

The Next Decade: Industries and Occupations for the Los Angeles Workforce



FINAL REPORT



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The City of Los Angeles Workforce Investment Board would like to thank Labor Secretary Hilda Solis for her support of the City's workforce development efforts.

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This report was prepared by the Economic and Policy Consulting Practice of the Los Angeles County Economic Development Corporation (LAEDC).

As the Southern California region's premier economic development organization, the mission of the LAEDC is to attract, retain and grow businesses and jobs in the regions of Los Angeles County, as well as to identify trends and to effect positive change on the local economy.

The LAEDC Consulting Practice offers unbiased, fee-based custom economic and policy research for public agencies and private firms. The Consulting Practice focuses on economic impact studies, regional industry analyses, economic forecasts and issue studies, particularly in water, transportation, infrastructure and environmental policy. Projects are selected based on their relevance to the *L.A. County Strategic Plan for Economic Development* and the potential for the research to shape policy that supports the LAEDC mission.



ANTONIO R. VILLARAIGOSA
MAYOR

February 14, 2011

Dear Friends,

With unemployment in the City of Los Angeles at 14 percent at the end of 2010, it is vitally important that we do everything possible to create a business environment that encourages job growth and fund initiative that provide workers with the skills required for these new employment opportunities. "The Next Decade: Industries and Occupations for the Los Angeles Workforce" is a critical step in the process.

This report describes the major industry clusters in the Southland that will likely expand their operations and add living wage jobs over the next 10 years. The City of Los Angeles Workforce Investment Board (WIB) and its myriad partners (community colleges, non-profit agencies, employer associations, economic development organizations, labor unions, etc.) will now use the report's findings to adopt strategic workforce development policies and undertake joint workforce development programs.

I want to commend the WIB for its foresight in commissioning the report, which was prepared by the Los Angeles Economic Development Corporation.

I also want to comment the WIB for its efforts to date in overseeing an integrated workforce development delivery system of 18 WorkSource/One-Stop Career Centers, 13 OneSource/Youth Opportunity Centers, and an online career and hiring website (JobsLA.org).

This system has assisted over 171,000 jobseekers in securing employment and advancing their careers, 15,700 youth through summer job, internship and work experience placements, and 1,400 businesses and employers with staffing and recruitment services.

For additional information on the City's workforce development system and to view the full report, please visit www.wib.lacity.org.

Very truly yours,

ANTONIO R. VILLARAIGOSA
Mayor



January 2, 2011

Dear Colleagues:

On behalf of the City of Los Angeles Workforce Investment Board (WIB), I'm pleased to present the report, *The Next Decade: Industries and Occupations for the Los Angeles Workforce*.

Produced by the Los Angeles County Economic Development Corporation, *The Next Decade: Industries and Occupations for the Los Angeles Workforce* provides an industry cluster analysis for the Los Angeles County in general and the WIB's Service Delivery Area. The report provides a basis upon which the WIB can focus its efforts and where to invest its limited resources for sector training for Los Angeles workers.

This report provides the foundation for which we will use to analyze and forecast population growth and employment projections for 2010 through 2020, identify promising industries for job growth and retention, export-orientation and industries that serve the population, and provide the critical intelligence for these strategic decisions.

We all wait with great anticipation when our economy will recover from this economic malaise. While we can't predict when or how quickly the national economic recovery will happen, we can prepare ourselves for future opportunities. Here locally, we must be proactive and provide our workforce with the requisite training and education they need to compete for the jobs of tomorrow; we must invest in our workforce if we are to remain a globally competitive region.

Together – business, labor, education and government – must work in partnership to achieve our mission to develop policy and strategy to ensure that the business community has access to a trained workforce and workers have access to quality jobs.

Thank you for your continued support and interest in workforce development. For more information on the WIB's efforts, please visit www.wib.lacity.org. We look forward to working with the community to achieve our shared goals.

Sincerely,

A handwritten signature in black ink that reads "Charles Woo". The signature is written in a cursive, flowing style.

Charles Woo, Chair

City of Los Angeles Workforce Investment Board

Executive Summary

In partnership with Mayor Antonio Villaraigosa and the Los Angeles City Council, the City of Los Angeles Workforce Investment Board (WIB) provides vision, coordination and direction for the City's workforce development activities. The Board develops policy and strategy to ensure businesses have access to a trained workforce and workers have access to quality jobs.

Funded primarily through the federal U.S. Department of Labor Workforce Investment Act (WIA), the WIB oversees the City's \$45 million workforce delivery system of 18 WorkSource Centers for Adults and 13 OneSource Centers for youth. These career centers offer a wide range of employment-related services to both job seekers and employers.

A primary strategy of the WIB is to develop and invest in sector-based training programs. By commissioning the Los Angeles County Economic Development Corporation (LAEDC) to create *The Next Decade: Industries and Occupations for the Los Angeles Workforce*, the WIB seeks to identify regional industries that are promising to target for job retention and expansion efforts and investment in sector training programs.

This report provides an economic overview of Los Angeles County in general and of the City WIB Service Delivery Area (SDA) in particular to provide a basis upon which the board can focus its efforts. We provide an industry cluster analysis of the economic base of the region, highlighting differences between Los Angeles County and the City WIB SDA, and prepare a ten-year employment forecast at the county level, highlighting those industries which are expected to grow.

Using the forecast and data on each industry's presence and strength in the City WIB SDA, we identify those industries which are most promising to target for job retention and expansion efforts. For each identified target industry, we provide detailed occupational data.

Because the City WIB SDA covers a very large geographic area encompassing a variety of socio-economically diverse communities, we identify the following sub-regions, defined by contiguous zip codes: the Valley, Hollywood/West Los Angeles City, Downtown, East Los Angeles City, South Los Angeles City, and Harbor Gateway.¹

Population and Income (2010) Los Angeles County and City of Los Angeles WIB SDA Sub-Regions					
	Population *	Households	Average Household Size	Median Household Income	Per Capita Income
The Valley	1,652,267	550,934	2.96	\$61,073	\$29,331
Hollywood/ West LA	1,082,130	454,770	2.32	48,011	31,387
South City of LA	814,082	223,932	3.59	33,527	13,241
East City of LA	502,828	142,234	3.48	41,498	15,890
Harbor Gateway	267,973	85,558	3.08	49,585	19,849
Downtown LA	107,641	36,239	2.4	18,142	16,250
City of Los Angeles WIB SDA	4,426,921	1,493,667	2.9	\$49,009	\$24,456
Los Angeles County	10,240,505	3,292,577	3.06	\$54,755	\$24,448

* The population of the WIB SDA exceeds the population of the City proper since the service delivery area extends beyond the City's boundaries.
Source: ESRI BAO

Household size is on average smaller in the City WIB SDA than in Los Angeles County but ranges substantially across sub-regions, from rather small households in Hollywood/West LA City and downtown to larger households in South Los Angeles.

Median household income is approximately ten percent lower in the City WIB SDA than in Los Angeles County, but per capita income is approximately the same.

Compared to Los Angeles County, the share of the population with at least a high school diploma (or higher) is slightly smaller in the WIB SDA, but the region has a relatively larger share with a bachelor's degree or higher.

Educational Attainment of Population 25 Years and Older (2010) Los Angeles County and City of Los Angeles WIB SDA				
	Los Angeles County		City of LA WIB SDA	
	Number	% of total	Number	% of total
No High School Diploma	1,546,460	24.3	756,537	27.4
High School Graduate	1,431,907	22.5	579,827	21.0
Some College, No Degree	1,126,433	17.7	452,818	16.4
Associate Degree	432,754	6.8	162,904	5.9
Bachelor's Degree	1,196,438	18.8	530,128	19.2
Graduate / Professional Degree	623,675	9.8	281,630	10.2
Total *	6,364,031	100	2,761,083	100

* May not sum due to rounding
Source: ESRI BAO

¹ Socio-economic and demographic data for these sub-regions, along with maps showing their geographic definition, appear in the Appendix.

Industry Clusters

We review the overall size, performance and characteristics of the economic base of Los Angeles County by analyzing its industrial structure as organized into industry clusters.

We identify fifteen export-oriented industry clusters that are the key drivers of the regional economy, and six population-serving industry clusters which, while not traditionally considered targets for development, are significant employment generators.

Cluster Employment (2008) Los Angeles County and City of Los Angeles WIB SDA				
	Los Angeles County		City of LA WIB SDA	
	Number	% of total	Number	% of total
Export-Oriented Industry Clusters				
Health Services and Biomedical	364,157	8.7	148,750	7.9
Professional and Business Services	267,898	6.4	142,389	7.5
Entertainment	262,011	6.3	155,987	8.2
Wholesale Trade	159,127	3.8	52,664	2.8
Technology	151,009	3.6	47,489	2.5
Higher Education	130,697	3.1	63,761	3.4
Materials and Machinery	120,262	2.9	32,933	1.7
Goods Movement	115,198	2.8	57,946	3.1
Fashion Design, Manufacturing, Wholesaling	104,175	2.5	59,263	3.1
Financial Services	103,973	2.5	50,503	2.7
Tourism and Hospitality	84,436	2.0	36,699	1.9
Food Products	63,544	1.5	22,596	1.2
Furniture and Home Furnishings	35,720	0.9	11,024	0.6
Automotive Manufacturing and Wholesaling	22,688	0.5	6,503	0.3
Jewelry Manufacturing and Wholesaling	6,567	0.2	5,306	0.3
Export-Oriented Clusters Total	1,991,462	47.8	893,812	47.2
Population-Serving Industry Clusters				
Retail Trade	418,264	10.0	160,370	8.5
Food Services and Drinking Places	286,974	6.9	121,356	6.4
Construction	145,652	3.5	56,523	3.0
Real Estate	54,226	1.3	26,314	1.4
Repair and Maintenance	40,948	1.0	16,479	0.9
Waste Management and Remediation Services	9,016	0.2	2,874	0.2
Population-Serving Clusters Total	955,080	20.6	383,916	20.3
Non-classified industries	1,222,157	31.6	614,970	32.5
Total *	4,168,699	100.0	1,892,698	100.0

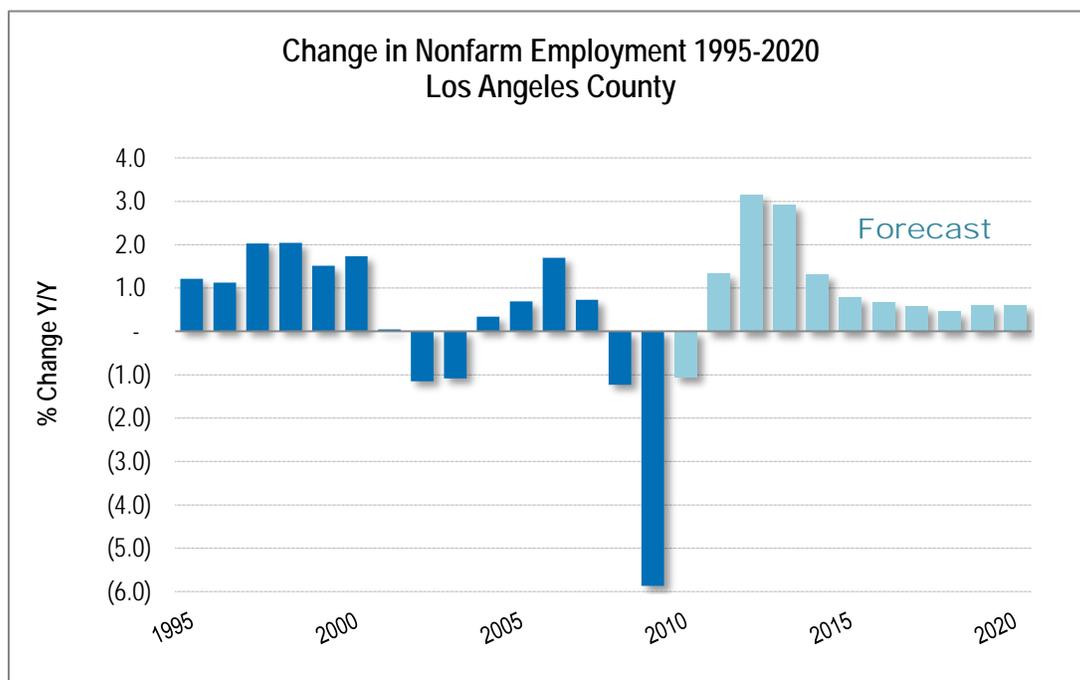
* May not sum due to rounding
Sources: CA EDD; LAEDC

At the county level, the Health Services and Biomedical industry cluster is the largest, employing 364,157 people in 2008. In terms of relative size, this was not the largest cluster in the City of LA WIB SDA, though it employed 148,750 people. The largest cluster in the WIB SDA was the Entertainment cluster, employing 155,987 people.

For each industry cluster, we report the number of establishments, the employment, the total payroll and the total output in Los Angeles County in 2008 (the most recent year for which data is available). We provide a breakdown of employment in the cluster by industry (or sub-industry) and we report the average annual wage by industry (or sub-industry) at the county level. In addition, we report the number of establishments, the total employment and total output in each cluster in the City WIB SDA, and employment by industry (or sub-industry).

Employment Forecast

We present population and employment projections for Los Angeles County. Using these projections, we estimate job creation potentials for the county and for the City WIB SDA, and discuss the presence of county industry employment in the City WIB SDA.



Sources: California Employment Development Department; Moody's Economy.com; LAEDC

Our nonfarm employment forecast for Los Angeles County can be described as follows:

- The county's economy entered a severe recession in December of 2007, with an employment decline of 1.2 percent in 2008 and an estimated 5.9 percent decline in 2009. Employment is expected to continue to fall in early 2010 before recovering, with a year-over-year loss of 1.1 percent.
- Employment will recover in 2011 with a growth rate of 1.3 percent, and rebound with 3.2 percent growth in 2012 and 2.9 percent in 2013.

- After 2013, economic growth is forecast to continue to be positive but to decelerate from the rapid pace of the post-recession recovery period. In 2014, the forecast growth in employment is 1.3 percent, falling to 0.8 percent in 2015.
- Over the longer term, the economy in Los Angeles County is forecast to grow at its trend rate of approximately 0.6 percent.

Most industry sectors will follow this general contour of post-recession recovery followed by moderation. However, there are differences among industries. Recovery strength in many cases is determined by the magnitude of the industry's decline during the recession. Broadly, Los Angeles County's economic growth over the forecast period will be powered by the post-recession recovery, led in large part by service-providing industries such as professional and business services, educational and health services, and leisure and hospitality, as well as by construction.

Employment Growth in Los Angeles County by Sector: History and Forecast						
Industry Sector	Annual Average Percent Change					
	1995-00	2000-05	2005-10 ¹	2010 ¹ -15	2015-20	2010 ¹ -20
Total Nonfarm Payroll Employment	1.7	-0.2	-1.2	1.9	0.6	1.2
Goods Producing Industries	0.1	-3.5	-5.1	1.6	-0.3	0.6
Natural Resources and Mining	-4.0	1.8	2.6	0.7	-2.1	-0.7
Construction	3.1	2.5	-7.1	3.1	1.5	2.3
Manufacturing - Durable Goods	-0.2	-5.1	-4.6	2.0	-0.4	0.8
Manufacturing - Nondurable Goods	-0.8	-5.1	-4.5	0.2	-1.6	-0.7
Service Providing Industries	2.2	0.5	-0.6	2.2	0.7	1.4
Wholesale Trade	1.3	0.0	-1.9	2.0	0.1	1.0
Retail Trade	1.6	1.1	-1.5	1.2	-0.3	0.4
Transportation, Warehousing, Utilities	2.4	-1.5	-1.7	0.8	-0.8	0.0
Information	5.0	-3.2	0.4	0.9	0.3	0.6
Financial Activities	0.1	1.7	-2.4	2.1	1.1	1.6
Professional and Business Services	2.6	-0.4	-2.0	3.1	1.0	2.1
Educational and Health Services	2.3	2.5	2.3	2.7	1.4	2.1
Leisure and Hospitality	2.2	1.8	0.3	2.8	1.2	2.0
Other Services	1.3	0.6	-1.0	1.6	0.0	0.8
Government	1.6	0.1	-0.0	0.6	0.7	0.7

¹ Employment data for 2009 included in this period are preliminary; data for 2010 are forecasts.

Sources: California Employment Development Department; Moody's Economy.com; LAEDC

Service-providing industries are in aggregate expected to grow at an average annual rate of 1.4 percent between 2010 and 2020, higher than goods-producing industries which will grow at an average annual rate of 0.6 percent.

Target Industries

To identify potential target industries in the City WIB SDA for job retention and expansion efforts, we derive two composite indices: the first composite index is indicative of industry performance in Los Angeles County using four criteria:

- Projected employment growth rate in Los Angeles County from 2010 to 2020
- Industry size in Los Angeles County, as measured by employment level in 2008
- Average wages in Los Angeles County in 2008
- Projected job creation in Los Angeles County from 2010 to 2020

Our second composite index is indicative of industry performance in the City WIB SDA using three criteria:

- Industry size in the City WIB SDA, as measured by employment level in 2008
- Job creation in the City WIB SDA from 2001 to 2008
- Relative concentration of the industry in the City WIB SDA, as measured by the location quotient in 2008

Each of these measures provides an indication of whether an industry has the potential to be an attractive target for job retention. For the purposes of this exercise, we evaluate only private industries.

Using our two indices, we identify industries that are most likely to be good targets for job retention activities, including both export-oriented and population-serving industries. Several are large industries with good growth potential, but the list also contains smaller industries with a relatively strong concentration in the City WIB SDA or those that we believe have growth potential.

Identified Target Industries	
NAICS Industry Sector	NAICS
Professional and Technical Services	541
Ambulatory Health Care Services	621
Hospitals	622
Nursing and Residential Care Facilities	623
Social Assistance	624
Motion Picture and Sound Recording Industries	512
Manufacturing: Fabricated Metal Products	332
Manufacturing: Machinery	333
Manufacturing: Computer and Electronic Products	334
Manufacturing: Electrical Equipment and Appliances	335
Wholesalers: Durable Goods	423
Wholesalers: Nondurable Goods	424
Electronic Markets and Agents and Brokers	425
Warehousing and Storage	493
Construction of Buildings	236
Heavy and Civil Engineering Construction	237
Specialty Trade Contractors	238
Administrative and Support Services	561
Waste Management and Remediation	562
Educational Services	611
Repair and Maintenance	811

Occupational Analysis

For each of the twenty-one target industries, we examine the occupational composition by *major* occupational group, including broad descriptive categories such as production occupations, management occupations and business and financial operations occupations. We also report *detailed* occupations for those major occupational groups with sufficient employment share. Education and training requirements are provided, along with median annual earnings in Los Angeles County for each detailed occupation and the total number of people employed in this occupation across all industries in Los Angeles County.

