
Weighted Mean Annual Wage	***$72,300***	**100.0%**	**5.8%**
Computer and mathematical science occupations			
Computer programmers	$80,700	6.2%	0.4%
Computer software engineers, applications	$96,400	20.7%	1.3%
Computer software engineers, systems software	$96,200	28.0%	1.8%
Computer support specialists	$49,100	7.7%	0.5%
Computer systems analysts	$81,500	10.6%	0.7%
Network and computer systems administrators	$73,800	7.5%	0.5%
Network systems and data communications analysts	$86,700	4.5%	0.3%
All Other Computer and mathematical science occupations (Avg. All Categories)	$79,900	14.7%	0.9%
Weighted Mean Annual Wage	***$85,600***	**100.0%**	**6.3%**
Architecture and engineering occupations			
Aerospace engineers	$104,000	6.1%	0.7%
Computer hardware engineers	$83,900	5.4%	0.6%
Electrical engineers	$96,500	9.4%	1.1%
Electronics engineers, except computer	$99,700	8.3%	0.9%
Industrial engineers	$82,000	14.1%	1.6%
Mechanical engineers	$86,200	11.8%	1.3%
Engineers, all other	$96,400	7.1%	0.8%
Electrical and electronic engineering technicians	$61,700	8.5%	1.0%
Industrial engineering technicians	$44,900	4.6%	0.5%
All Other Architecture and engineering occupations (Avg. All Categories)	$81,400	24.7%	2.8%
Weighted Mean Annual Wage	***$84,200***	**100.0%**	**11.4%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Manufacturing 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 10
AVERAGE ANNUAL COMPENSATION, 2010
MANUFACTURING WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Manufacturing Workers
Life, physical, and social science occupations			
Biochemists and biophysicists	$82,500	8.1%	0.7%
Medical scientists, except epidemiologists	$87,100	21.8%	1.9%
Chemists	$94,400	14.4%	1.3%
Market research analysts	$70,300	4.5%	0.4%
Biological technicians	$49,300	11.5%	1.0%
Chemical technicians	$50,800	8.3%	0.7%
Life, physical, and social science technicians, all other	$51,500	4.2%	0.4%
All Other Life, physical, and social science occupations (Avg. All Categories)	$72,800	27.2%	2.4%
Weighted Mean Annual Wage	***$74,300***	**100.0%**	**8.8%**
Office and administrative support occupations			
First-line supervisors/managers of office and administrative support workers	$54,500	5.8%	0.6%
Bookkeeping, accounting, and auditing clerks	$38,200	9.2%	1.0%
Customer service representatives	$37,500	9.4%	1.0%
Production, planning, and expediting clerks	$51,200	8.6%	0.9%
Shipping, receiving, and traffic clerks	$29,600	11.6%	1.2%
Stock clerks and order fillers	$25,000	6.0%	0.6%
Executive secretaries and administrative assistants	$45,400	14.1%	1.5%
Secretaries, except legal, medical, and executive	$35,400	7.6%	0.8%
Office clerks, general	$30,400	11.8%	1.2%
All Other Office and administrative support occupations (Avg. All Categories)	$36,300	15.9%	1.7%
Weighted Mean Annual Wage	***$38,000***	**100.0%**	**10.4%**
Production occupations			
First-line supervisors/managers of production and operating workers	$62,200	7.4%	2.5%
Electrical and electronic equipment assemblers	$27,700	8.0%	2.7%
Team assemblers	$25,800	11.2%	3.8%
Machinists	$42,000	9.0%	3.1%
Welders, cutters, solderers, and brazers	$42,800	4.5%	1.5%
Inspectors, testers, sorters, samplers, and weighers	$35,700	6.7%	2.3%
Packaging and filling machine operators and tenders	$25,200	5.4%	1.8%
All Other Production occupations (Avg. All Categories)	$33,600	47.7%	16.2%
Weighted Mean Annual Wage	***$35,200***	**100.0%**	**33.9%**
			85.2%

[1] Including occupations representing 4% or more of the major occupation group

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

[3] Occupation percentages are based on the 2009 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2009 Occupational Employment Survey data for San Diego County updated by the California Employment Development Department to 2010 wage levels.

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Manufacturing 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 11
2009 NATIONAL WAREHOUSING & STORAGE WORKER DISTRIBUTION BY OCCUPATION
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Major Occupations (3% or more)	2009 National Warehousing & Storage Industry Occupation Distribution	
Management occupations	264,210	5.9%
Business and financial operations occupations	168,440	*3.7%*
Computer and mathematical science occupations	145,260	*3.2%*
Sales and related occupations	1,110,410	*24.7%*
Office and administrative support occupations	1,071,220	*23.8%*
Installation, maintenance, and repair occupations	328,680	*7.3%*
Production occupations	228,040	*5.1%*
Transportation and material moving occupations	970,290	*21.6%*
All Other Warehousing & Storage Related Occupations	207,890	*4.6%*
INDUSTRY TOTAL	4,494,440	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Warehousing & Storage 7-29-10.xls Major Occupations Matrix; 10/29/2010; dd