The largest occupational group in Los Angeles County is office and administrative support occupations, making up more than 19 percent of all employment in the county in 2009, or 763,810 jobs. Sales and related occupations is the second-largest group with ten percent of all jobs. The highest-paid on average were legal occupations, followed closely by management occupations.

Employment by Major Occupational Group (May 2009) Los Angeles County				
SOC	Occupation Group Title	Employment	% of total employment	Median annual earnings
11-0000	Management occupations	228,020	5.8	\$ 117,780
13-0000	Business and financial operations occupations	207,570	5.2	71,190
15-0000	Computer and mathematical science occupations	86,850	2.2	80,000
17-0000	Architecture and engineering occupations	73,990	1.9	85,430
19-0000	Life, physical and social science occupations	38,360	1.0	69,080
21-0000	Community and social services occupations	56,740	1.4	49,910
23-0000	Legal occupations	39,990	1.0	122,050
25-0000	Education, training and library occupations	264,540	6.7	55,950
27-0000	Arts, design, entertainment, sports and media occupations	118,260	3.0	75,420
29-0000	Healthcare practitioners and technical occupations	175,960	4.4	79,110
31-0000	Healthcare support occupations	96,640	2.4	28,200
33-0000	Protective service occupations	110,710	2.8	51,220
35-0000	Food preparation and serving related occupations	318,080	8.0	21,490
37-0000	Building and grounds cleaning and maintenance occupations	101,600	2.6	26,740
39-0000	Personal care and service occupations	94,860	2.4	26,460
41-0000	Sales and related occupations	393,490	9.9	37,990
43-0000	Office and administrative support occupations	763,810	19.3	35,910
45-0000	Farming, fishing and forestry occupations	3,010	0.1	25,310
47-0000	Construction and extraction occupations	116,720	3.0	48,870
49-0000	Installation, maintenance and repair occupations	119,020	3.0	45,950
51-0000	Production occupations	283,250	7.2	30,850
53-0000	Transportation and material moving occupations	270,740	6.8	32,030

Source: BLS: Occupational Employment Statistics Survey, May 2009

We report the top 50 detailed occupations in Los Angeles County by employment, the top five of which are listed here, along with the median annual earnings in Los Angeles County.

Because each detailed occupation may be common to many industries, the exhibit provides a list of those industries which employ each occupation (listed in order of employment in May of 2009). Industries which are among our identified targets are *italicized*.

Top 5 Detailed Occupations by Employment (May 2009) Los Angeles County					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
1	41-2031	Retail salespersons	Retail stores; motor vehicle dealers; florists; <i>employment services</i> ; electronic shopping and mail-order houses; <i>wholesalers</i> ; telecommunications carriers; museums and historical sites.	114,890	\$ 20,730
2	43-9061	Office clerks, general	Local and state government; <i>colleges and universities</i> ; elementary and secondary schools; <i>temporary employment services</i> ; <i>hospitals</i> ; real estate offices; <i>offices of physicians</i> ; <i>accounting services</i> ; <i>legal services</i> ; insurance agencies; management of companies; insurance carriers; <i>management and technical consulting services</i> ; <i>construction</i> ; <i>computer systems design services</i> ; <i>architectural and engineering services</i> ; banks and credit unions; <i>service to buildings</i> .	107,170	27,060
3	41-2011	Cashiers	Retail stores; restaurants; movie theatres; amusement parks and arcades; <i>automotive repair and maintenance</i> ; local government; hospitals; spectator sports; performing arts companies.	92,130	19,130
4	53-7062	Laborers and freight, stock, and material movers, hand	<i>Temporary employment agencies</i> ; <i>warehousing and storage</i> ; couriers; <i>wholesalers</i> ; general and specialized freight trucking; building material dealers; <i>motion picture and video industries</i> ; grocery stores; furniture stores; building equipment contractors.	73,940	22,560
5	11-1021	General and operations managers	Management of companies; <i>management and technical consulting services</i> ; <i>computer systems design services</i> ; local government; <i>architectural and engineering services</i> ; grocery stores; <i>electronic markets</i> ; <i>construction</i> ; <i>administrative services</i> ; restaurants; <i>accounting services</i> ; retail stores; insurance agencies; <i>advertising services</i> .	67,790	108,670

The single largest detailed occupation is retail salespersons, with 114,890 employed in Los Angeles County in May of 2009 with median annual earnings of \$20,730. As shown, this occupation is common to many industries. The second largest detailed occupation is general office clerks, with almost 107,170 employed earning median annual earnings of \$27,060.

For each identified target industry, we provide data sheets which report the employment in Los Angeles County and in the City WIB SDA in 2008, and the average annual earnings. We provide a breakdown of the occupational makeup of each industry by major group, and for each major group with a significant share of the industry's employment, we provide a list of the detailed occupations therein, including: the education and training required; the median annual earnings in Los Angeles County; and the total number of persons employed in Los Angeles County in that detailed occupational group in 2009.

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In partnership with Mayor Antonio Villaraigosa and the Los Angeles City Council, the City of Los Angeles Workforce Investment Board (WIB) provides vision, coordination and direction for the City's workforce development activities. The Board develops policy and strategy to ensure businesses have access to a trained workforce and workers have access to quality jobs.

Funded primarily through the federal U.S. Department of Labor Workforce Investment Act (WIA), the WIB oversees the City's \$45 million workforce delivery system of 18 WorkSource Centers for Adults and 13 OneSource Centers for youth. These career centers offer a wide range of employment-related services to both job seekers and employers.

A primary strategy of the WIB is to develop and invest in sector-based training programs. By commissioning the Los Angeles County Economic Development Corporation (LAEDC) to create *The Next Decade: Industries and Occupations for the Los Angeles Workforce*, the WIB seeks to identify regional industries that are promising to target for job retention and expansion efforts and investment in sector training programs.

This report provides an economic overview of Los Angeles County in general and of the City WIB Service Delivery Area (SDA) in particular to provide a basis upon which the board can focus its efforts.

In Section 2, we review the current economic structure of the county by providing an industry cluster analysis of the economic base of the region. This analysis is extended to the City WIB SDA to highlight differences where appropriate.

Section 3 presents a ten-year industry forecast for Los Angeles County which highlights those industries which are expected to grow.

Together with the industrial structure of the region, the forecast and the relative strength of each industry in the City WIB SDA provide metrics from which we identify those industries which are most promising to target for job retention and expansion efforts. This analysis is presented in Section 4.

Finally, Section 5 provides detailed occupational data for each of the identified industries.

In the following pages, we first review a selection of demographic and socioeconomic data specific to the City WIB SDA and its sub-regions as compared to the county as a whole.

City of Los Angeles Workforce Investment Board Service Delivery Area

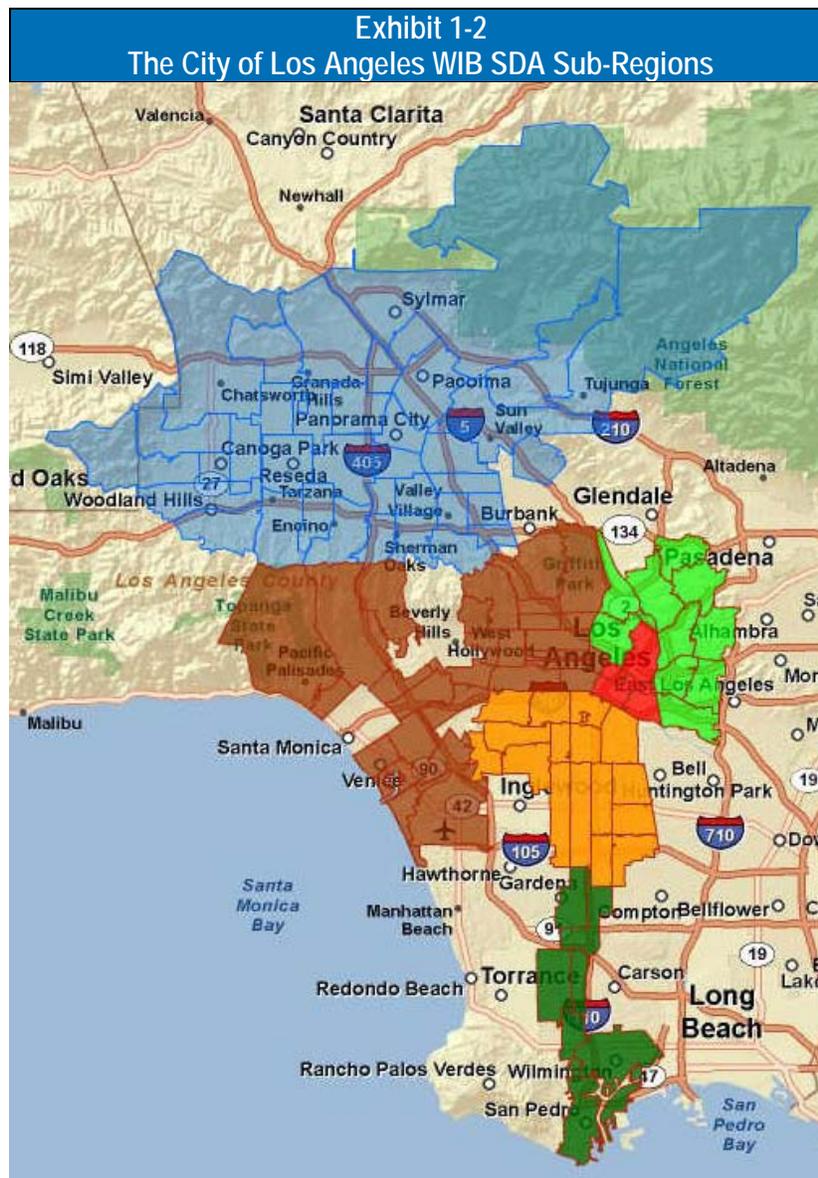
The City of Los Angeles Workforce Investment Board service delivery area (City WIB SDA) stretches across vast areas of Los Angeles County, from the Port of Los Angeles in the south to Sylmar in the north, and from West Hills in the west to the I-710 in the east. The service delivery area is shown in Exhibit 1-1.



Source: City of LA WIB; ESRI

The total population of the City of Los Angeles WIB SDA in 2010 is 4,426,921, accounting for approximately 43 percent of the population of Los Angeles County. **The population of the City WIB SDA exceeds the population of the City proper since the service delivery area is defined by zip codes and extends beyond the City's boundaries.**

Because the City WIB SDA covers a very large, geographic area encompassing a variety of socio-economically diverse communities, we identify the following sub-regions, which are shown in Exhibit 1-2²: (i) The Valley; (ii) Hollywood and West Los Angeles City; (iii) Downtown Los Angeles; (iv) East Los Angeles City; (v) South Los Angeles City; and (vi) Harbor Gateway.



Source: City of LA WIB; ESRI

² Socio-economic and demographic data for Regional Planning Districts and City Council Districts are presented in the Appendix.

Demographic and household economic data are shown in Exhibit 1-3 for each of the sub-regions in the City WIB SDA, for the WIB SDA as a whole, and for Los Angeles County.

The largest sub-region is the Valley, with a population of over 1.5 million, followed by Hollywood/West Los Angeles City (population 1.15 million), South Los Angeles City (814,082) and East Los Angeles City (502,828), Harbor Gateway (267,973) and downtown Los Angeles (107,641).

Exhibit 1-3 Population and Income (2010) Los Angeles County and City of Los Angeles WIB SDA Sub-Regions					
	Population	Households	Average Household Size	Median Household Income	Per Capita Income
The Valley	1,583,400	520,750	3.00	\$ 59,405	\$ 27,082
Hollywood/West LA City	1,150,997	484,954	2.32	50,413	34,359
South Los Angeles City	814,082	223,932	3.59	33,527	13,241
East Los Angeles City	502,828	142,234	3.48	41,498	15,890
Harbor Gateway	267,973	85,558	3.08	49,585	19,849
Downtown	107,641	36,239	2.40	18,142	16,250
City of LA WIB SDA	4,426,921	1,493,667	2.90	\$ 49,009	\$ 24,456
Los Angeles County	10,240,505	3,292,577	3.06	54,755	24,448

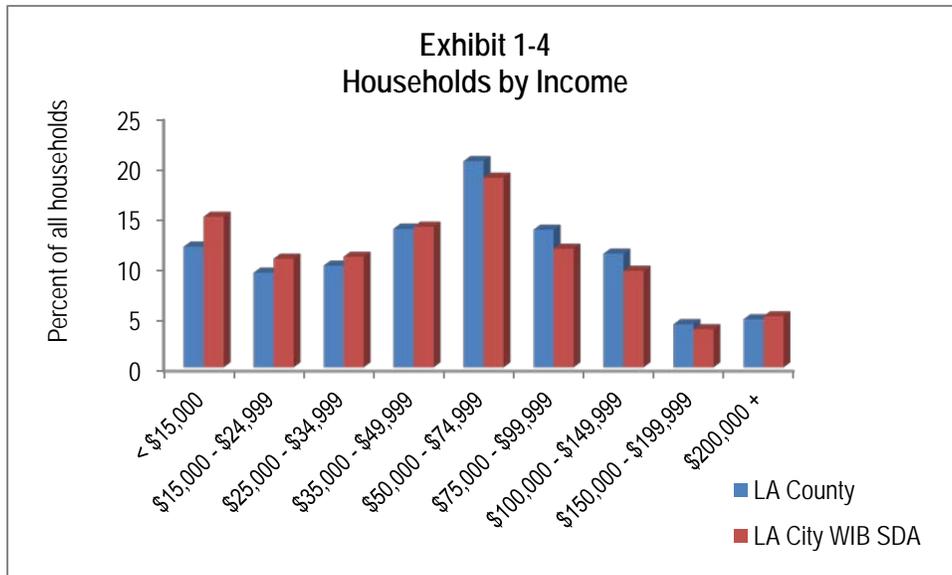
Source: ESRI BAO

Household size is on average smaller in the City WIB SDA than in Los Angeles County (2.90 persons compared to 3.06 persons in Los Angeles County), but ranges substantially, from rather small households in Hollywood/West LA (2.32 persons per household) to larger households in South Los Angeles (3.59 persons).

Median household income in the City WIB SDA, estimated to be \$49,009, is lower than the average in Los Angeles County, but per capita income is approximately the same. The lower average median household income in the WIB SDA results from a relatively smaller average household size than in Los Angeles County.

Per capita income is highest in the Hollywood/West LA sub-region (\$34,359), followed by the Valley (\$27,082). Other regions of the WIB SDA have significantly lower per capita income: Harbor Gateway (\$19,849), downtown (\$16,250) and East Los Angeles City (\$15,890). The lowest per capita in the WIB SDA is \$13,241 in South Los Angeles City.

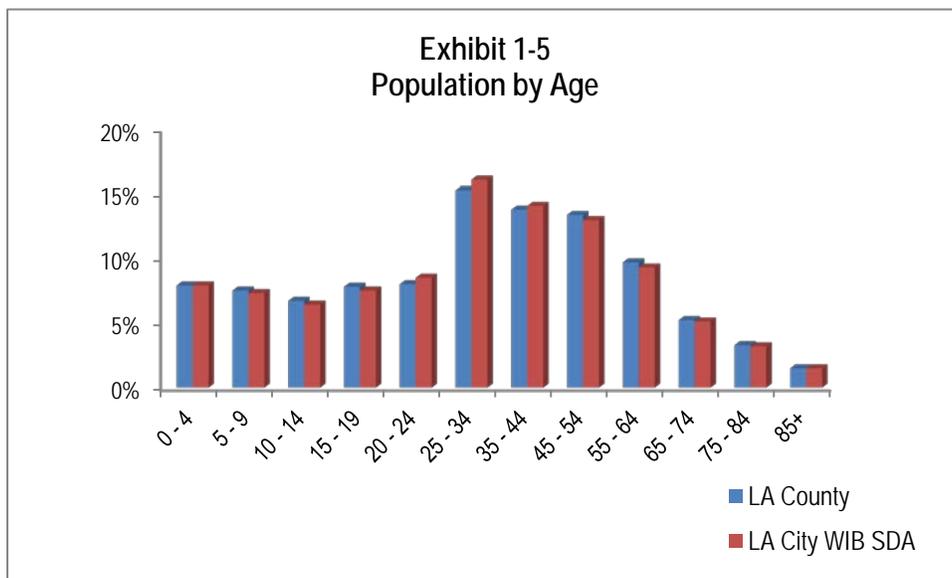
The distribution of household income in the City WIB SDA is shown in Exhibit 1-4. Households in the WIB SDA have a lower percentage of higher income households than in Los Angeles County as a whole. While 45 percent of households in Los Angeles County earn less than \$50,000 per year, more than 50 percent of households in the WIB SDA do. The percentage of households in the WIB SDA in income brackets \$50,000 to \$75,000, \$75,000 to \$100,000 and \$100,000 to \$150,000 are each relatively smaller than in Los Angeles County.



Source: ESRI BAO

The population in the City of Los Angeles WIB SDA in 2010 is slightly more Hispanic than the county overall. In the WIB SDA, 44.3 percentage of the population is white and 50.4 percent is of Hispanic origin, compared to 46.2 percent and 48.5 percent, respectively, in Los Angeles County.

The demographic makeup of the population in the City of Los Angeles WIB SDA is representative of the county as a whole, with just slightly fewer children and slightly more young adults. The age distribution is shown in Exhibit 1-5.