APPENDIX C TABLE 12
AVERAGE ANNUAL COMPENSATION, 2010
WAREHOUSING & STORAGE WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total sing & Storage Workers
Management occupations			
Chief executives	$200,600	5.8%	0.3%
General and operations managers	$125,400	40.8%	2.4%
Sales managers	$112,400	18.4%	1.1%
Computer and information systems managers	$123,000	5.4%	0.3%
Financial managers	$126,600	5.8%	0.3%
Transportation, storage, and distribution managers	$91,400	5.1%	0.3%
All Other Management occupations (Avg. All Categories)	$113,900	18.7%	1.1%
Weighted Mean Annual Wage	***$123,400***	**100.0%**	**5.9%**
Business and financial operations occupations			
Wholesale and retail buyers, except farm products	$65,600	23.9%	0.9%
Purchasing agents, except wholesale, retail, and farm products	$65,200	7.7%	0.3%
Management analysts	$94,900	6.5%	0.2%
Business operations specialists, all other	$66,900	15.1%	0.6%
Accountants and auditors	$71,200	25.3%	0.9%
All Other Business and financial operations occupations (Avg. All Categories)	$70,100	21.4%	0.8%
Weighted Mean Annual Wage	***$70,000***	**100.0%**	**3.7%**
Computer and mathematical science occupations			
Computer programmers	$80,700	11.3%	0.4%
Computer software engineers, applications	$96,400	12.7%	0.4%
Computer software engineers, systems software	$96,200	13.4%	0.4%
Computer support specialists	$49,100	22.6%	0.7%
Computer systems analysts	$81,500	18.6%	0.6%
Network and computer systems administrators	$73,800	8.3%	0.3%
Network systems and data communications analysts	$86,700	5.4%	0.2%
All Other Computer and mathematical science occupations (Avg. All Categories)	$79,900	7.8%	0.3%
Weighted Mean Annual Wage	***$77,500***	**100.0%**	**3.2%**
Sales and related occupations			
First-line supervisors/managers of non-retail sales workers	$69,700	7.1%	1.8%
Parts salespersons	$32,800	4.6%	1.1%
Retail salespersons	$26,100	4.5%	1.1%
Sales representatives, wholesale and manufacturing, technical and scientific produc	$79,200	16.0%	3.9%
Sales representatives, wholesale and manufacturing, except technical and scientific	$65,300	57.8%	14.3%
All Other Sales and related occupations (Avg. All Categories)	$37,700	10.0%	2.5%
Weighted Mean Annual Wage	***$61,800***	**100.0%**	**24.7%**
Office and administrative support occupations			
First-line supervisors/managers of office and administrative support workers	$54,500	5.5%	1.3%
Bookkeeping, accounting, and auditing clerks	$38,200	10.2%	2.4%
Customer service representatives	$37,500	12.9%	3.1%
Order clerks	$31,800	5.9%	1.4%
Shipping, receiving, and traffic clerks	$29,600	12.9%	3.1%
Stock clerks and order fillers	$25,000	16.4%	3.9%
Secretaries, except legal, medical, and executive	$35,400	5.6%	1.3%
Office clerks, general	$30,400	11.6%	2.8%
All Other Office and administrative support occupations (Avg. All Categories)	$36,300	19.1%	4.5%
Weighted Mean Annual Wage	***$33,900***	**100.0%**	**23.8%**

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Warehousing & Storage 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 12
AVERAGE ANNUAL COMPENSATION, 2010
WAREHOUSING & STORAGE WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Warehousing & Storage Workers
Installation, maintenance, and repair occupations			
First-line supervisors/managers of mechanics, installers, and repairers	$65,000	7.8%	0.6%
Computer, automated teller, and office machine repairers	$34,400	10.9%	0.8%
Automotive service technicians and mechanics	$43,200	4.2%	0.3%
Bus and truck mechanics and diesel engine specialists	$47,500	10.4%	0.8%
Farm equipment mechanics	$38,100	6.8%	0.5%
Mobile heavy equipment mechanics, except engines	$53,900	10.0%	0.7%
Industrial machinery mechanics	$57,200	7.8%	0.6%
Maintenance and repair workers, general	$37,700	10.5%	0.8%
Installation, maintenance, and repair workers, all other	$38,300	4.5%	0.3%
All Other Installation, maintenance, and repair occupations (Avg. All Categories)	$45,400	27.1%	2.0%
Weighted Mean Annual Wage	***$46,000***	**100.0%**	**7.3%**
Production occupations			
First-line supervisors/managers of production and operating workers	$62,200	8.8%	0.4%
Team assemblers	$25,800	24.1%	1.2%
Machinists	$42,000	5.3%	0.3%
Welders, cutters, solderers, and brazers	$42,800	5.7%	0.3%
Inspectors, testers, sorters, samplers, and weighers	$35,700	7.9%	0.4%
Packaging and filling machine operators and tenders	$25,200	9.9%	0.5%
All Other Production occupations (Avg. All Categories)	$33,600	38.5%	2.0%
Weighted Mean Annual Wage	***$34,500***	**100.0%**	**5.1%**
Transportation and material moving occupations			
Driver/sales workers	$25,700	10.1%	2.2%
Truck drivers, heavy and tractor-trailer	$42,600	15.8%	3.4%
Truck drivers, light or delivery services	$33,300	15.6%	3.4%
Industrial truck and tractor operators	$35,900	9.2%	2.0%
Laborers and freight, stock, and material movers, hand	$25,800	32.7%	7.1%
Packers and packagers, hand	$20,600	6.9%	1.5%
All Other Transportation and material moving occupations (Avg. All Categories)	$32,000	9.6%	2.1%
Weighted Mean Annual Wage	***$30,800***	**100.0%**	**21.6%**
			95.4%

[1] Including occupations representing 4% or more of the major occupation group

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

[3] Occupation percentages are based on the 2009 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2009 Occupational Employment Survey data for San Diego County updated by the California Employment Development Department to 2010 wage levels.

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Warehousing & Storage 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 13
2009 NATIONAL EDUCATION WORKER DISTRIBUTION BY OCCUPATION
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Major Occupations (3% or more)	2009 National Education Industry Occupation Distribution	
Management occupations	547,880	4.4%
Education, training, and library occupations	7,393,850	*59.3%*
Food preparation and serving related occupations	462,710	*3.7%*
Building and grounds cleaning and maintenance occupations	542,260	*4.3%*
Office and administrative support occupations	1,324,660	*10.6%*
All Other Education Related Occupations	2,204,200	*17.7%*
INDUSTRY TOTAL	12,475,560	100.0%

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Education 7-29-10.xls; Major Occupations Matrix; 10/29/2010; dd

APPENDIX C TABLE 14
AVERAGE ANNUAL COMPENSATION, 2010
EDUCATION WORKER OCCUPATIONS
CITY OF SAN DIEGO JOBS-HOUSING ANALYSIS UPDATE
CITY OF SAN DIEGO