Source: ESRI BAO

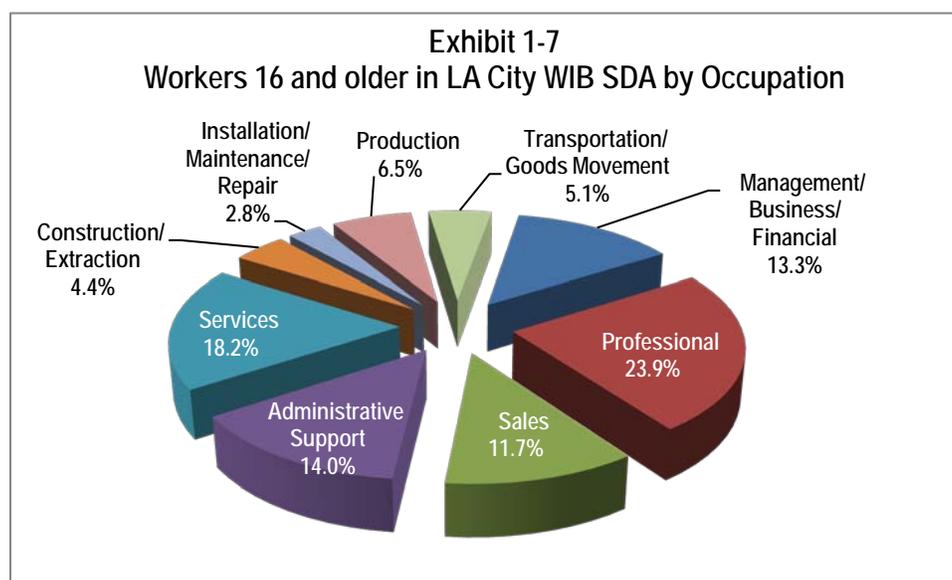
The population of the WIB SDA aged 25 and over shows a mixed performance for educational attainment levels compared to the county. These data are shown in Exhibit 1-6.

Exhibit 1-6 Educational Attainment of Population 25 Years and Older (2010) Los Angeles County and City of Los Angeles WIB SDA				
	Los Angeles County		City of LA WIB SDA	
	Number	% of total	Number	% of total
No High School Diploma	1,546,460	24.3	756,537	27.4
High School Graduate	1,431,907	22.5	579,827	21.0
Some College, No Degree	1,126,433	17.7	452,818	16.4
Associate Degree	432,754	6.8	162,904	5.9
Bachelor's Degree	1,196,438	18.8	530,128	19.2
Graduate / Professional Degree	623,675	9.8	281,630	10.2
Total *	6,364,031	100.0	2,761,083	100.0

* May not sum due to rounding
Source: ESRI BAO

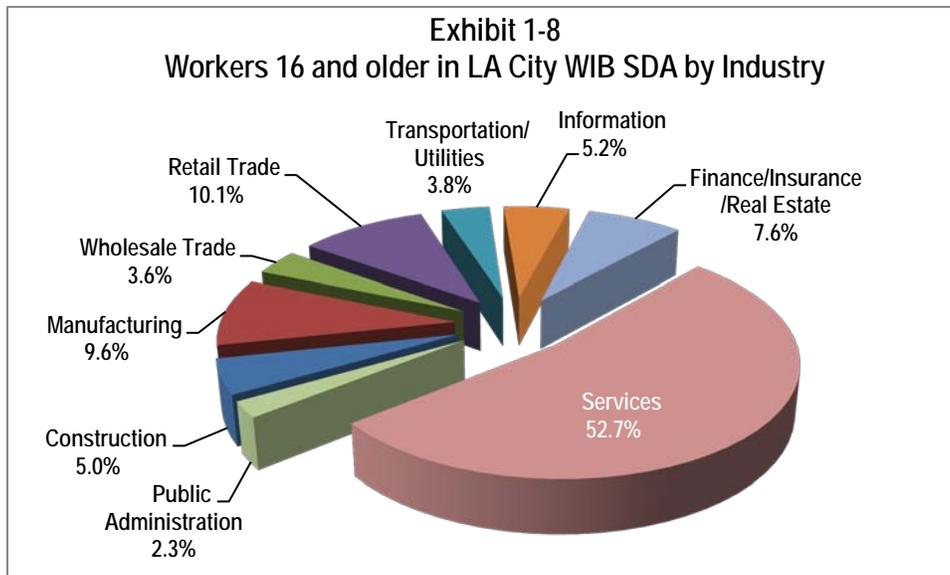
The share of this population with at least a high school diploma (or higher) is slightly smaller in the WIB SDA, with 72.6 percent compared to 75.6 percent in Los Angeles County, but the region has a relatively larger share with a bachelor's degree or higher (29.4 percent in the WIB SDA versus 28.6 percent in Los Angeles County).

The workforce in the City WIB SDA is mixed, with 62.9 percent employed in white collar occupations such as management, professional, sales and administrative support occupations, 18.9 percent in blue collar occupations such as construction, production and transportation, and 18.2 percent in services. The breakdown of employment by occupation is shown in Exhibit 1-7.



Source: ESRI BAO

Employment by industry is shown in Exhibit 1-8. More than half of the employed works in service industries, ten percent are in retail trade and 7.6 percent are in finance, insurance and real estate.



Source: ESRI BAO

Comparable data for each individual sub-region are presented in the Appendix. Data by Regional Planning Area and Council District are also shown.

In this section, we review the overall size, performance and characteristics of the economic base of Los Angeles County by analyzing its industrial structure as organized into industry clusters. These industry clusters have been identified as key drivers of the regional economy. We investigate fifteen export-oriented industry clusters, including: Automotive Manufacturing and Wholesaling; Entertainment; Fashion Design, Manufacturing and Wholesaling; Financial Services; Food Products; Furniture and Home Furnishings; Goods Movement; Health Services and Biomedical; Higher Education; Jewelry Manufacturing and Wholesaling; Materials and Machinery; Professional and Business Services; Technology; Tourism and Hospitality; and Wholesale Trade.

In addition, we review six population-serving industry clusters which are significant sources of employment, including: Construction; Food Services and Drinking Places; Real Estate; Repair and Maintenance; Retail Trade; and Waste Management and Remediation Services.

Before our examination of each industry cluster begins, we first summarize cluster employment in Los Angeles County and the City of Los Angeles WIB SDA. Exhibit 2-1 presents the employment and relative size of the two types of industry clusters, export-oriented and population-serving, in Los Angeles County and in the City of LA WIB SDA.

Exhibit 2-1 Cluster Employment (2008) Los Angeles County and City of Los Angeles WIB SDA				
	Los Angeles County		City of LA WIB SDA	
	Number	% of total	Number	% of total
Export-oriented clusters	1,991,462	47.8	893,812	47.2
Population-serving clusters	955,080	20.6	383,916	20.3
Non-classified industries	1,222,157	31.6	614,970	32.5
Total *	4,168,699	100.0	1,892,698	100.0

* May not sum due to rounding
Sources: CA EDD; LAEDC

In total, in 2008 there were 4,168,699 jobs in Los Angeles County. Of these, 47.8 percent, or 1,991,462, were employed in export-oriented industry clusters and 20.6 percent were employed in the six population-serving clusters. An additional 31.6 percent of employment was in industries that have not been classified, including state and local government.

Employment in the City of LA WIB SDA was apportioned among clusters in almost exactly the same numbers as Los Angeles County.

Employment by industry cluster in Los Angeles County and in the WIB SDA is summarized in Exhibit 2-2. The industry clusters are shown in descending order of employment in Los Angeles County.

Exhibit 2-2 Cluster Employment (2008) Los Angeles County and City of Los Angeles WIB SDA				
	Los Angeles County		City of LA WIB SDA	
	Number	% of total	Number	% of total
Export-Oriented Industry Clusters				
Health Services and Biomedical	364,157	8.7	148,750	7.9
Professional and Business Services	267,898	6.4	142,389	7.5
Entertainment	262,011	6.3	155,987	8.2
Wholesale Trade	159,127	3.8	52,664	2.8
Technology	151,009	3.6	47,489	2.5
Higher Education	130,697	3.1	63,761	3.4
Materials and Machinery	120,262	2.9	32,933	1.7
Goods Movement	115,198	2.8	57,946	3.1
Fashion Design, Manufacturing, Wholesaling	104,175	2.5	59,263	3.1
Financial Services	103,973	2.5	50,503	2.7
Tourism and Hospitality	84,436	2.0	36,699	1.9
Food Products	63,544	1.5	22,596	1.2
Furniture and Home Furnishings	35,720	0.9	11,024	0.6
Automotive Manufacturing and Wholesaling	22,688	0.5	6,503	0.3
Jewelry Manufacturing and Wholesaling	6,567	0.2	5,306	0.3
Export-Oriented Clusters Total	1,991,462	47.8	893,812	47.2
Population-Serving Clusters				
Retail Trade	418,264	10.0	160,370	8.5
Food Services and Drinking Places	286,974	6.9	121,356	6.4
Construction	145,652	3.5	56,523	3.0
Real Estate	54,226	1.3	26,314	1.4
Repair and Maintenance	40,948	1.0	16,479	0.9
Waste Management and Remediation Services	9,016	0.2	2,874	0.2
Population-Serving Clusters Total	955,080	20.6	383,916	20.3
Non-classified industries	1,222,157	31.6	614,970	32.5
Total *	4,168,699	100.0	1,892,698	100.0

* May not sum due to rounding
Sources: CA EDD; LAEDC

At the county level, the Health Services and Biomedical industry cluster is the largest, employing 364,157 people, or 8.7 percent of all employment in Los Angeles County in 2008. In terms of relative size, this was not the largest cluster in the City of LA WIB SDA, but employed 148,750 people, or 7.9 percent of all employed in the WIB SDA. The largest cluster in the WIB SDA was the Entertainment cluster, employing 155,987 people or 8.2 percent of all employed.

The lower portion of the exhibit displays the population-serving industry clusters. While not traditionally considered targets for development, these industries are clearly significant employment generators and should be included in our analysis.

Individual industry clusters, presented in the same order as in Exhibit 2-2, are reviewed on the following pages. For each industry cluster, we report the number of establishments, the employment, the total payroll and the total output in Los Angeles County in 2008 (the most recent year for which data is available). We provide a breakdown of employment in the cluster by industry (or sub-industry) and we report the average annual wage by industry (or sub-industry) at the county level. In addition, we report the number of establishments, the total employment and total output in each cluster in the City of Los Angeles WIB SDA, and employment by industry (or sub-industry).

Definitions of the clusters are derived from those established by the Kyser Center for Economic Research. For the purposes of our analysis, in particular to adequately account for population-serving clusters, we have made minor adjustments to those original definitions.

Export-Oriented Industry Clusters

The following pages present detailed data on each of the fifteen export-oriented industry clusters:

	Page
Health Services and Biomedical	14
Professional and Business Services	16
Entertainment	18
Wholesale Trade	20
Technology	22
Higher Education	24
Materials and Machinery	26
Goods Movement	28
Fashion Design, Manufacturing and Wholesaling	30
Financial Services	32
Tourism and Hospitality	34
Food Products	36
Furniture and Home Furnishings	38
Automotive Manufacturing and Wholesaling	40
Jewelry Manufacturing and Wholesaling	42

Health Services and Biomedical

Los Angeles County (2008)

Establishments



22,226
5.3% of total

Employment



364,157 Jobs
8.7% of total

Annual Payroll



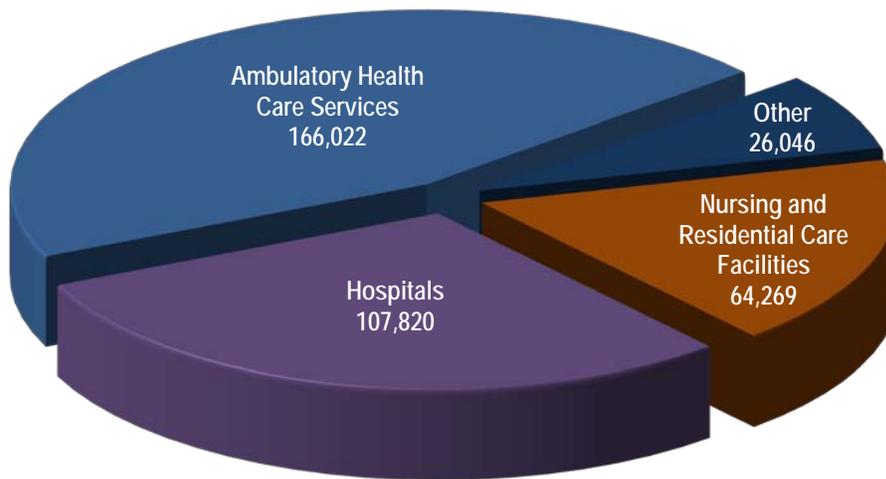
\$19.2 Billion
8.9% of total

Output

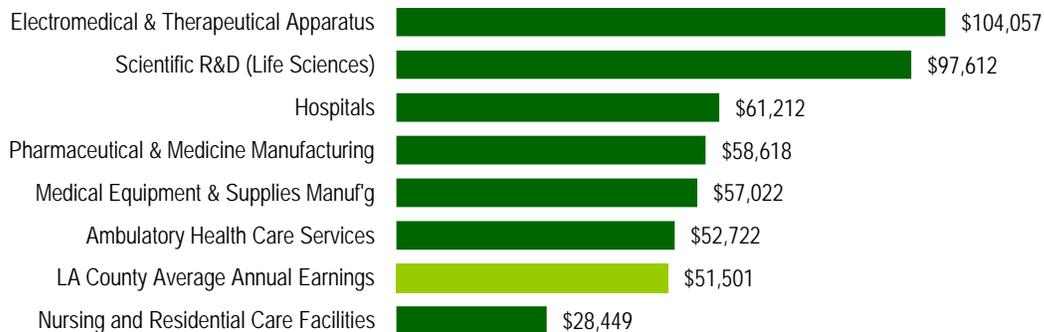


\$57.4 Billion
6.0% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Health Services and Biomedical

City of Los Angeles WIB SDA (2008)

Establishments



8,812
4.5% of total

Employment



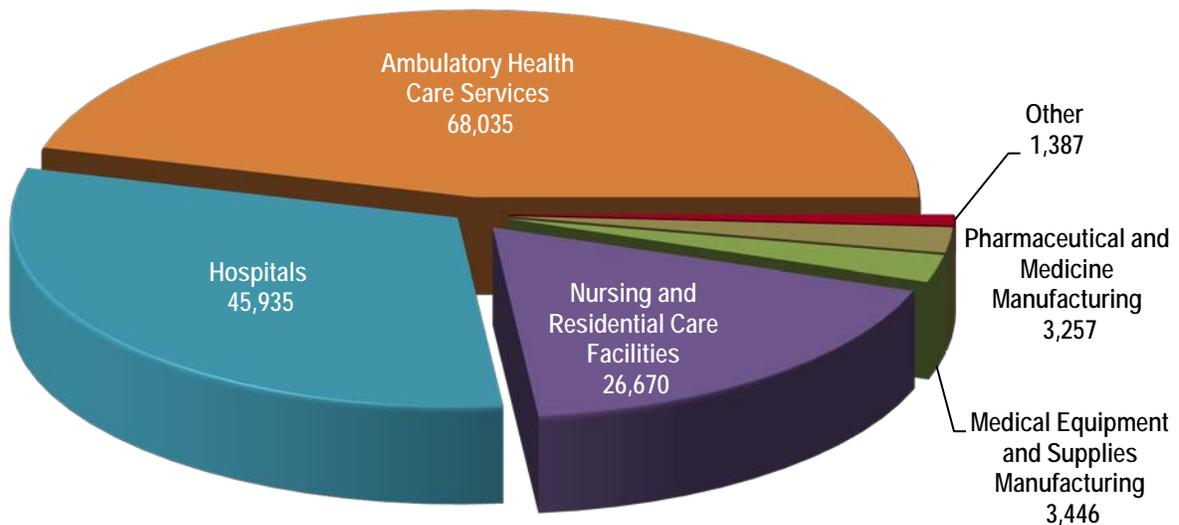
148,750 Jobs
7.9% of total

Output



\$25.1 Billion
6.2% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Professional and Business Services

Los Angeles County (2008)

Establishments



28,722
6.8% of total

Employment



267,898 Jobs
6.4% of total

Annual Payroll



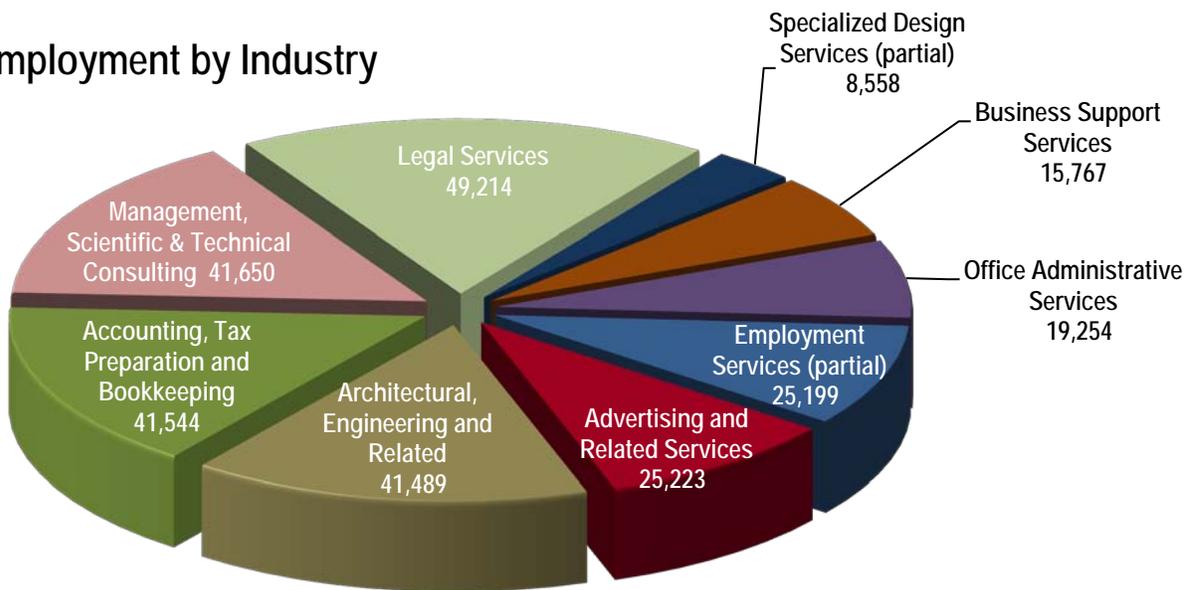
\$20.0 Billion
9.3% of total

Output

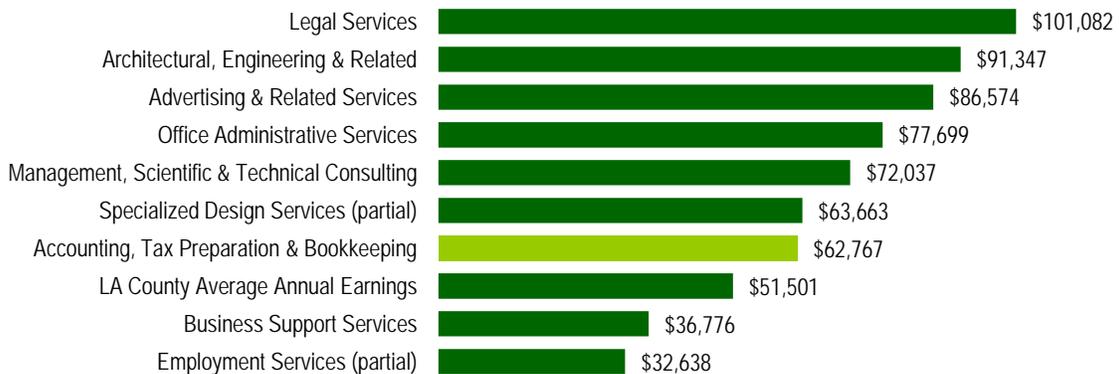


\$63.9 Billion
6.7% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Professional and Business Services

City of Los Angeles WIB SDA (2008)

Establishments



14,584
7.5% of total

Employment



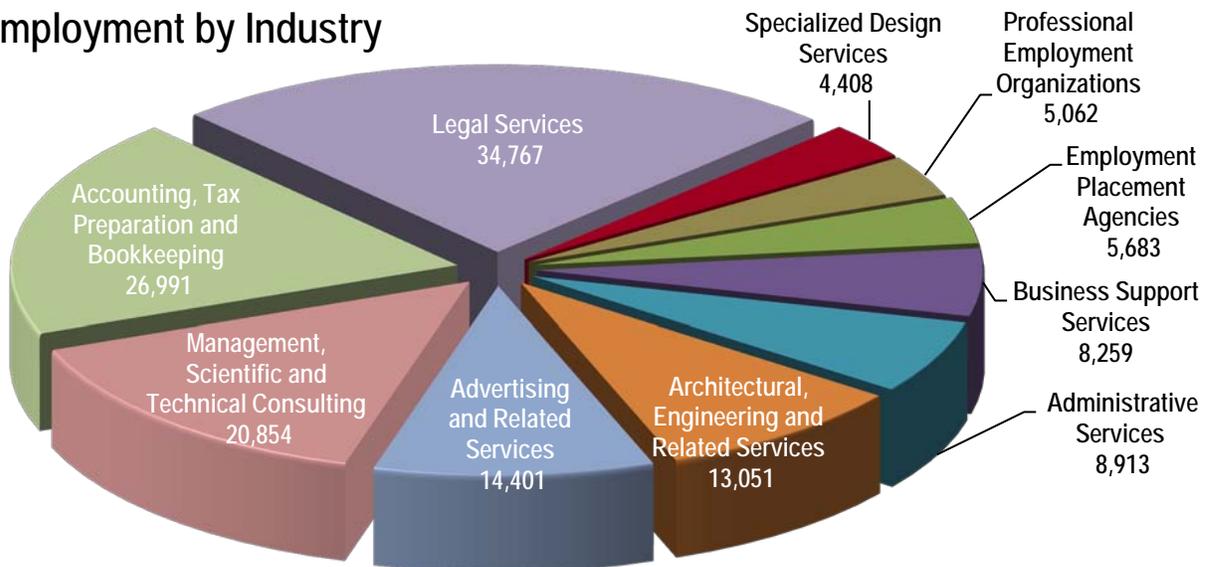
142,389 Jobs
7.5% of total

Output



\$33.4 Billion
8.2% of total

Employment by Industry

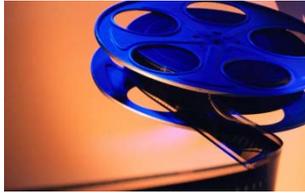


Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Entertainment

Los Angeles County (2008)

Establishments



14,718
3.5% of total

Employment



262,011 Jobs
6.3% of total

Annual Payroll



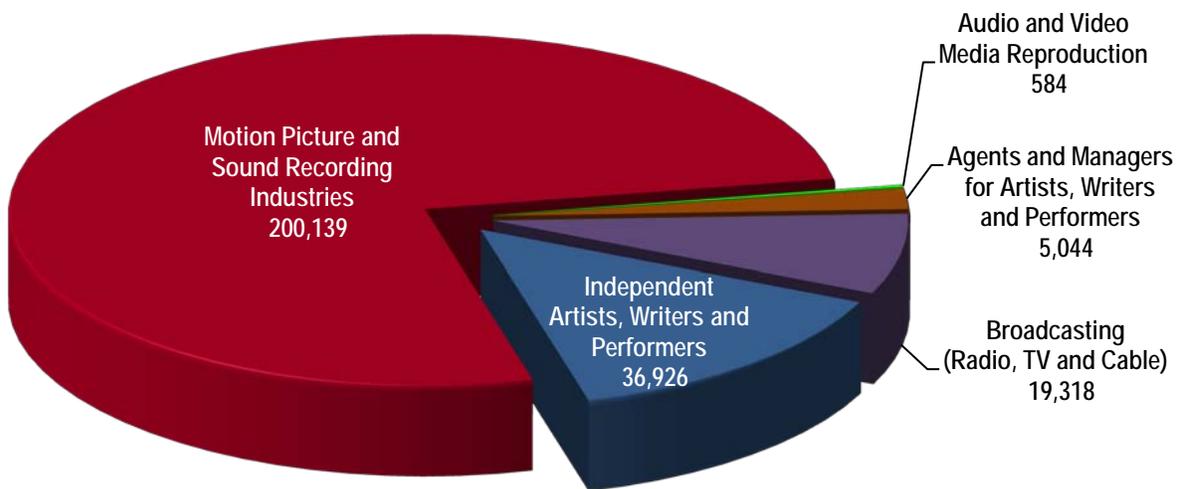
\$32.7 Billion
15.2% of total

Output

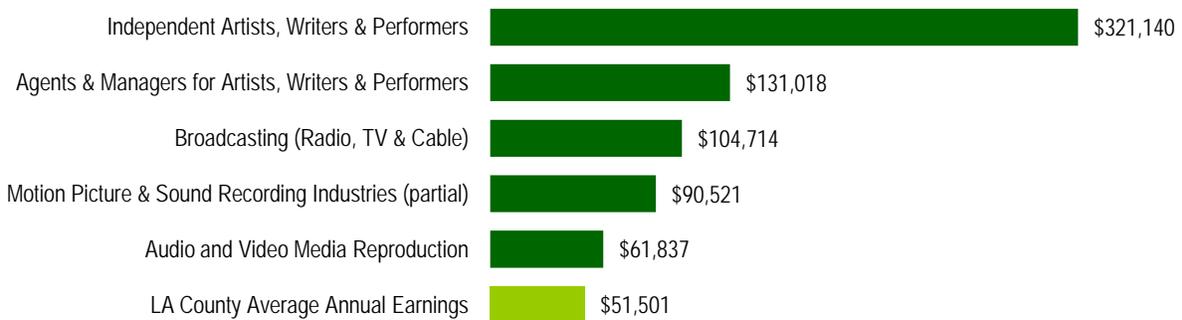


\$102.1 Billion
10.7% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Entertainment

City of Los Angeles WIB SDA (2008)

Establishments



10,001
5.1% of total

Employment



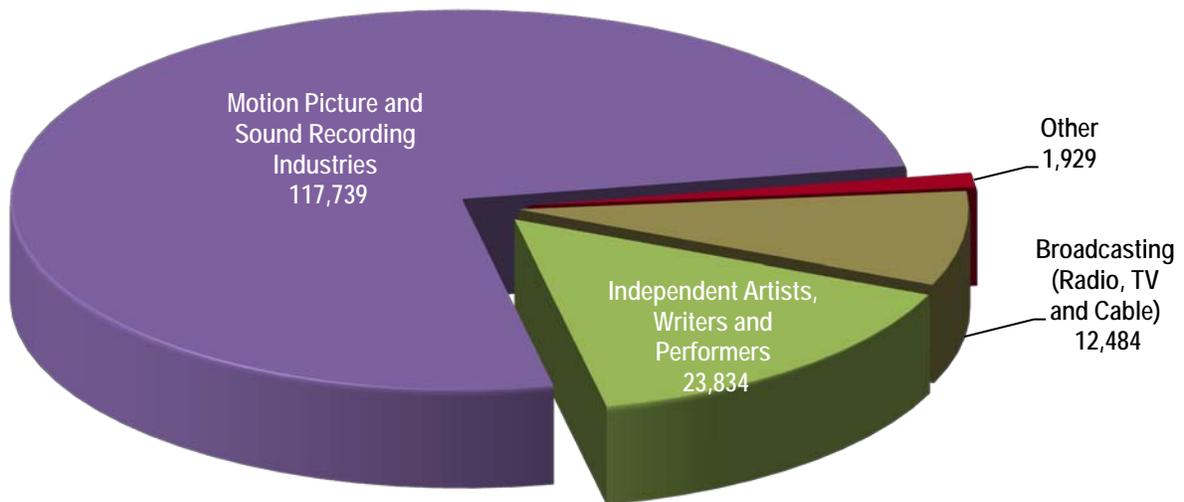
155,987 Jobs
8.2% of total

Output



\$55.1 Billion
13.6% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Wholesale Trade

Los Angeles County (2008)

Establishments



13,785
3.3% of total

Employment



159,127 Jobs
3.8% of total

Annual Payroll



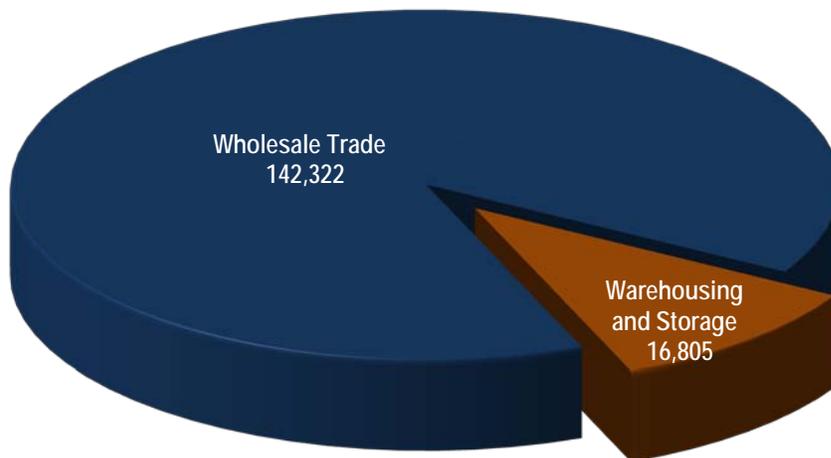
\$8.7 Billion
4.0% of total

Output



\$32.9 Billion
3.4% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Wholesale Trade

City of Los Angeles WIB SDA (2008)

Establishments



5,408
2.8% of total

Employment



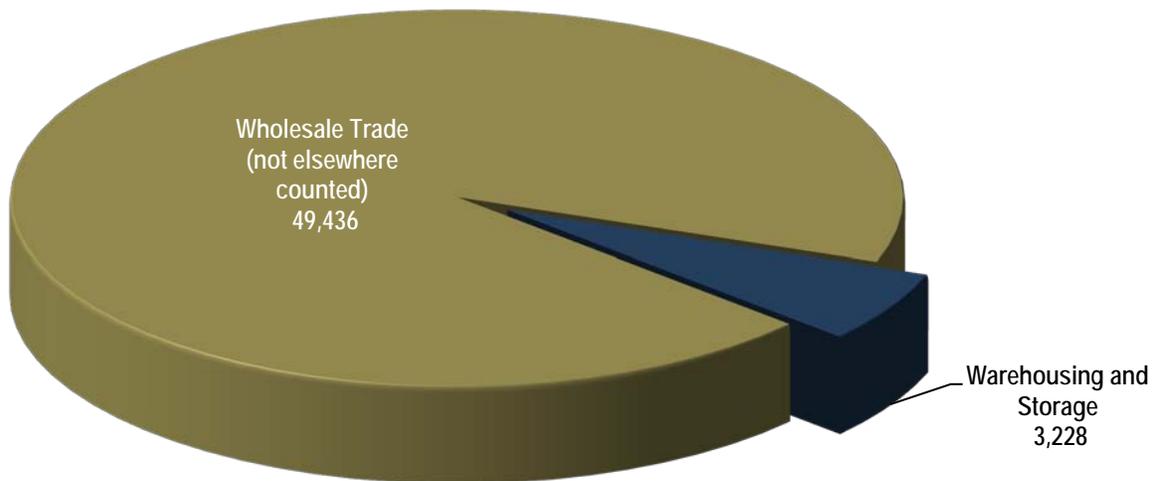
52,664 Jobs
2.8% of total

Output



\$12.2 Billion
3.0% of total

Employment by Industry

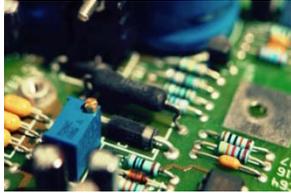


Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Technology

Los Angeles County (2008)

Establishments



5,581
1.3% of total

Employment



151,009 Jobs
3.6% of total

Annual Payroll



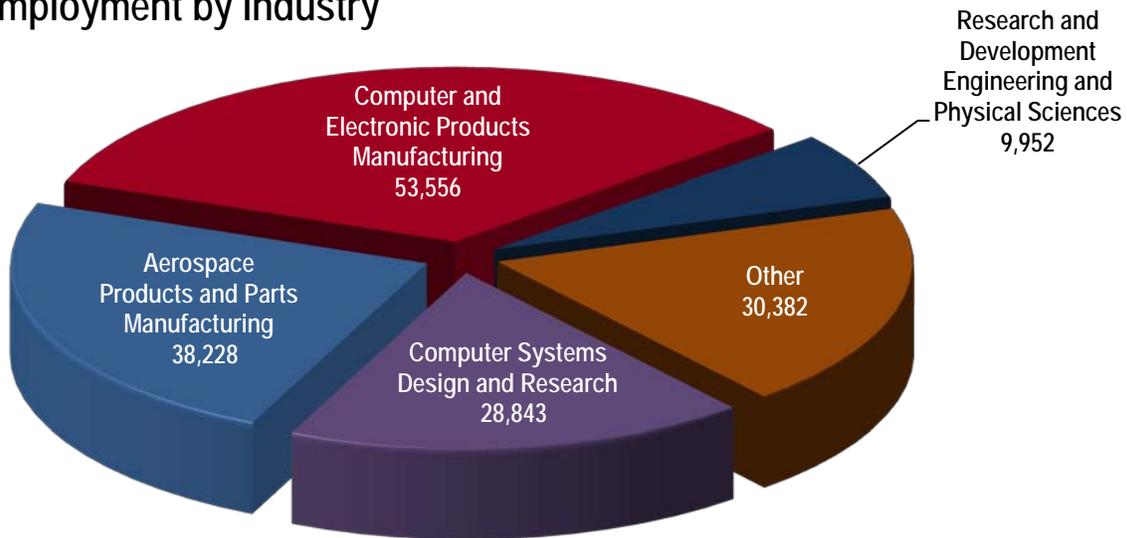
\$13.2 Billion
6.1% of total

Output

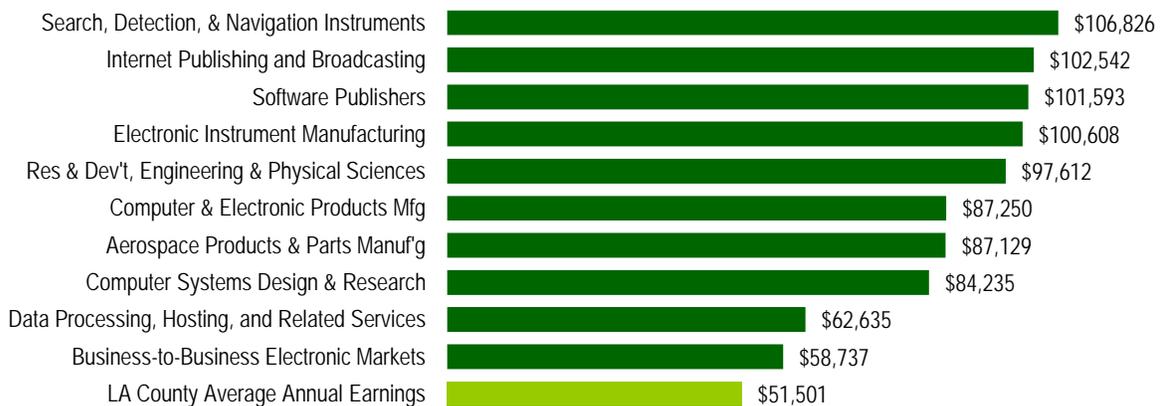


\$73.3 Billion
7.7% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Technology

City of Los Angeles WIB SDA (2008)

Establishments



2,389
1.2% of total

Employment



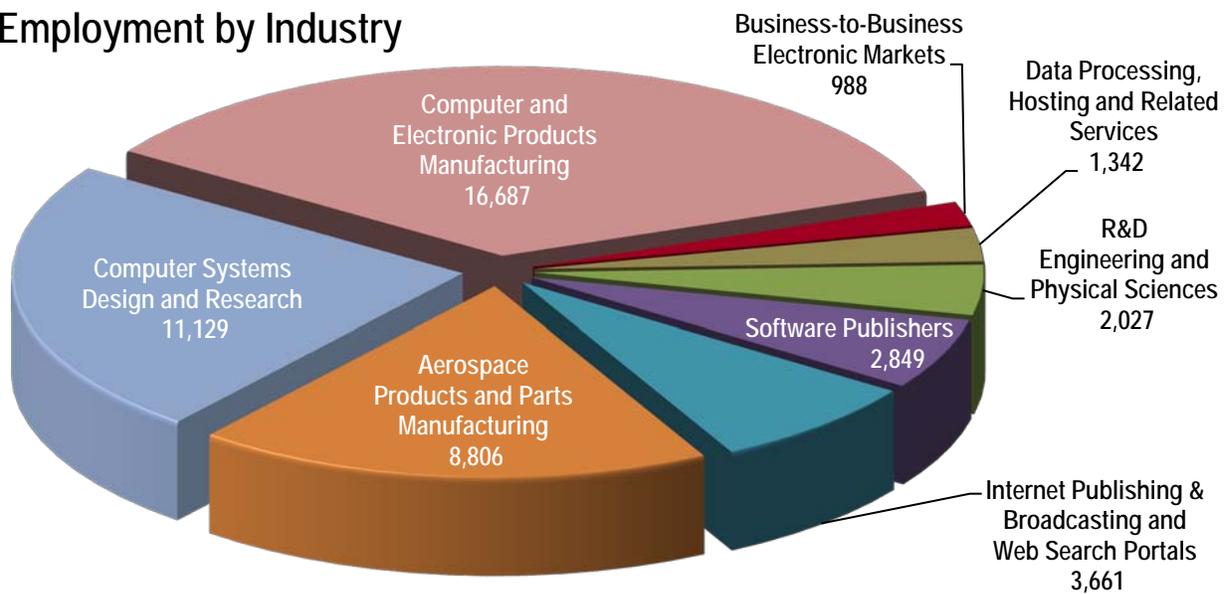
47,489 Jobs
2.5% of total

Output



\$21.7 Billion
5.4% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Higher Education