Occupation [1]	2010 Avg. Compensation [2]	% of Total Occupation Group [3]	% of Total Education Workers
Management occupations			
Chief executives	$200,600	4.4%	0.2%
General and operations managers	$125,400	8.3%	0.4%
Administrative services managers	$85,500	5.7%	0.3%
Education administrators, elementary and secondary school	$118,700	39.4%	1.7%
Education administrators, postsecondary	$111,500	18.9%	0.8%
Managers, all other	$112,500	5.0%	0.2%
All Other Management occupations (Avg. All Categories)	$113,900	18.2%	0.8%
Weighted Mean Annual Wage	***$118,400***	**100.0%**	**4.4%**
Education, training, and library occupations			
Elementary school teachers, except special education	$69,600	20.7%	12.3%
Middle school teachers, except special and vocational education	$68,600	8.9%	5.3%
Secondary school teachers, except special and vocational education	$67,500	14.7%	8.7%
Teachers and instructors, all other	$52,200	6.4%	3.8%
Teacher assistants	$28,800	14.7%	8.7%
All Other Education, training, and library occupations (Avg. All Categories)	$60,500	34.6%	20.5%
Weighted Mean Annual Wage	***$58,900***	**100.0%**	**59.3%**
Food preparation and serving related occupations			
First-line supervisors/managers of food preparation and serving workers	$31,800	10.0%	0.4%
Cooks, institution and cafeteria	$28,600	28.7%	1.1%
Food preparation workers	$21,600	15.4%	0.6%
Combined food preparation and serving workers, including fast food	$20,500	30.8%	1.1%
Counter attendants, cafeteria, food concession, and coffee shop	$20,900	8.2%	0.3%
All Other Food preparation and serving related occupations (Avg. All Categories)	$22,200	6.9%	0.3%
Weighted Mean Annual Wage	***$24,300***	**100.0%**	**3.7%**
Building and grounds cleaning and maintenance occupations			
First-line supervisors/managers of housekeeping and janitorial workers	$39,500	6.3%	0.3%
Janitors and cleaners, except maids and housekeeping cleaners	$25,700	83.7%	3.6%
Landscaping and groundskeeping workers	$27,200	7.5%	0.3%
All Other Building and grounds cleaning and maintenance occupations (Avg. All Cate	$26,400	2.6%	0.1%
Weighted Mean Annual Wage	***$26,700***	**100.0%**	**4.3%**
Office and administrative support occupations			
First-line supervisors/managers of office and administrative support workers	$54,500	4.4%	0.5%
Bookkeeping, accounting, and auditing clerks	$38,200	6.3%	0.7%
Executive secretaries and administrative assistants	$45,400	13.2%	1.4%
Secretaries, except legal, medical, and executive	$35,400	25.7%	2.7%
Office clerks, general	$30,400	25.4%	2.7%
Office and administrative support workers, all other	$28,300	5.8%	0.6%
All Other Office and administrative support occupations (Avg. All Categories)	$36,300	19.4%	2.1%
Weighted Mean Annual Wage	***$36,200***	**100.0%**	**10.6%**
			82.3%

[1] Including occupations representing 4% or more of the major occupation group

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

[3] Occupation percentages are based on the 2009 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on the 2009 Occupational Employment Survey data for San Diego County updated by the California Employment Development Department to 2010 wage levels.

Source: Bureau of Labor Statistics
Prepared by: Keyser Marston Associates, Inc.
Filename: \\Sf-fs1\wp\19\19035\012\Education 7-29-10.xls; Compensation; 10/29/2010; dd

APPENDIX C TABLE 15
WORKERS COMMUTING FROM MEXICO TO SAN DIEGO
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

Year	2009
Total North-Bound Border Crossings: San Ysidro and Otay Mesa[1]	40,790,000
(Less) North-Bound Truck Crossings[1]	(680,000)
Border Crossings Net of Trucks	40,110,000
Upper-end Estimate: Share of Crossings that are Commute Trips to Work[2]	50%
Upper-end Estimate of Border Crossings that are Commute Trips	20,055,000
Number of Annual Work Days[3]	245
Upper-end Estimate: Number of Workers Crossing the Border	81,857
San Diego Share of Total Employment in County[4]	55%
Upper-end Estimate: Number of Workers Crossing the Border for Work in City of San Diego	45,000

[1] U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data, based on the U.S. Department of Homeland Security, Customs and Border Protection.

[2] Estimate by Keyser Marston Associates.

[3] Assumes an average of 5 days per week and 49 weeks per year.

[4] SANDAG 2050 Regional Growth Forecast.

APPENDIX C TABLES 16 - 21

Garden Apartments

Affordability Gap Analysis
Housing Impact Fee Nexus Study

APPENDIX C TABLE 16
DEVELOPMENT PROFILE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

I.	**Product Type**		Garden Apartments		
	Construction Type		Type V		
	Tenure		Rental		
II.	**Site Area**		174,240	SF	
			4.0	Acres	
III.	**Number of Stories**		2 - 3	Stories	
IV.	**Unit Mix**				
		# of Units	Unit Size		
	Two Bedroom	100 Units	950	SF	
V.	**Density**		25.0	Units/Acre	
VI.	**Gross Building Area**				
	Residential Net Building Area		95,000	SF	95%
	Building Efficiency		5,000	SF	5%
	Total Gross Building Area (GBA)		100,000	SF	100%
VII.	**Floor Area Ratio (FAR)**		0.57		
VIII.	**Parking**				
	Type		Surface		
	Number of Parking Spaces		200	Spaces	
	Parking Ratio (Space/Unit)		2.00	Spaces/Unit	

APPENDIX C TABLE 17
DEVELOPMENT COSTS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