Los Angeles County (2008)

Establishments



1,562
0.4% of total

Employment



130,697 Jobs
3.1% of total

Annual Payroll



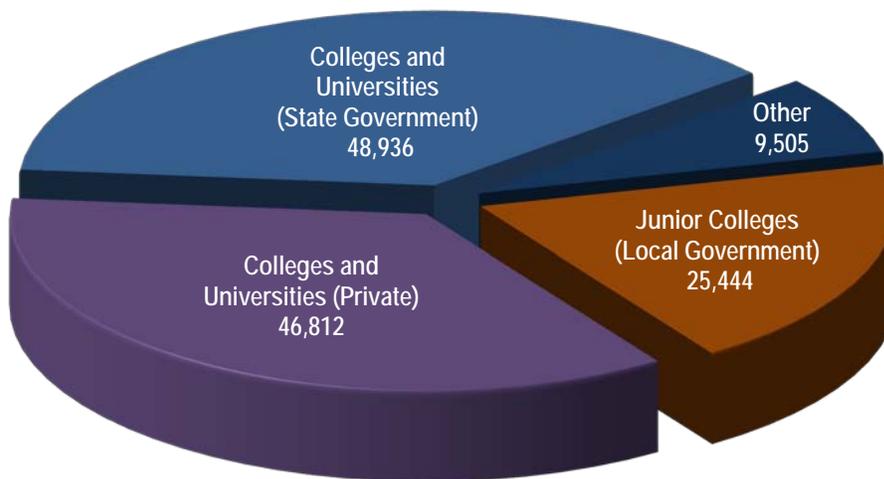
\$6.4 Billion
3.0% of total

Output



\$12.9 Billion
1.4% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Higher Education

City of Los Angeles WIB SDA (2008)

Establishments



280
0.1% of total

Employment



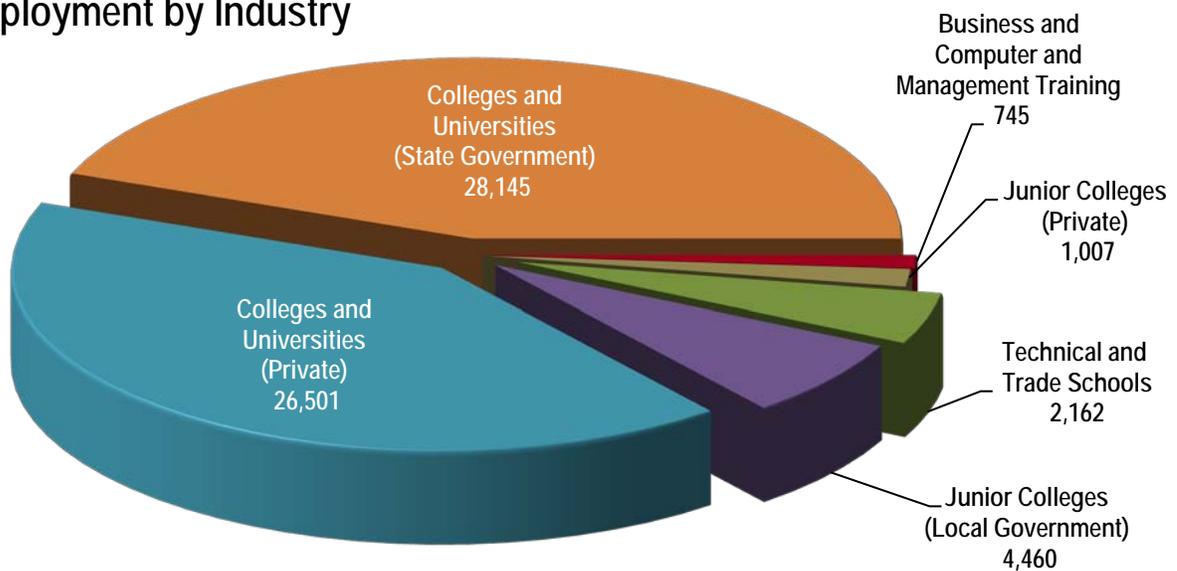
63,761 Jobs
3.4% of total

Output



\$5.3 Billion
1.3% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Materials and Machinery

Los Angeles County (2008)

Establishments



5,086
1.2% of total

Employment



120,262 Jobs
2.9% of total

Annual Payroll



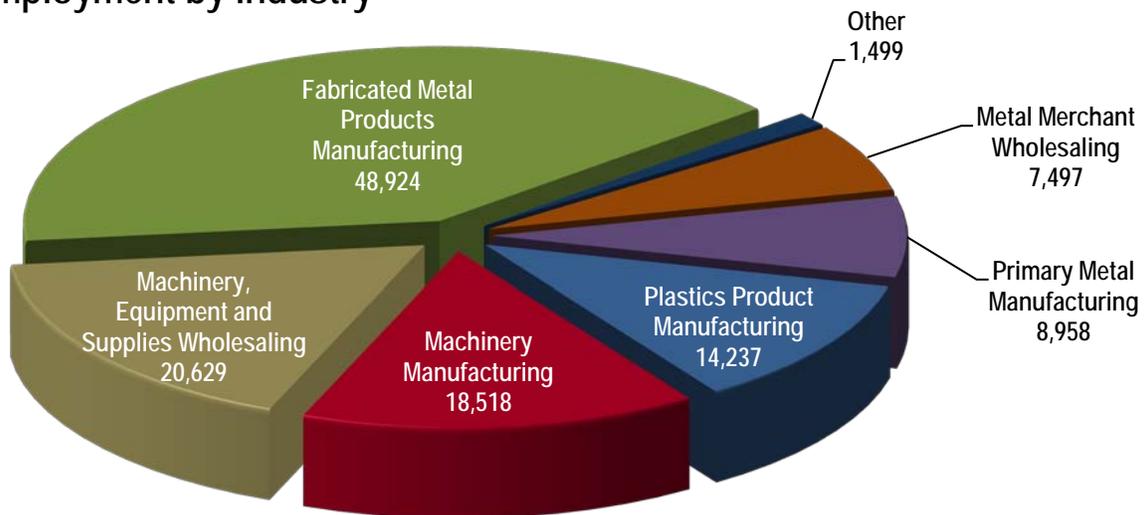
\$6.3 Billion
2.9% of total

Output

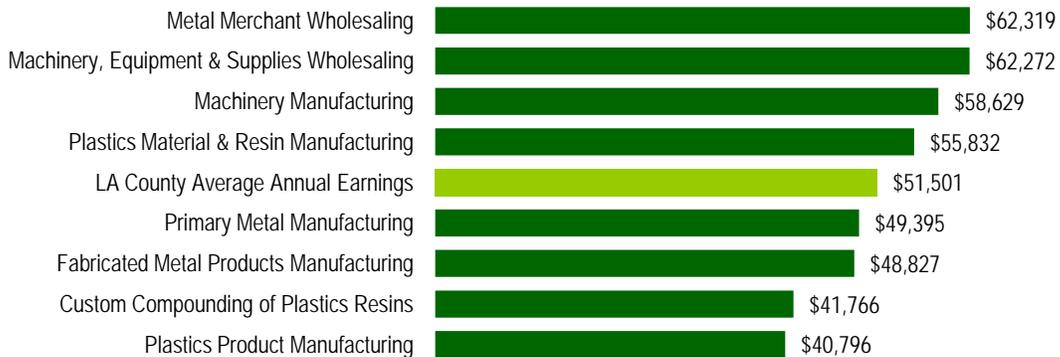


\$35.1 Billion
3.7% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Materials and Machinery

City of Los Angeles WIB SDA (2008)

Establishments



1,716
0.9% of total

Employment



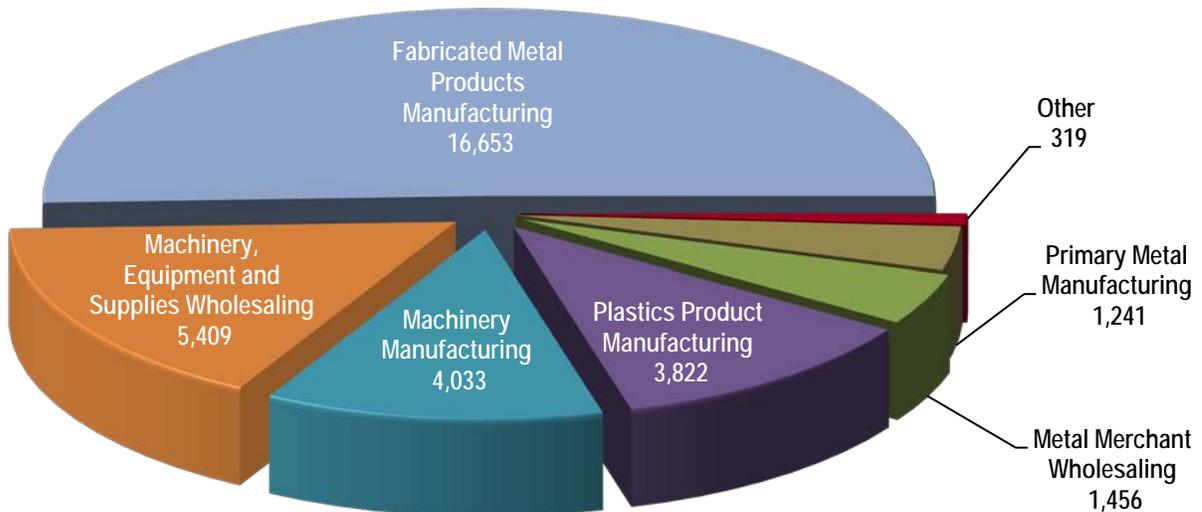
32,933 Jobs
1.7% of total

Output



\$11.5 Billion
2.8% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Goods Movement

Los Angeles County (2008)

Establishments



3,392
0.8% of total

Employment



115,198 Jobs
2.8% of total

Annual Payroll



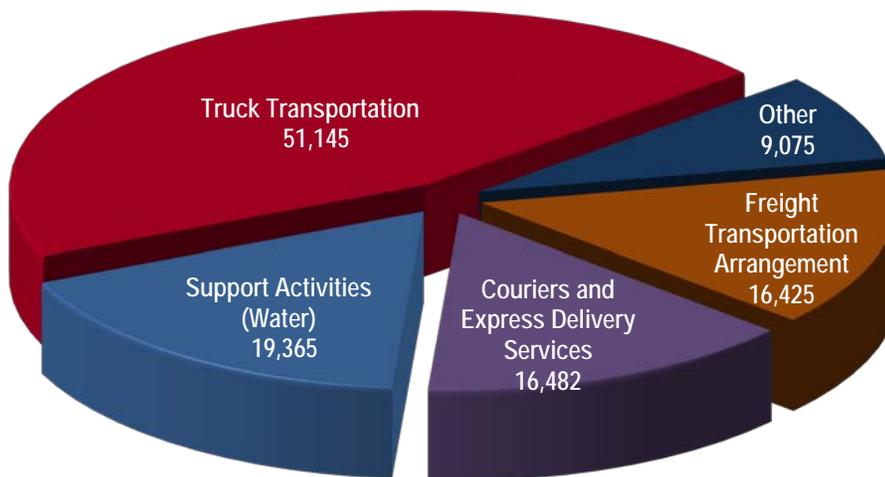
\$6.1 Billion
2.8% of total

Output

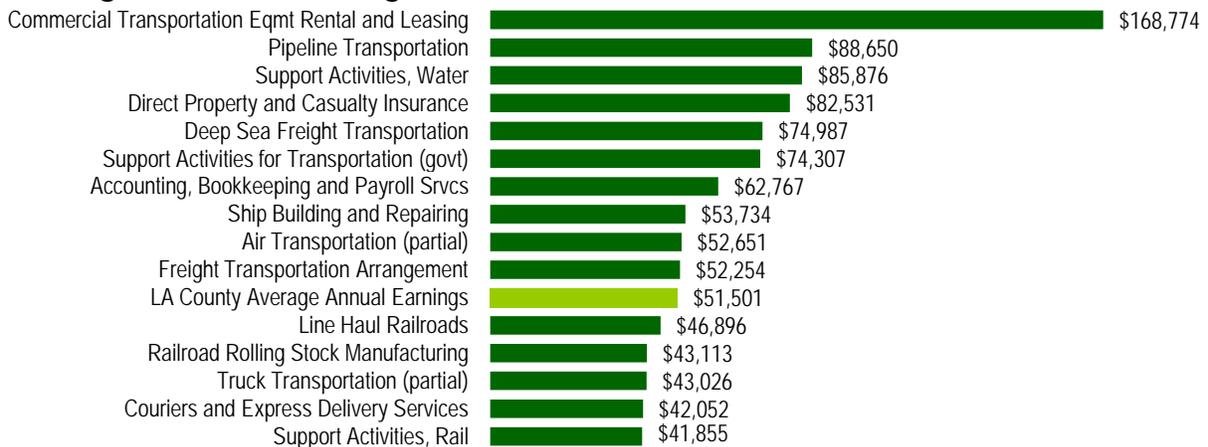


\$16.8 Billion
1.8% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Goods Movement

City of Los Angeles WIB SDA (2008)

Establishments



1,093
0.6% of total

Employment



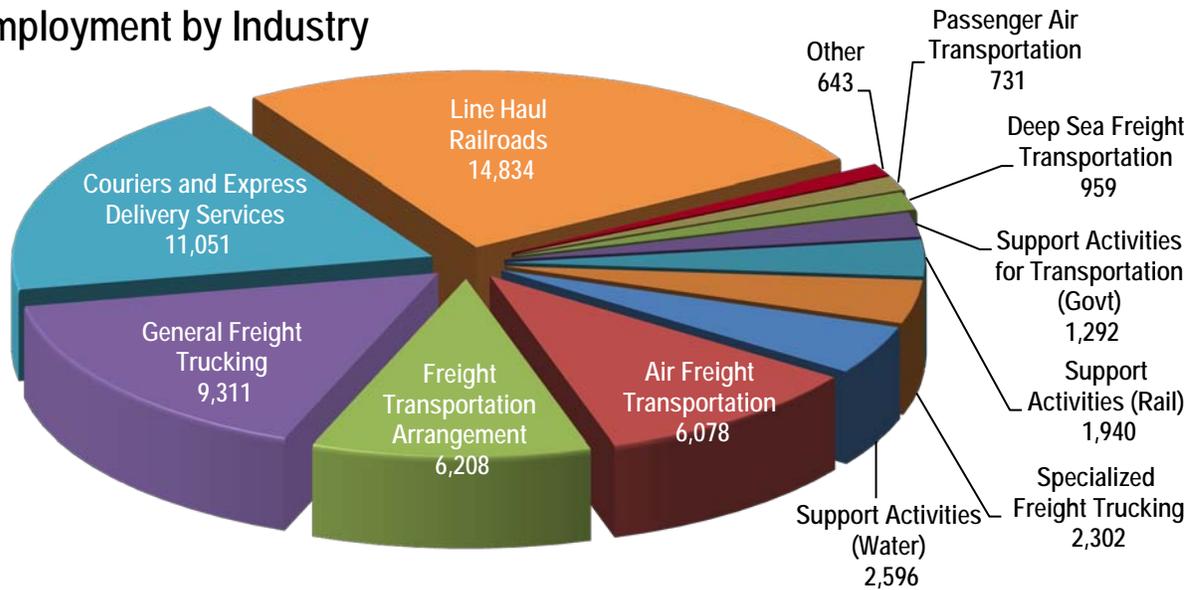
57,946 Jobs
3.1% of total

Output



\$8.7 Billion
2.1% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Fashion Design, Manufacturing and Wholesaling

Los Angeles County (2008)

Establishments



5,835
1.4% of total

Employment



104,175 Jobs
2.5% of total

Annual Payroll



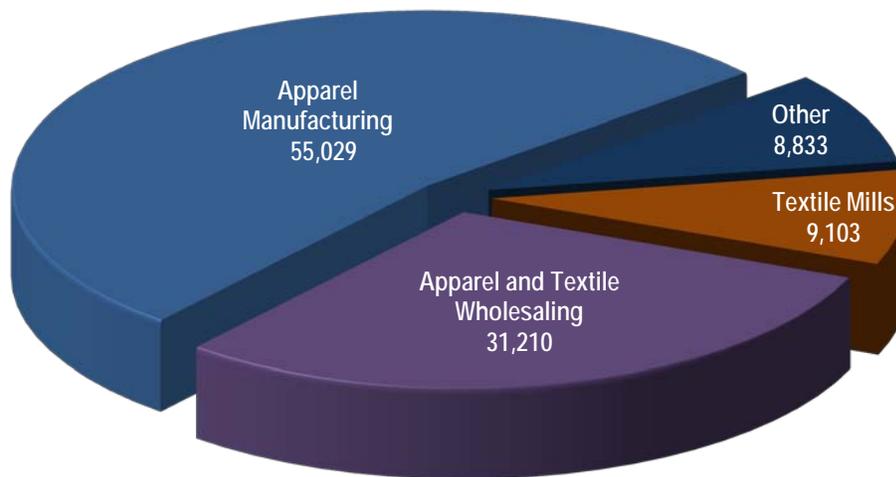
\$3.9 Billion
1.8% of total

Output

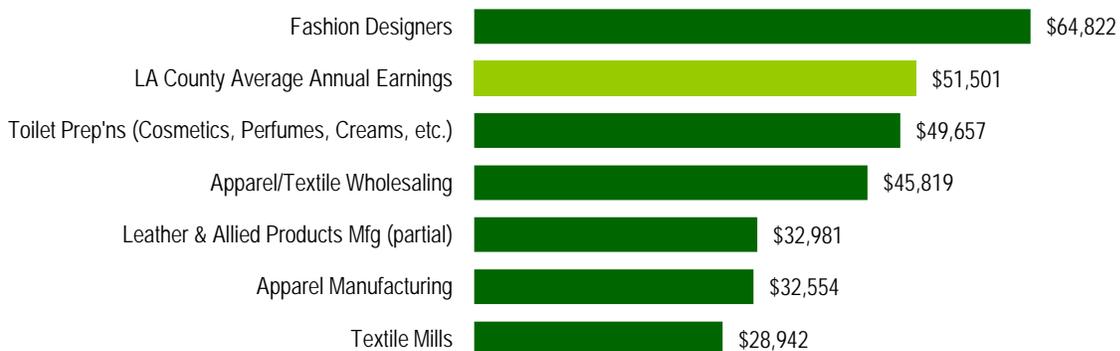


\$22.4 Billion
2.4% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Fashion Design, Manufacturing and Wholesaling