GARDEN APARTMENTS

	Low Income (80% AMI)			Very Low Income (50% AMI) (4% Tax Credits)		
	Totals	**Per Unit**	**Comments**	**Totals**	**Per Unit**	**Comments**
I. Acquisition Costs	$4,356,000	$43,560	$25 Per SF of Site Area	$4,356,000	$43,560	$25 Per SF of Site Area
II. Direct Costs[1]						
Off-Site Improvements	$523,000	$5,230	$3 Per SF of Site Area	$523,000	$5,230	$3 Per SF of Site Area
On-Sites/Landscaping	$1,742,000	$17,420	$10 Per SF of Site Area	$1,742,000	$17,420	$10 Per SF of Site Area
Shell Construction	$10,000,000	$100,000	$100 Per SF GBA	$10,000,000	$100,000	$100 Per SF GBA
Parking	$0	$0	Included above	$0	$0	Included above
Amenities/FF&E	$250,000	$2,500	Allowance	$250,000	$2,500	Allowance
Contingency	$626,000	$6,260	5.0% of Above Directs	$626,000	$6,260	5.0% of Above Directs
Subtotal Direct Costs	$13,141,000	$131,410	$131 Per SF GBA	$13,141,000	$131,410	$131 Per SF GBA
III. Indirect Costs						
Architecture & Engineering	$788,000	$7,880	6.0% of Directs	$788,000	$7,880	6.0% of Directs
Permits & Fees [2]	$2,000,000	$20,000	$20 Per SF GBA	$2,000,000	$20,000	$20 Per SF GBA
Legal & Accounting	$263,000	$2,630	2.0% of Directs	$263,000	$2,630	2.0% of Directs
Taxes & Insurance	$263,000	$2,630	2.0% of Directs	$263,000	$2,630	2.0% of Directs
Developer Fee	$526,000	$5,260	4.0% of Directs	$2,500,000	$25,000	19.0% of Directs
Marketing/Lease-Up	$150,000	$1,500	$2 Per SF GBA	$150,000	$1,500	$2 Per SF GBA
Contingency	$200,000	$2,000	5.0% of Above Indirects	$298,000	$2,980	5.0% of Above Indirects
Subtotal Indirect Costs	$4,190,000	$41,900	31.9% of Directs	$6,262,000	$62,620	47.7% of Directs
IV. Financing Costs						
Loan Fees	$233,000	$2,330	1.8% of Directs	$799,000	$7,990	6.1% of Directs
Interest During Construction	$1,049,000	$10,490	8.0% of Directs	$719,000	$7,190	5.5% of Directs
Interest During Lease-Up	$583,000	$5,830	4.4% of Directs	$399,000	$3,990	3.0% of Directs
TCAC/Syndication Fees	$0	$0	0.0% of Directs	$152,000	$1,520	1.2% of Directs
Operating Lease-Up/Reserves	$227,000	$2,270	1.7% of Directs	$280,000	$2,800	2.1% of Directs
Subtotal Financing Costs	$2,092,000	$20,920	15.9% of Directs	$2,349,000	$23,490	17.9% of Directs
V. Total Development Costs	**$23,779,000**	**$237,790**	**$238 Per SF GBA**	**$26,108,000**	**$261,080**	**$261 Per SF GBA**

[1] Excludes the payment of prevailing wages.
[2] Estimate. Not verified by KMA or the City.

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APPENDIX C TABLE 18
AFFORDABLE RENTS AND UNIT VALUES AND NET OPERATING INCOME
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

GARDEN APARTMENTS

	Low Income (80% of AMI)			Very Low Income (50% of AMI)		
I. Affordable Rent - Per Unit						
Family Size			3.0			3.0
Number of Bedrooms			2			2
Household Income			$56,560			$35,350
Income Allocation to Housing			30%			30%
Monthly Housing Cost			$1,414			$884
(Less) Utility Allowance [1]			($28)			($28)
Maximum Monthly Rent			**$1,386**			**$856**
		Total	**Per Unit**		**Total**	**Per Unit**
II. Net Operating Income (NOI)						
Units		100	1		100	1
Gross Scheduled Income (GSI)						
Monthly		$138,600	$1,386		$85,575	$856
Annual		$1,663,000	$16,630		$1,027,000	$10,270
Other Income	$15	$18,000	$180	$10	$12,000	$120
(Less) Vacancy	5.0%	($83,000)	($830)	5.0%	($51,000)	($510)
Effective Gross Income (EGI)		$1,598,000	$15,980		$988,000	$9,880
(Less) Operating Expenses [2]		($486,000)	($4,860)		($486,000)	($4,860)
(Less) Property Taxes		($160,000)	($1,600) [3]		$0	$0 [4]
Net Operating Income (NOI)		**$952,000**	**$9,520**		**$502,000**	**$5,020**

Source: Rents from San Diego Housing Commission Income and Rent Calculations

[1] Assumes San Diego Housing Commission (SDHC) 2010 utility allowances at $28/month

[2] Includes replacement reserves, monitoring fee, assessments, etc.

[3] Based on capitalized income approach: assumes a 1.25% tax rate and a 7.5% cap rate.

[4] Assumes development is tax-exempt based on partnership with non-profit developer.

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APPENDIX C TABLE 19
AFFORDABILITY GAP FOR RENTAL UNITS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	Low Income (80% AMI)		Very Low Income (50% AMI)	
	Total	**Per Unit**	**Total**	**Per Unit**
I. Net Operating Income (NOI)	$952,000	$9,520	$502,000	$5,020
II. Target Return on Investment (Low)	7.5%	7.5%	N/A	N/A
III. Sources of Funds (Very Low)				
Supportable Debt	N/A	N/A	$6,067,000	$61,000
Market Value of Tax Credits	N/A	N/A	$6,744,000	$67,000
Deferred Developer Fee	N/A	N/A	$250,000	$3,000
IV. Warranted Investment	$12,693,000	$127,000	$13,061,000	$131,000
V. (Less) Total Development Costs	($23,779,000)	($238,000)	($26,108,000)	($261,000)
VI. Affordability Gap	**($11,086,000)**	**($111,000)**	**($13,047,000)**	**($130,000)**

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APPENDIX C TABLE 20
FINANCING COSTS - ASSUMPTIONS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

GARDEN APARTMENTS

			Low Income (80% AMI)		Very Low Income (50% AMI)
I.	**Loan Fees**				
	Total Development Costs [1]		$19,423,000		
	Loan to Cost Ratio (LTC)		80.0%		
	Construction Loan Amount		$15,538,000		
	Eligible Basis				$19,848,000
	Add: Land				$4,356,000
	Aggregate Basis				$24,204,000
	Minimum Required Tax-Exempt Bond			55%	$13,312,000
	Construction Loan Fees:				
	Loan Amount		$15,538,000		$13,312,000
	Points / Issuance Costs		1.5		6.0
	Total Loan Fees		233,000		$799,000
II.	**Interest During Construction**				
	Interest Rate		7.5%		6.0%
	Term (Months)		18		18
	Average Balance Out		60.0%		60.0%
	Interest During Construction		$1,049,000		$719,000
III.	**Interest During Lease-Up**				
	Interest Rate		7.5%		6.0%
	Term (Months)		6		6
	Average Balance Out		100.0%		100.0%
	Interest During Lease-Up		$583,000		$399,000
IV.	**TCAC Fees**				
	Application Fee				$2,000
	Compliance Monitoring Fee			$410 /Unit	$41,000
	One Year of Tax Credit Value @			4.0%	$34,000
	Total TCAC Fees				$77,000
	Syndication Fees				$75,000
	Total TCAC/Syndication Fees				$152,000
V.	**Operating Lease-Up/Reserves**				
	Operating Expenses	3 months	$162,000		$122,000
	Debt Service	3 months			$109,000
	10% of Op Expenses	10.0%	$65,000		$49,000
	Total Operating Reserves		$227,000		$280,000

[1] Excluding acquisition costs.