City of Los Angeles WIB SDA (2008)

Establishments



3,759
1.9% of total

Employment



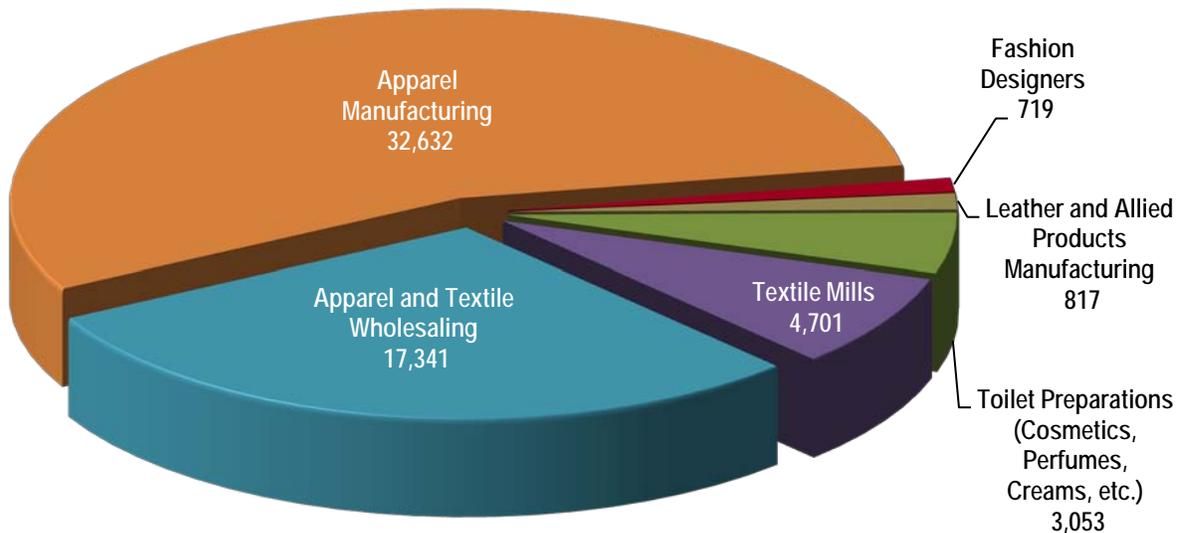
59,263 Jobs
3.1% of total

Output



\$12.8 Billion
3.2% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Financial Services

Los Angeles County (2008)

Establishments



7,977
1.9% of total

Employment



103,973 Jobs
2.5% of total

Annual Payroll



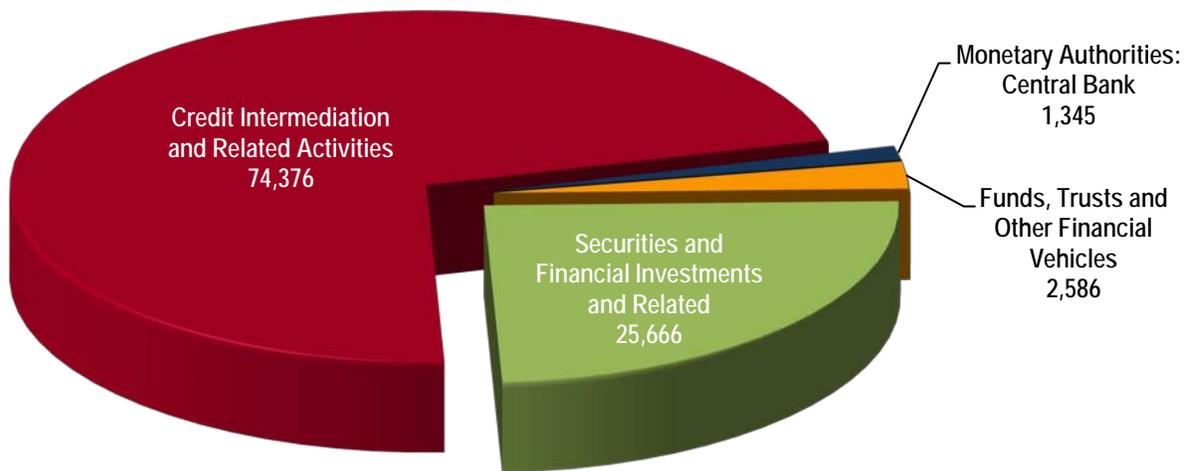
\$10.6 Billion
5.0% of total

Output

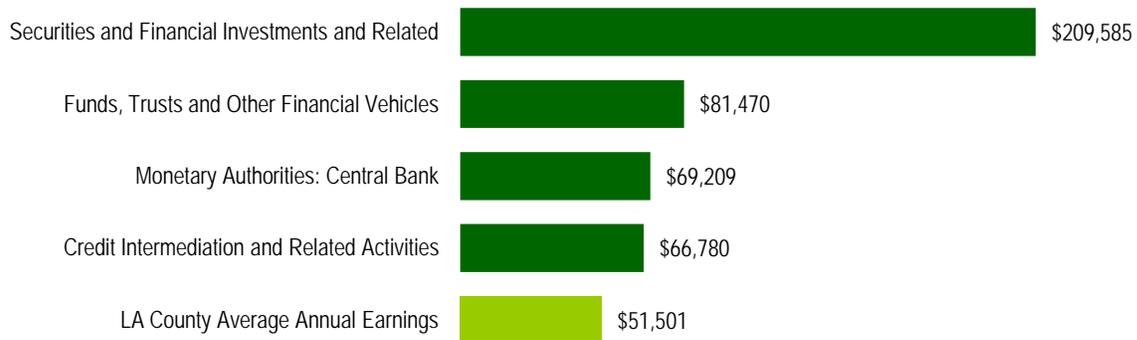


\$41.1 Billion
4.3% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Financial Services

City of Los Angeles WIB SDA (2008)

Establishments



3,467
1.8% of total

Employment



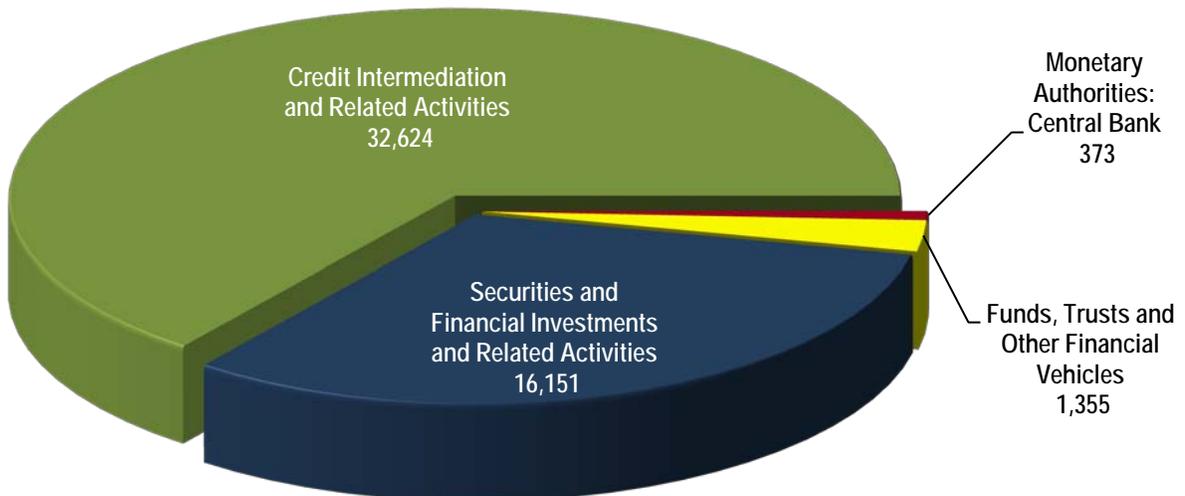
50,503 Jobs
2.7% of total

Output



\$20.7 Billion
5.1% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Tourism and Hospitality

Los Angeles County (2008)

Establishments



2,921
0.7% of total

Employment



84,436 Jobs
2.0% of total

Annual Payroll



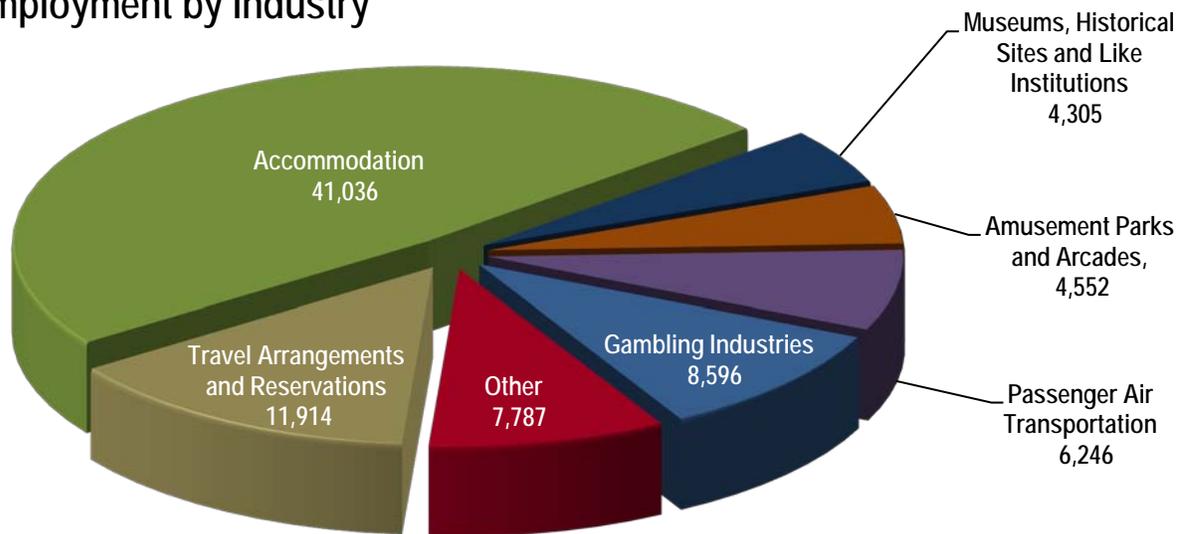
\$3.1 Billion
1.4% of total

Output

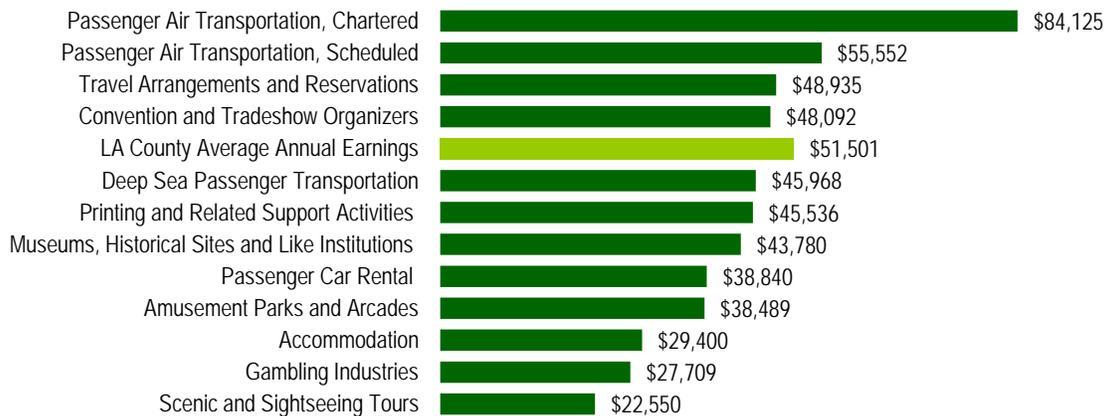


\$15.7 Billion
1.6% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Tourism and Hospitality

City of Los Angeles WIB SDA (2008)

Establishments



1,325
0.7% of total

Employment



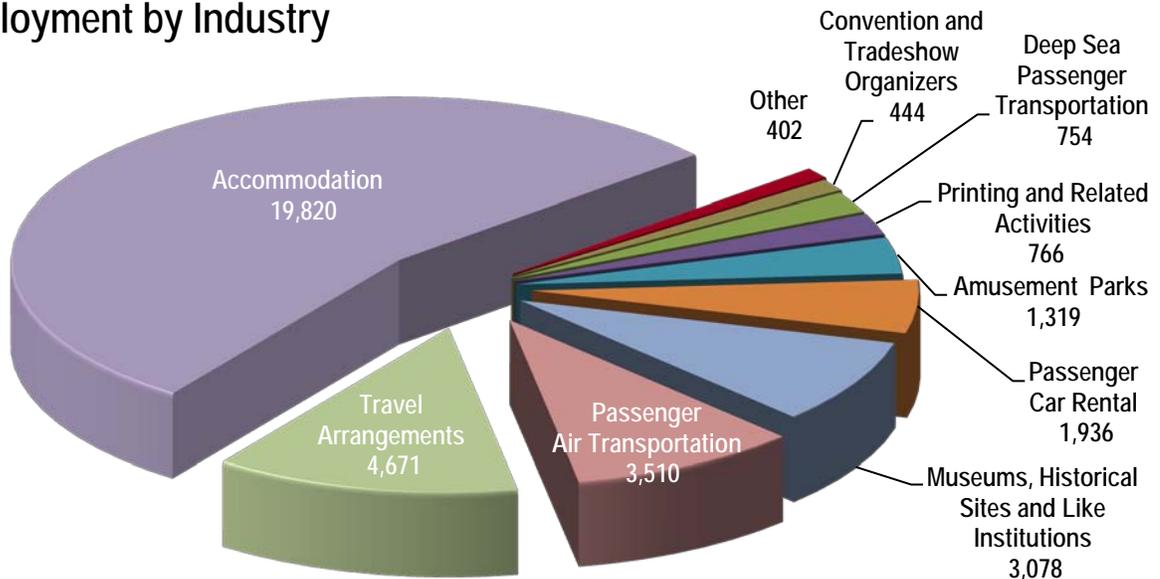
36,699 Jobs
1.9% of total

Output



\$7.5 Billion
1.9% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Food Products

Los Angeles County (2008)

Establishments



1,799
0.4% of total

Employment



63,544 Jobs
1.5% of total

Annual Payroll



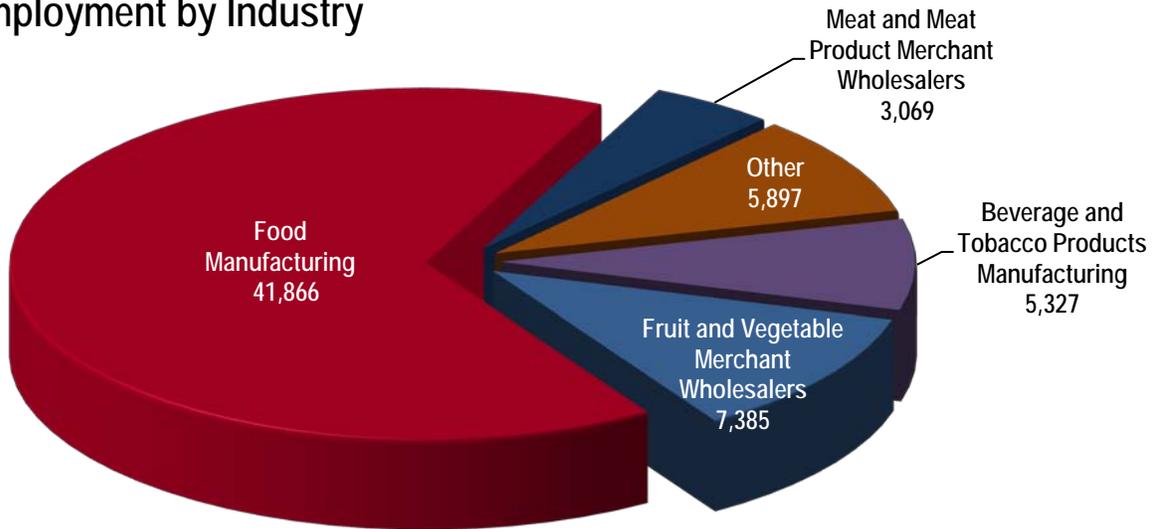
\$2.8 Billion
1.3% of total

Output

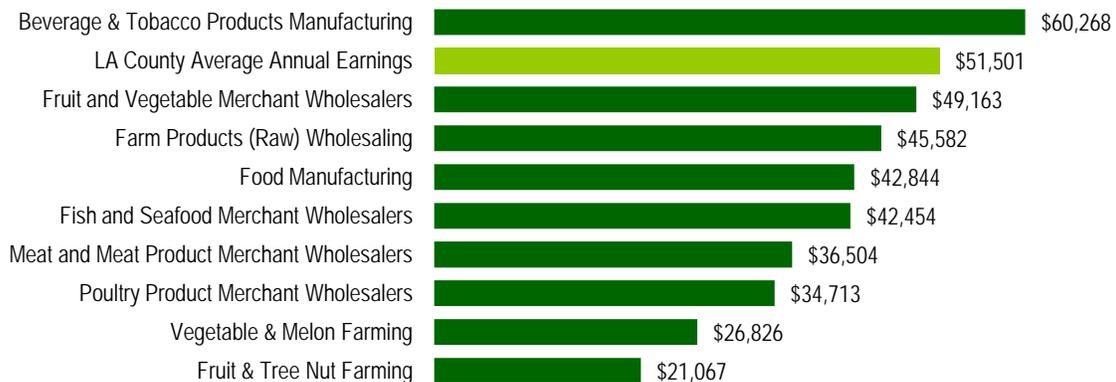


\$27.2 Billion
2.9% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Food Products

City of Los Angeles WIB SDA (2008)

Establishments



792
0.4% of total

Employment



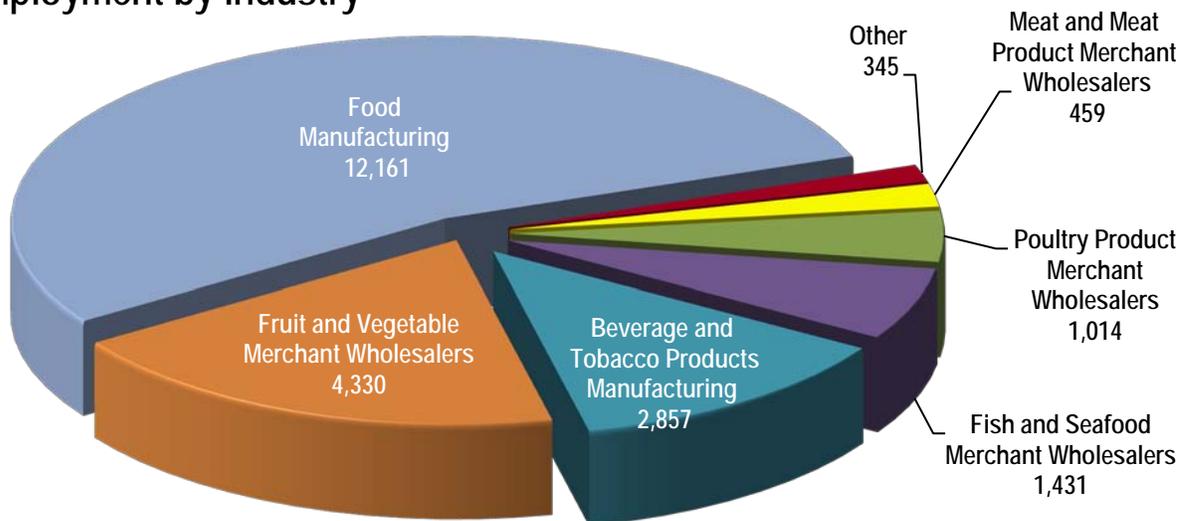
22,596 Jobs
1.2% of total

Output



\$8.0 Billion
2.0% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Furniture and Home Furnishings

Los Angeles County (2008)

Establishments



1,713
0.4% of total

Employment



35,720 Jobs
0.9% of total

Annual Payroll



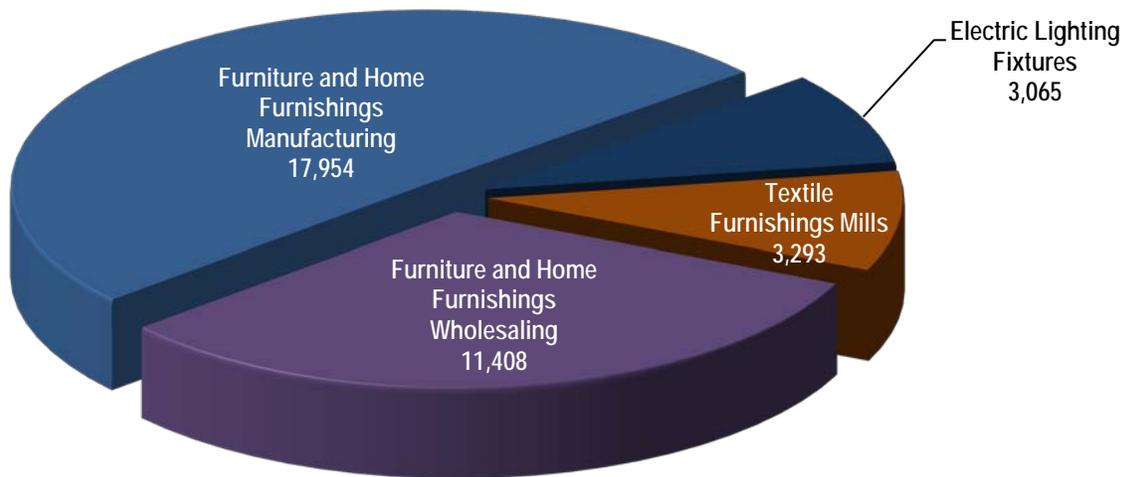
\$1.4 Billion
0.7% of total

Output



\$7.3 Billion
0.8% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Furniture and Home Furnishings

City of Los Angeles WIB SDA (2008)

Establishments



758
0.4% of total

Employment



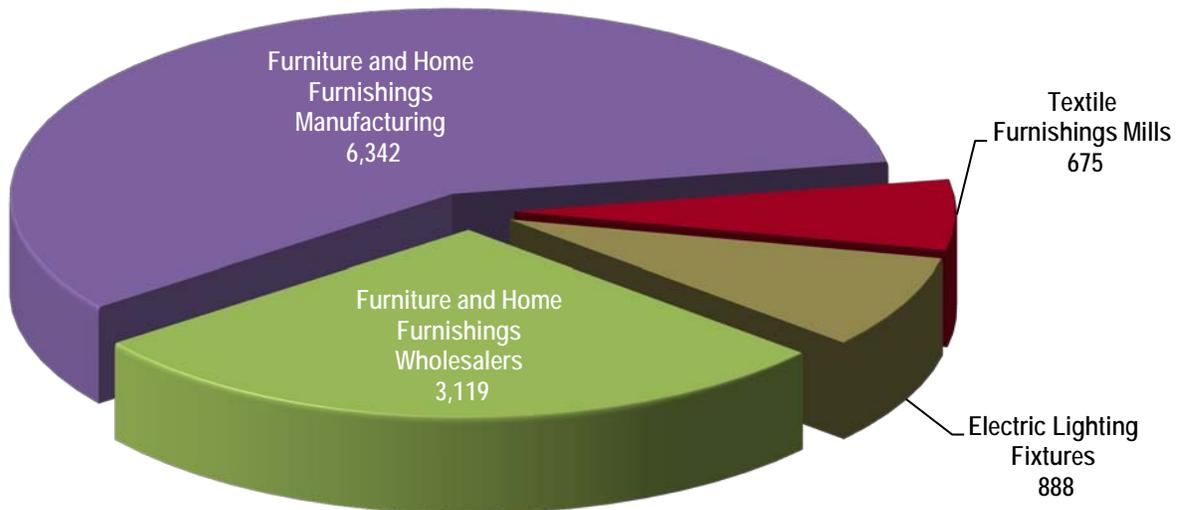
11,024 Jobs
0.6% of total

Output



\$2.2 Billion
0.5% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Automotive Manufacturing and Wholesaling

Los Angeles County (2008)

Establishments



1,110
0.3% of total

Employment



22,688 Jobs
0.5% of total

Annual Payroll



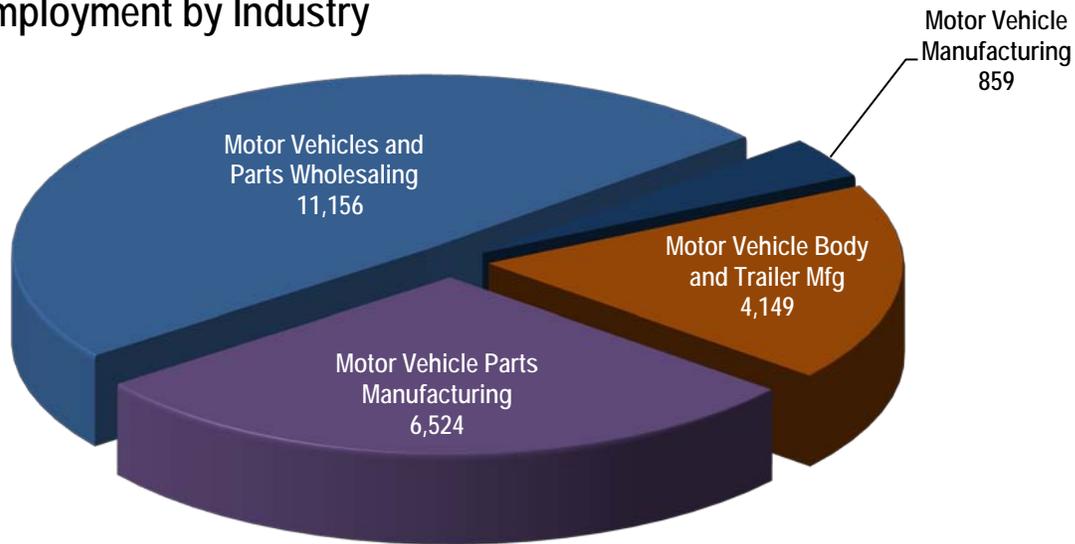
\$1.3 Billion
0.6% of total

Output



\$7.4 Billion
0.8% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Automotive Manufacturing and Wholesaling

City of Los Angeles WIB SDA (2008)

Establishments



367
0.2% of total

Employment



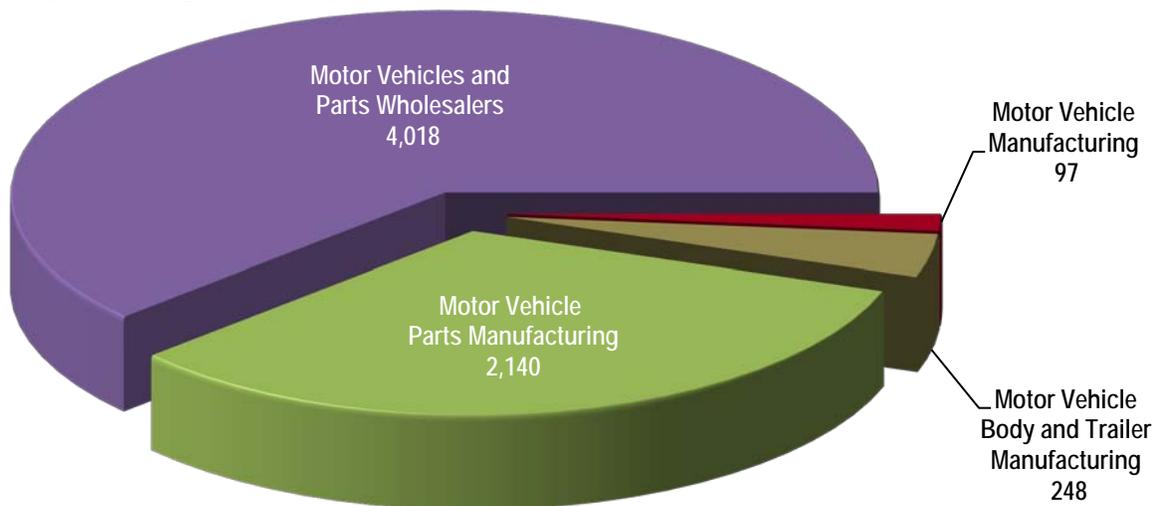
6,503 Jobs
0.3% of total

Output



\$2.4 Billion
0.6% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Jewelry Manufacturing and Wholesaling

Los Angeles County (2008)

Establishments



1,071
0.3% of total

Employment



6,567 Jobs
0.2% of total

Annual Payroll



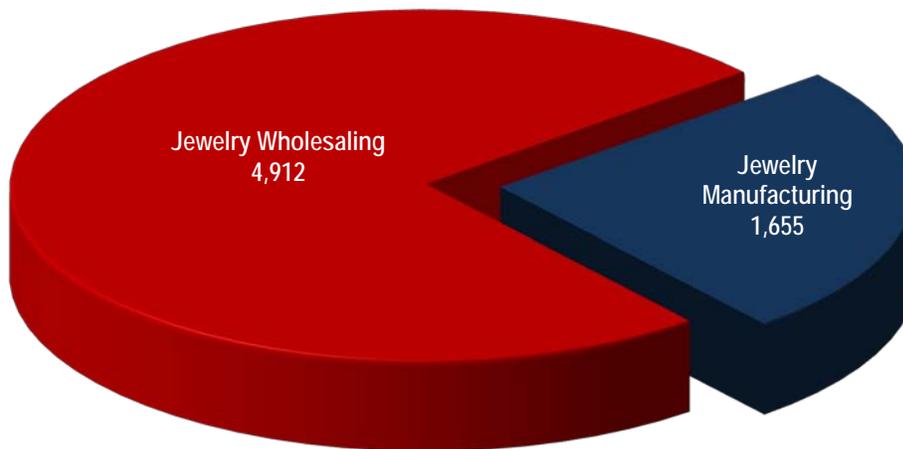
\$281 Million
0.1% of total

Output



\$1.0 Billion
0.1% of total

Employment by Industry



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Jewelry Manufacturing and Wholesaling

City of Los Angeles WIB SDA (2008)

Establishments



875
0.4% of total

Employment



5,306 Jobs
0.3% of total

Output



\$379 Million
0.1% of total

Employment by Industry



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Population-Serving Industry Clusters

The following pages present detailed data on each of the fifteen population-serving industry clusters:

	Page
Retail Trade	46
Food Services and Drinking Places	48
Construction	50
Real Estate	52
Repair and Maintenance	54
Waste Management and Remediation Services	56

Retail Trade

Los Angeles County (2008)

Establishments



27,293
6.5% of total

Employment



418,264 Jobs
10.0% of total

Annual Payroll



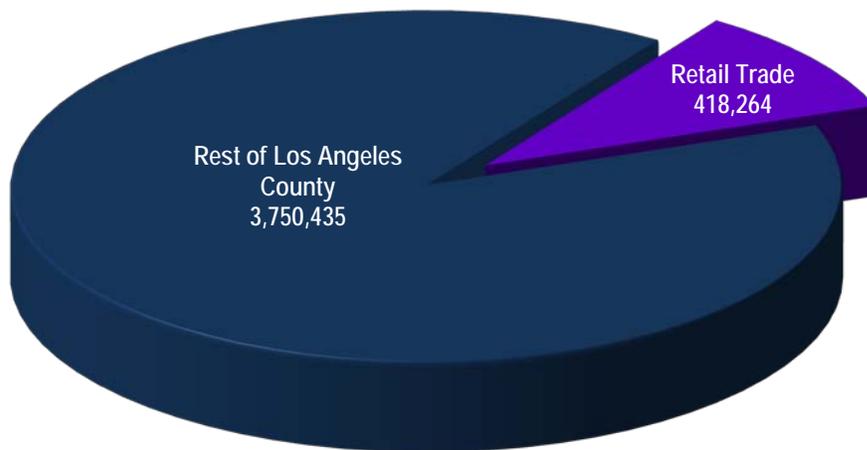
\$12.8 Billion
6.0% of total

Output



\$44.9 Billion
4.7% of total

Share of Total Employment



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Retail Trade

City of Los Angeles WIB SDA (2008)

Establishments



11,968
6.1% of total

Employment



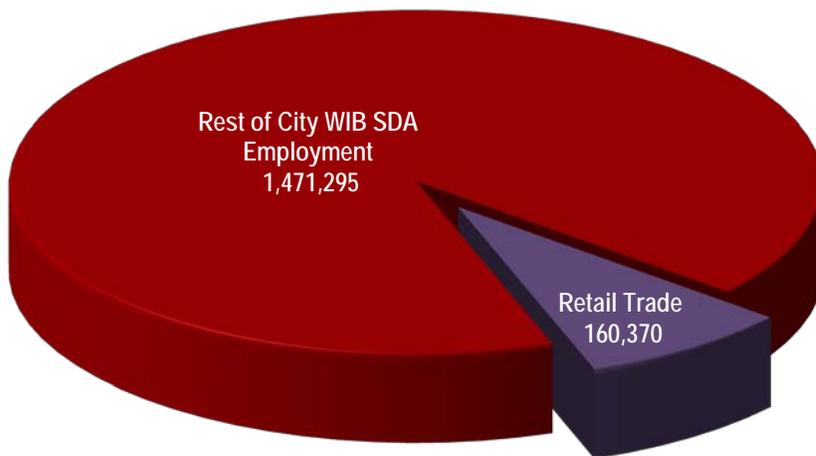
160,370 Jobs
8.5% of total

Output



\$17.6 Billion
4.3% of total

Share of Total Employment



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Food Services and Drinking Places

Los Angeles County (2008)

Establishments



16,161
3.8% of total

Employment



286,974 Jobs
6.9% of total

Annual Payroll



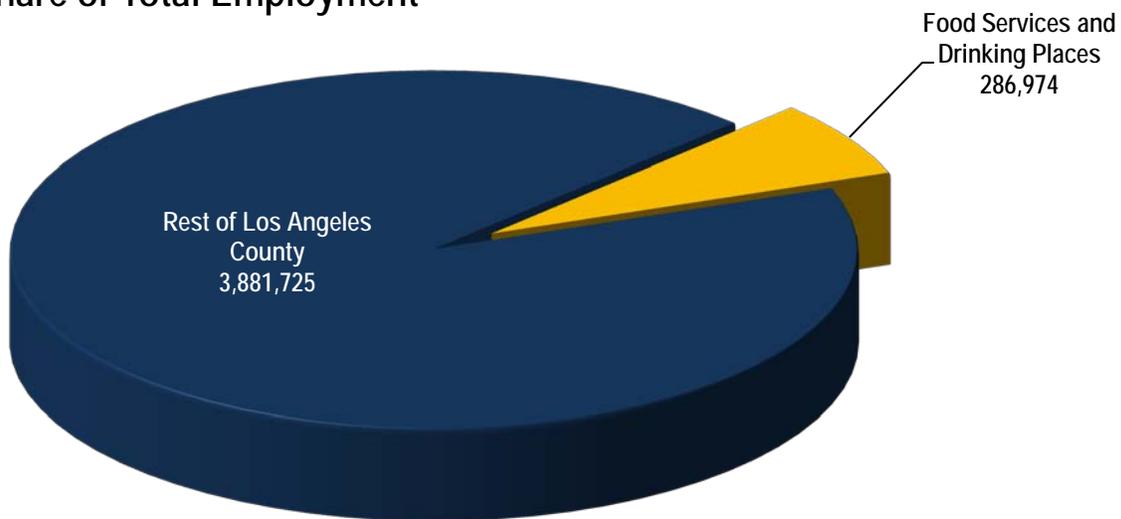
\$5.2 Billion
2.4% of total

Output



\$20.6 Billion
2.2% of total

Share of Total Employment



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Food Services and Drinking Places

City of Los Angeles WIB SDA (2008)