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APPENDIX C TABLE 21
AFFORDABILITY GAP FOR RENTAL UNITS - ASSUMPTIONS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

GARDEN APARTMENTS

					Very Low - 50% AMI (4% Tax Credits)
(1)	Supportable Debt				
	NOI				$502,000
	Interest Rate				6.00%
	Term				30
	Debt Coverage				1.15
	Annual Debt Service				$436,522
	Supportable Debt				$6,067,000
(2)	Low Income Housing Tax Credits				
	Threshold Basis Limits	# of Units			
	Two Bedroom	100	$243,200	/Unit	$24,320,000
	Add: Prevailing Wage Impact		0.0%		$0
	Add: Basis Adjustment		14.0%	*	$3,404,800
	Add: Local Development Impact Fees		20%		$400,000
	Add: Affordability <50%	100	1.0%		$24,320,000
	Add: Affordability <35%	-	2.0%		$0
	Total Threshold Basis Limit				$52,444,800
	* Assumes 10% for projects with elevator service and 4% for projects with energy efficient features.				
	Estimate of Eligible Basis				
	Total Development Costs				$26,108,000
	(Less) Ineligible Costs				($6,260,000)
	Eligible Basis				$19,848,000
	Maximum Eligible Basis				$19,848,000
	(Less) Voluntary Credit Reduction			0.0%	$0
	Maximum Eligible Basis				$19,848,000
	Tax Credit Qualified Units			100.0%	$19,848,000
	Impacted Bonus Factor			130.0%	$25,802,400
	Tax Credit Rate			3.30%	$851,479
	Total Tax Credits			10	$8,514,792
	Limited Partner Share			99.00%	$8,429,644
	Present Market Value			80.0%	$6,744,000
(3)	Estimate of Deferred Developer Overhead Fee				
	Eligible Basis				$19,848,000
	(Less) Developer Fee				($2,500,000)
	Unadjusted Eligible Basis				$17,348,000
	Total Developer Overhead Fee			15%	$2,602,200
	Maximum Developer Overhead Fee				$2,602,200
	Maximum Developer Overhead Fee In Eligible Basis				$2,500,000
	Developer Overhead Fee				$2,500,000
	Portion Deferred				10%
	Total Deferred Developer Overhead Fee				$250,000

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APPENDIX C TABLES 22-27

Rental Units: Stacked Flats Over Podium Parking

Affordability Gap Analysis
Housing Impact Fee Nexus Study

APPENDIX C TABLE 22
DEVELOPMENT PROFILE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

I.	**Product Type**		Stacked Flats		
	Construction Type		Type V		
	Tenure		Rental		
II.	**Site Area**		87,120	SF	
			2.0	Acres	
III.	**Number of Stories**		4	Stories	
IV.	**Unit Mix**				
		# of Units	Unit Size		
	Two Bedroom	100 Units	800	SF	
V.	**Density**		50.0	Units/Acre	
VI.	**Gross Building Area**				
	Residential Net Building Area		80,000	SF	85%
	Building Efficiency		14,100	SF	15%
	Total Gross Building Area (GBA)		94,100	SF	100%
VII.	**Floor Area Ratio (FAR)**		1.08		
VIII.	**Parking**				
	Type		Podium/Subterranean		
	Number of Parking Spaces		175	Spaces	
	Parking Ratio (Space/Unit)		1.75	Spaces/Unit	

APPENDIX C TABLE 23
DEVELOPMENT COSTS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

STACKED FLATS OVER
PODIUM PARKING

	Low Income (80% AMI)			Very Low Income (50% AMI) (4% Tax Credits)		
	Totals	**Per Unit**	**Comments**	**Totals**	**Per Unit**	**Comments**
I. Acquisition Costs	$4,356,000	$43,560	$50 Per SF of Site Area	$4,356,000	$43,560	$50 Per SF of Site Area
II. Direct Costs[1]						
Off-Site Improvements	$436,000	$4,360	$5 Per SF of Site Area	$436,000	$4,360	$5 Per SF of Site Area
On-Sites/Landscaping	$1,307,000	$13,070	$15 Per SF of Site Area	$1,307,000	$13,070	$15 Per SF of Site Area
Shell Construction	$11,763,000	$117,630	$125 Per SF GBA	$11,763,000	$117,630	$125 Per SF GBA
Parking	$4,375,000	$43,750	$25,000 Per Space	$4,375,000	$43,750	$25,000 Per Space
Amenities/FF&E	$250,000	$2,500	Allowance	$250,000	$2,500	Allowance
Contingency	$907,000	$9,070	5.0% of Above Directs	$907,000	$9,070	5.0% of Above Directs
Subtotal Direct Costs	$19,038,000	$190,380	$202 Per SF GBA	$19,038,000	$190,380	$202 Per SF GBA
III. Indirect Costs						
Architecture & Engineering	$1,142,000	$11,420	6.0% of Directs	$1,142,000	$11,420	6.0% of Directs
Permits & Fees [2]	$1,882,000	$18,820	$20 Per SF GBA	$1,882,000	$18,820	$20 Per SF GBA
Legal & Accounting	$381,000	$3,810	2.0% of Directs	$381,000	$3,810	2.0% of Directs
Taxes & Insurance	$381,000	$3,810	2.0% of Directs	$381,000	$3,810	2.0% of Directs
Developer Fee	$762,000	$7,620	4.0% of Directs	$2,500,000	$25,000	4.0% of Directs
Marketing/Lease-Up	$150,000	$1,500	$2 Per SF GBA	$150,000	$1,500	$2 Per SF GBA
Contingency	$235,000	$2,350	5.0% of Above Indirects	$322,000	$3,220	5.0% of Above Indirects
Subtotal Indirect Costs	$4,933,000	$49,330	25.9% of Directs	$6,758,000	$67,580	35.5% of Directs
IV. Financing Costs						
Loan Fees	$328,000	$3,280	1.7% of Directs	$799,000	$7,990	4.2% of Directs
Interest During Construction	$1,966,000	$19,660	10.3% of Directs	$958,000	$9,580	5.0% of Directs
Interest During Lease-Up	$819,000	$8,190	4.3% of Directs	$399,000	$3,990	2.1% of Directs
TCAC/Syndication Fees	$0	$0	0.0% of Directs	$164,000	$1,640	0.9% of Directs
Operating Lease-Up/Reserves	$227,000	$2,270	1.2% of Directs	$280,000	$2,800	1.5% of Directs
Subtotal Financing Costs	$3,340,000	$33,400	17.5% of Directs	$2,600,000	$26,000	13.7% of Directs
V. Total Development Costs	**$31,667,000**	**$316,670**	**$337 Per SF GBA**	**$32,752,000**	**$327,520**	**$348 Per SF GBA**

[1] Excludes the payment of prevailing wages.
[2] Estimate. Not verified by KMA or the City.

APPENDIX C TABLE 24
AFFORDABLE RENTS AND UNIT VALUES AND NET OPERATING INCOME
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

STACKED FLATS OVER
PODIUM PARKING

	Low Income (80% of AMI)			Very Low Income (50% of AMI)		
I. Affordable Rent - Per Unit						
Family Size			3.0			3.0
Number of Bedrooms			2			2
Household Income			$56,560			$35,350
Income Allocation to Housing			30%			30%
Monthly Housing Cost			$1,414			$884
(Less) Utility Allowance [1]			($28)			($28)
Maximum Monthly Rent			**$1,386**			**$856**
		Total	**Per Unit**		**Total**	**Per Unit**
II. Net Operating Income (NOI)						
Units		100	1		100	1
Gross Scheduled Income (GSI)						
Monthly		$138,600	$1,386		$85,575	$856
Annual		$1,663,000	$16,630		$1,027,000	$10,270
Other Income	$15	$18,000	$180	$10	$12,000	$120
(Less) Vacancy	5.0%	($83,000)	($830)	5.0%	($51,000)	($510)
Effective Gross Income (EGI)		$1,598,000	$15,980		$988,000	$9,880
(Less) Operating Expenses [2]		($486,000)	($4,860)		($486,000)	($4,860)
(Less) Property Taxes		($160,000)	($1,600) [3]		$0	$0 [4]
Net Operating Income (NOI)		**$952,000**	**$9,520**		**$502,000**	**$5,020**

Source: Rents from San Diego Housing Commission Income and Rent Calculations

[1] Assumes San Diego Housing Commission (SDHC) 2010 utility allowances at $28/month

[2] Includes replacement reserves, monitoring fee, assessments, etc.

[3] Based on capitalized income approach: assumes a 1.25% tax rate and a 7.5% cap rate.

[4] Assumes development is tax-exempt based on partnership with non-profit developer.

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APPENDIX C TABLE 25
AFFORDABILITY GAP FOR RENTAL UNITS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

	Low Income (80% AMI)		Very Low Income (50% AMI)	
	Total	**Per Unit**	**Total**	**Per Unit**
I. Net Operating Income (NOI)	$952,000	$9,520	$502,000	$5,020
II. Target Return on Investment (Low)	7.5%	7.5%	N/A	N/A
III. Sources of Funds (Very Low)				
Supportable Debt	N/A	N/A	$6,067,000	$61,000
Market Value of Tax Credits	N/A	N/A	$9,027,000	$90,000
Deferred Developer Fee	N/A	N/A	$250,000	$3,000
IV. Warranted Investment	$12,693,000	$127,000	$15,344,000	$154,000
V. (Less) Total Development Costs	($31,667,000)	($317,000)	($32,752,000)	($328,000)
VI. Affordability Gap	**($18,974,000)**	**($190,000)**	**($17,408,000)**	**($174,000)**

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APPENDIX C TABLE 26
FINANCING COSTS - ASSUMPTIONS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

STACKED FLATS OVER
PODIUM PARKING

			Low Income (80% AMI)		Very Low Income (50% AMI)
I.	**Loan Fees**				
	Total Development Costs [1]		$27,311,000		
	Loan to Cost Ratio (LTC)		80.0%		
	Construction Loan Amount		$21,849,000		
	Eligible Basis				$19,848,000
	Add: Land				$4,356,000
	Aggregate Basis				$24,204,000
	Minimum Required Tax-Exempt Bond			55%	$13,312,000
	Construction Loan Fees:				
	Loan Amount		$21,849,000		$13,312,000
	Points / Issuance Costs		1.5		6.0
	Total Loan Fees		328,000		$799,000
II.	**Interest During Construction**				
	Interest Rate		7.5%		6.0%
	Term (Months)		24		24
	Average Balance Out		60.0%		60.0%
	Interest During Construction		$1,966,000		$958,000
III.	**Interest During Lease-Up**				
	Interest Rate		7.5%		6.0%
	Term (Months)		6		6
	Average Balance Out		100.0%		100.0%
	Interest During Lease-Up		$819,000		$399,000
IV.	**TCAC Fees**				
	Application Fee				$2,000
	Compliance Monitoring Fee			$410 /Unit	$41,000
	One Year of Tax Credit Value @			4.0%	$46,000
	Total TCAC Fees				$89,000
	Syndication Fees				$75,000
	Total TCAC/Syndication Fees				$164,000
V.	**Operating Lease-Up/Reserves**				
	Operating Expenses	3 months	$162,000		$122,000
	Debt Service	3 months			$109,000
	10% of Op Expenses	10.0%	$65,000		$49,000
	Total Operating Reserves		$227,000		$280,000

[1] Excluding acquisition costs.

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APPENDIX C TABLE 27
AFFORDABILITY GAP FOR RENTAL UNITS - ASSUMPTIONS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

STACKED FLATS OVER PODIUM PARKING

	Very Low - 50% AMI (4% Tax Credits)
(1) Supportable Debt	
NOI	$502,000
Interest Rate	6.00%
Term	30
Debt Coverage	1.15
Annual Debt Service	$436,522
Supportable Debt	$6,067,000

(2) Low Income Housing Tax Credits

Threshold Basis Limits		# of Units			
Two Bedroom		100	$243,200	/Unit	$24,320,000
Add: Prevailing Wage Impact			0.0%		$0
Add: Basis Adjustment			21.0%	*	$5,107,200
Add: Local Development Impact Fees			20%		$500,000
Add: Affordability	<50%	100	1.0%		$24,320,000
Add: Affordability	<35%	-	2.0%		$0
Total Threshold Basis Limit					$54,247,200

* Assumes 10% for projects with elevator service, 7% for projects with parking beneath residential units, and 4% for projects with energy efficient features.

Estimate of Eligible Basis			
Total Development Costs			$32,752,000
(Less) Ineligible Costs			($6,185,000)
Eligible Basis			$26,567,000
Maximum Eligible Basis			$26,567,000
(Less) Voluntary Credit Reduction	0.0%		$0
Maximum Eligible Basis			$26,567,000
Tax Credit Qualified Units	100.0%		$26,567,000
Impacted Bonus Factor	130.0%		$34,537,100
Tax Credit Rate	3.30%		$1,139,724
Total Tax Credits	10		$11,397,243
Limited Partner Share	99.00%		$11,283,271
Present Market Value	80.0%		$9,027,000

(3) Estimate of Deferred Developer Overhead Fee

Eligible Basis		$26,567,000
(Less) Developer Fee		($2,500,000)
Unadjusted Eligible Basis		$24,067,000
Total Developer Overhead Fee	15%	$3,610,050
Maximum Developer Overhead Fee		$3,610,050
Maximum Developer Overhead Fee In Eligible Basis		$2,500,000
Developer Overhead Fee		$2,500,000
Portion Deferred		10%
Total Deferred Developer Overhead Fee		$250,000

APPENDIX C TABLES 28 - 32

Ownership Units: Townhomes with Attached Garages

Affordability Gap Analysis
Housing Impact Fee Nexus Study

APPENDIX C TABLE 28
DEVELOPMENT PROFILE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

I.	**Product Type**			Townhome
	Construction Type			Type V - Wood-frame with attached garages
	Tenure			For-Sale
II.	**Site Area**		43,560	SF
			1.0	Acres
III.	**Number of Stories**		2	Stories
IV.	**Unit Mix**	# of Units	Unit Size	
	Two Bedroom	20 Units	1,200	SF
V.	**Density**		20.0	Units/Acre
VI.	**Gross Building Area (GBA)**			
	Residential		24,000	SF 100%
	Common Areas @		0	SF 0%
	Total Gross Building Area		24,000	SF 100%
VII.	**FAR**		0.55	
VIII.	**Parking**			
	Type			Attached Garage
	Parking Ratio - Residential		2.00	Spaces/Unit
	Total Number of Spaces		40	Spaces

APPENDIX C TABLE 29
DEVELOPMENT COSTS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

		Moderate Income (120% of AMI)			
		Totals	**Per Unit**		**Comments**
I.	**Acquisition Costs**	$1,089,000	$54,450	$25	Per SF of Site Area
II.	**Direct Costs**[1]				
	Off-Site Improvements	$131,000	$6,550	$3	Per SF of Site Area
	On-Sites/Landscaping	$436,000	$21,800	$10	Per SF of Site Area
	Shell Construction	$2,400,000	$120,000	$100	Per SF GBA
	Parking	$0	$0		Included above
	Amenities/FF&E	$20,000	$1,000		Allowance
	Contingency	$149,000	$7,450	5.0%	of Directs
	Subtotal Direct Costs	$3,136,000	$156,800	$131	Per SF GBA
III.	**Indirect Costs**				
	Architecture & Engineering	$188,000	$9,400	6.0%	of Directs
	Permits & Fees [2]	$480,000	$24,000	$20	Per SF GBA
	Legal & Accounting	$63,000	$3,150	2.0%	of Directs
	Taxes & Insurance	$63,000	$3,150	2.0%	of Directs
	Developer Fee	$125,000	$6,250	4.0%	of Directs
	Marketing/Sales	$40,000	$2,000		Allowance
	Contingency	$48,000	$2,400	5.0%	of Above Indirects
	Subtotal Indirect Costs	$1,007,000	$50,350	32.1%	of Directs
IV.	**Financing Costs**				
	Loan Fees	$56,000	$2,800	1.8%	of Directs
	Interest During Construction	$125,000	$6,250	4.0%	of Directs
	Interest During Sales	$37,000	$1,850	1.2%	of Directs
	HOA Dues on Unsold Units	$10,000	$500	0.3%	of Directs
	Subtotal Financing Costs	$228,000	$11,400	7.3%	of Directs
V.	**Total Development Costs**	**$5,460,000**	**$273,000**	**$228**	**Per SF GBA**

[1] Excludes the payment of prevailing wages.
[2] Estimate. Not verified by KMA or the City.

APPENDIX C TABLE 30
MAXIMUM AFFORDABLE PURCHASE PRICE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

		Moderate Income (120% of AMI)
I.	Family Size	3
	Number of Bedrooms	2
II.	Household Income (Rounded)	$81,550
	Income Allocation to Housing	35.0%
	Amount Available for Housing	$28,543
III.	Annual HOA [1]	$3,900
	Taxes & Assessment	1.25%
	Annual Taxes [2]	$3,638
IV.	Available for Mortgage	$21,005
V.	Interest Rate	6.5%
	Down Payment	5.0%
VI.	Supportable Mortgage	$276,935
	Add: Down Payment	$14,550
VII.	**Maximum Affordable Unit Price (Rounded)**	**$291,000**

[1] Estimate.

[2] Based on affordable sales price.

APPENDIX C TABLE 31
ESTIMATE OF AFFORDABILITY GAP
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

			Moderate Income (120% of AMI)
I.	Maximum Unit Price Per Unit		$291,000
II.	Gross Sales Proceeds	20 Units	$5,820,000
	(Less) Cost of Sale	3.0% of Value [1]	($175,000)
	(Less) Developer Profit	12.0% of Value [1]	($698,000)
	Net Sales Proceeds		$4,947,000
III.	(Less) Development Costs		($5,460,000)
IV.	**Affordability Gap**		**($513,000)**
	Per Unit		**($26,000)**

[1] Based on affordable sales price.

APPENDIX C TABLE 32
FINANCING COSTS - ASSUMPTIONS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

I. Construction Loan Fees

Total Development Costs [1]	$4,371,000
Loan to Cost Ratio (LTC)	85.0%
Construction Loan Amount	$3,715,000
Points	1.5
Loan Fees	$56,000

II. Interest During Construction

Construction Loan Amount	$3,715,000
Interest Rate	7.5%
Average Balance Out	60.0%
Term (Months)	9
Interest During Construction	$125,000

III. Interest During Sales

Interest Rate	7.5%
Term (Months)	4
Average Balance Out	40.0%
Interest During Sales	$37,000

IV. HOA Dues on Unsold Units

Monthly Dues	$325
Number of Units	20
Average Balance Out	40.0%
Term	4
HOA Dues on Unsold Units	$10,000

[1] Excluding acquisition costs.

APPENDIX C TABLES 33 - 37

Ownership Units: Stacked Flats Over Podium Parking

Affordability Gap Analysis
Housing Impact Fee Nexus Study

APPENDIX C TABLE 33
DEVELOPMENT PROFILE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

I.	**Product Type**			Stacked Flat
	Construction Type			Type V - Wood-frame over parking podium
	Tenure			For-Sale
II.	**Site Area**		43,560	SF
			1.0	Acres
III.	**Number of Stories**		3	Stories over parking podium
IV.	**Unit Mix**	# of Units	Unit Size	
	Two Bedroom	45 Units	1,000	SF
V.	**Density**		45.0	Units/Acre
VI.	**Gross Building Area (GBA)**			
	Residential		45,000	SF 85%
	Common Areas @		7,900	SF 15%
	Total Gross Building Area		52,900	SF 100%
VII.	**FAR**		1.21	
VIII.	**Parking**			
	Type		Structured	
	Parking Ratio - Residential		1.75	Spaces/Unit
	Total Number of Spaces		79	Spaces

APPENDIX C TABLE 34
DEVELOPMENT COSTS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

		Moderate Income (120% of AMI)			
		Totals	**Per Unit**		**Comments**
I.	**Acquisition Costs**	$2,178,000	$48,400	$50	Per SF of Site Area
II.	**Direct Costs**[1]				
	Off-Site Improvements	$218,000	$4,844	$5	Per SF of Site Area
	On-Sites/Landscaping	$653,000	$14,511	$15	Per SF of Site Area
	Shell Construction	$6,613,000	$146,956	$125	Per SF GBA
	Parking	$1,969,000	$43,756	$25,000	Per Space
	Amenities/FF&E	$113,000	$2,500		Allowance
	Contingency	$478,000	$10,622	5.0%	of Directs
	Subtotal Direct Costs	$10,044,000	$223,200	$190	Per SF GBA
III.	**Indirect Costs**				
	Architecture & Engineering	$603,000	$13,400	6.0%	of Directs
	Permits & Fees [2]	$1,058,000	$23,511	$20	Per SF GBA
	Legal & Accounting	$201,000	$4,467	2.0%	of Directs
	Taxes & Insurance	$201,000	$4,467	2.0%	of Directs
	Developer Fee	$402,000	$8,933	4.0%	of Directs
	Marketing/Sales	$113,000	$2,500		Allowance
	Contingency	$129,000	$2,867	5.0%	of Directs
	Subtotal Indirect Costs	$2,707,000	$60,156	27.0%	of Directs
IV.	**Financing Costs**				
	Loan Fees	$204,000	$4,533	2.0%	of Directs
	Interest During Construction	$611,000	$13,578	6.1%	of Directs
	Interest During Sales	$204,000	$4,533	2.0%	of Directs
	HOA Dues on Unsold Units	$35,000	$778	0.3%	of Directs
	Subtotal Financing Costs	$1,054,000	$23,422	10.5%	of Directs
V.	**Total Development Costs**	**$15,983,000**	**$355,178**	**$302**	**Per SF GBA**

[1] Excludes the payment of prevailing wages.
[2] Estimate. Not verified by KMA or the City.

APPENDIX C TABLE 35
AFFORDABLE PURCHASE PRICE
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

		Moderate Income (120% of AMI)
I.	Family Size	3
	Number of Bedrooms	2
II.	Household Income (Rounded)	$81,550
	Income Allocation to Housing	35.0%
	Amount Available for Housing	$28,543
III.	Annual HOA [1]	$3,900
	Taxes & Assessment	1.25%
	Annual Taxes [2]	$3,638
IV.	Available for Mortgage	$21,005
V.	Interest Rate	6.5%
	Down Payment	5.0%
VI.	Supportable Mortgage	$276,935
	Add: Down Payment	$14,550
VII.	**Maximum Affordable Unit Price (Rounded)**	**$291,000**

[1] Estimate.

[2] Based on affordable sales price.

APPENDIX C TABLE 36
ESTIMATE OF AFFORDABILITY GAP
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

			Moderate Income (120% of AMI)
I.	Maximum Unit Price Per Unit		$291,000
II.	Gross Sales Proceeds	45 Units	$13,095,000
	(Less) Cost of Sale	3.0% of Value [1]	($393,000)
	(Less) Developer Profit	12.0% of Value [1]	($1,571,000)
	Net Sales Proceeds		$11,131,000
III.	(Less) Development Costs		($15,983,000)
IV.	**Affordability Gap**		**($4,852,000)**
	Per Unit		**($108,000)**

[1] Based on affordable sales price.

APPENDIX C TABLE 37
FINANCING COSTS - ASSUMPTIONS
JOBS HOUSING NEXUS STUDY
CITY OF SAN DIEGO, CA

I. Construction Loan Fees

Total Development Costs [1]	$15,983,000
Loan to Cost Ratio (LTC)	85.0%
Construction Loan Amount	$13,586,000
Points	1.5
Loan Fees	$204,000

II. Interest During Construction

Construction Loan Amount	$13,586,000
Interest Rate	7.5%
Average Balance Out	60.0%
Term (Months)	12
Interest During Construction	$611,000

III. Interest During Sales

Interest Rate	7.5%
Term (Months)	6
Average Balance Out	40.0%
Interest During Sales	$204,000

IV. HOA Dues on Unsold Units

Monthly Dues	$325
Number of Units	45
Average Balance Out	40.0%
Term	6
HOA Dues on Unsold Units	$35,000

[1] Excluding acquisition costs.

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