Establishments



6,924
3.5% of total

Employment



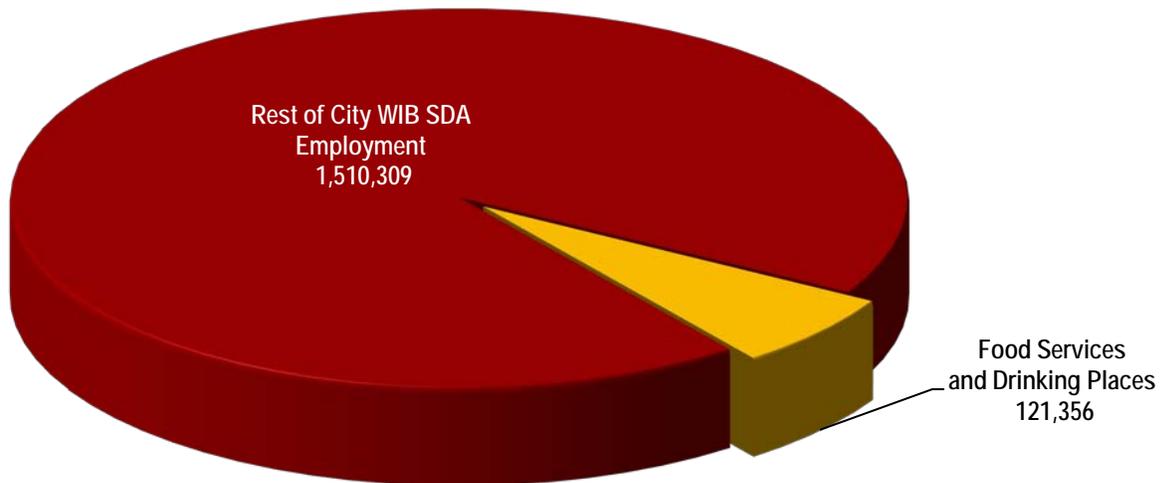
121,356 Jobs
6.4% of total

Output



\$8.7 Billion
2.1% of total

Share of Total Employment



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Construction

Los Angeles County (2008)

Establishments



13,875
3.3% of total

Employment



145,652 Jobs
3.5% of total

Annual Payroll



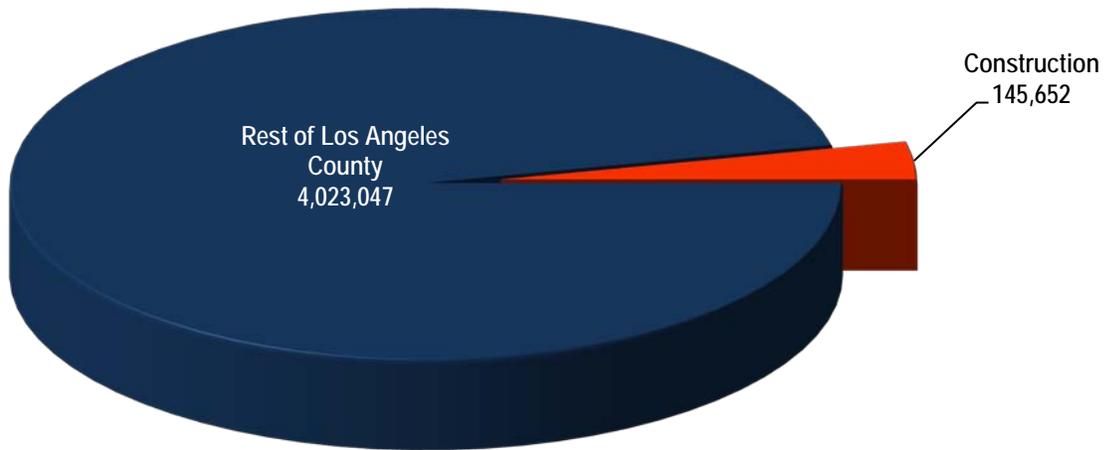
\$7.7 Billion
3.6% of total

Output



\$32.9 Billion
3.4% of total

Share of Total Employment



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Construction

City of Los Angeles WIB SDA (2008)

Establishments



5,610
2.9% of total

Employment



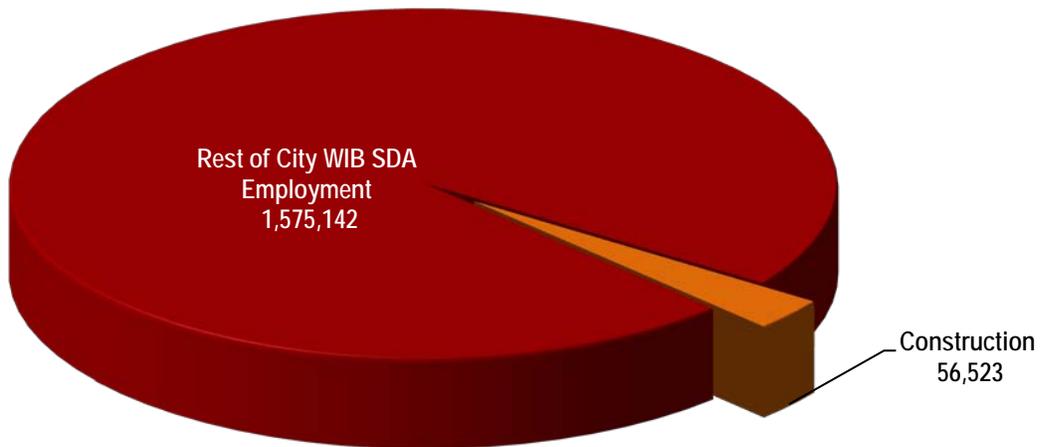
56,523 Jobs
3.0% of total

Output



\$12.8 Billion
3.1% of total

Share of Total Employment



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Real Estate

Los Angeles County (2008)

Establishments



10,224
2.4% of total

Employment



54,226 Jobs
1.3% of total

Annual Payroll



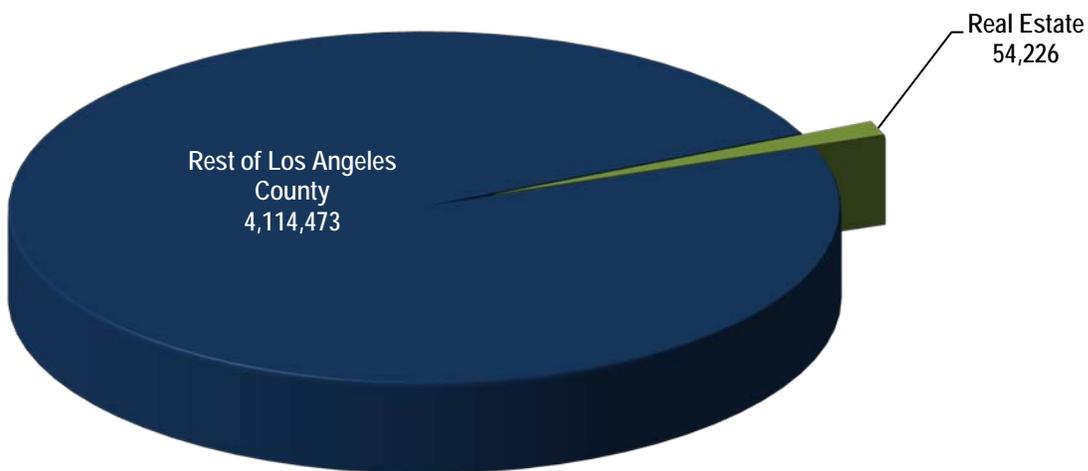
\$3.0 Billion
1.4% of total

Output



\$52.1 Billion
5.5% of total

Share of Total Employment



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Real Estate

City of Los Angeles WIB SDA (2008)

Establishments



4,799
2.5% of total

Employment



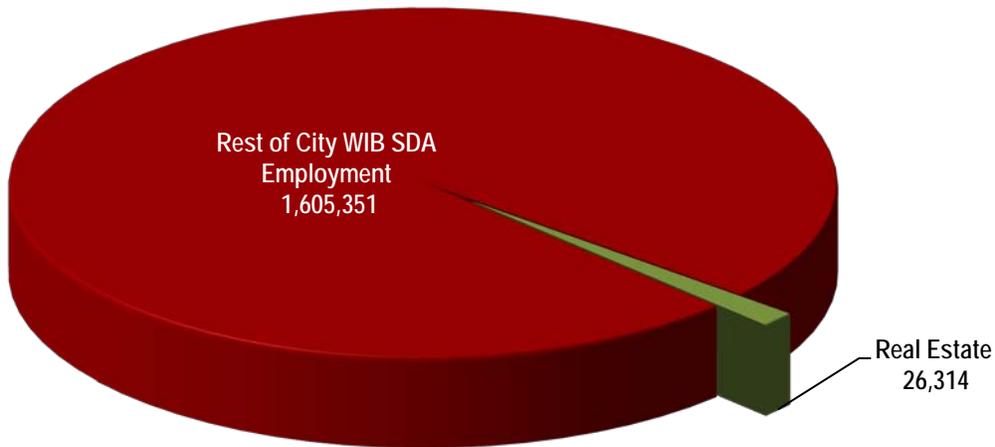
26,314 Jobs
1.4% of total

Output



\$26.1 Billion
6.4% of total

Share of Total Employment



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Repair and Maintenance

Los Angeles County (2008)

Establishments



6,157
1.5% of total

Employment



40,948 Jobs
1.0% of total

Annual Payroll



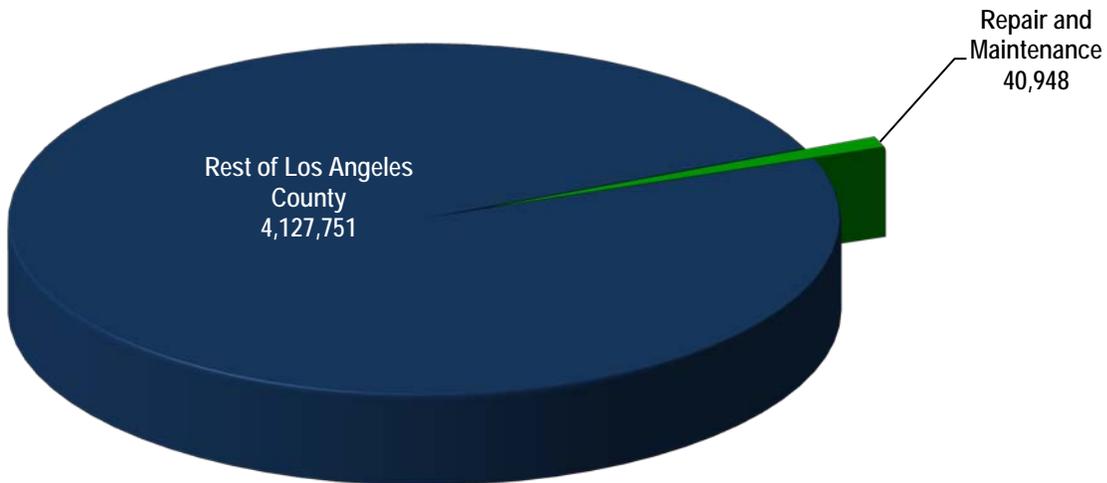
\$1.4 Billion
0.6% of total

Output



\$9.6 Billion
1.0% of total

Share of Total Employment



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Repair and Maintenance

City of Los Angeles WIB SDA (2008)

Establishments



2,602
1.3% of total

Employment



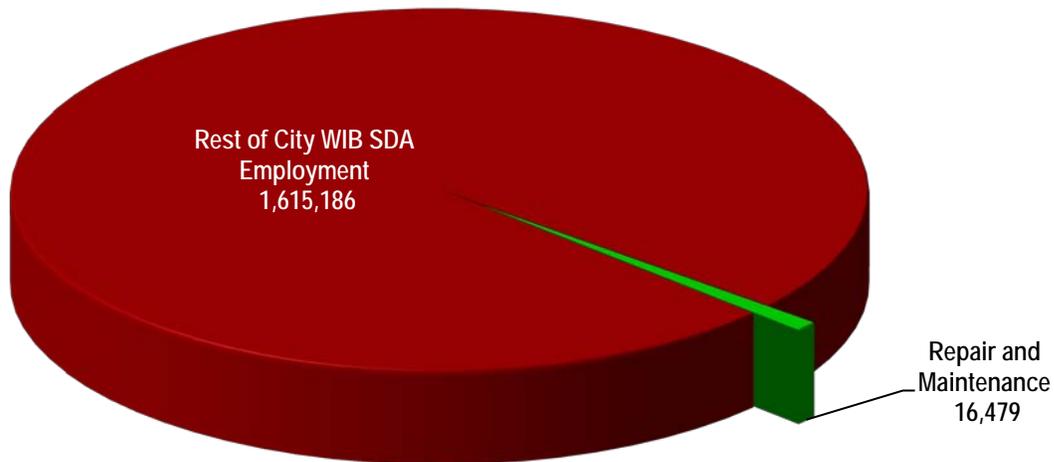
16,479 Jobs
0.9% of total

Output



\$3.5 Billion
0.9% of total

Share of Total Employment



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Waste Management and Remediation Services

Los Angeles County (2008)

Establishments



349
0.1% of total

Employment



9,016 Jobs
0.2% of total

Annual Payroll



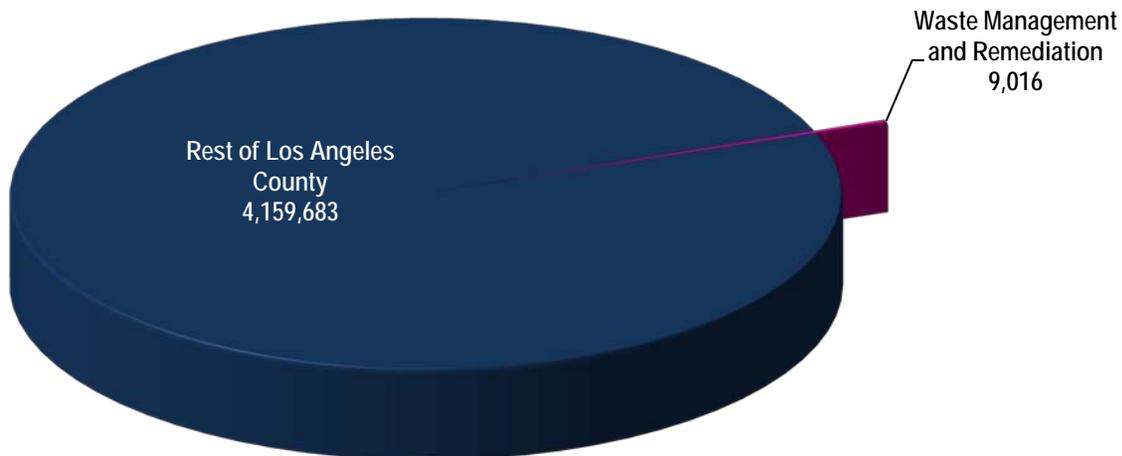
\$467 Million
0.2% of total

Output



\$1.9 Billion
0.2% of total

Share of Total Employment



Average Annual Earnings



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

Waste Management and Remediation Services

City of Los Angeles WIB SDA (2008)

Establishments



130
0.1% of total

Employment



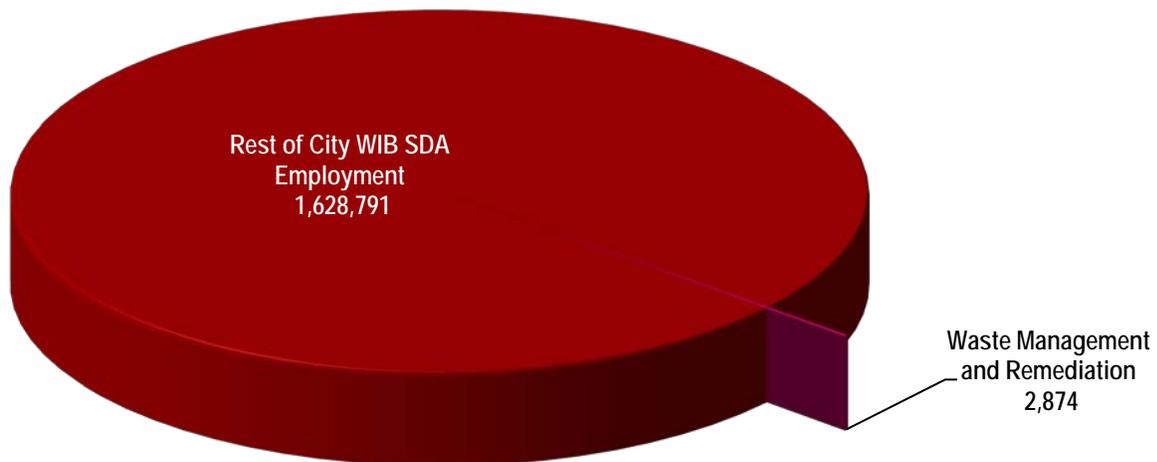
2,874 Jobs
0.2% of total

Output



\$534 Million
0.1% of total

Share of Total Employment



Sources: CA EDD; Minnesota IMPLAN Group, Inc.; LAEDC

In this section, we present population and employment projections for Los Angeles County. We begin by reviewing overall demographic trends at the national, state and county levels, and then turn to employment forecasts at the sector level as well as by detailed industry. Using these projections, we estimate job creation potentials for the county and for the City of Los Angeles WIB SDA, and discuss the share of county industry employment that falls in the City of Los Angeles WIB SDA.

There are several sources of information on demographics and industry employment trends, including the U.S. Bureau of Labor Statistics (BLS), the Demographic Research Unit of the California Department of Finance, and the California Employment Development Department's Labor Market Information Division (LMID). We also reviewed industry employment estimates obtained from Moody's Economy.com and incorporated these into our own forecast.

We begin with a review of the key demographic trends affecting the growth of the labor force. Since the size of the labor force is the ultimate limiting factor in future output growth, this key variable lays the foundation for our long-term employment projections. Thereafter, we look at the most recently published annual industry employment projections for Los Angeles County.

Population and Demographic Trends

Labor force projections depend upon two variables: population growth and labor force participation rates. Population growth is a function of the natural increase in population (the number of natural births less the number of deaths) and net migration (the number of in-migrants less those migrating out). At the state level, natural population increases account for at least 90 percent of total population growth.

With an average annual growth rate of 1.2 percent over the 2000 to 2020 period, the working-age population in California is projected to reach 28.6 million in 2020.³ This growth rate has been slowing and is expected to continue falling in spite of increased net migration, from an average annual rate of 1.6 percent during the period 2000 to 2010 to 0.8 percent during the period 2010 to 2020. See Exhibit 3-1 for these projections.

³ The working-age population includes all persons aged 15 to 64 years.

These rates are comparable to those at the national level. The average annual growth rate in the national labor force was 1.1 percent from 1998 to 2008 and is projected to be 0.8 percent from 2008 to 2018.⁴ Growth rates are higher in California partly due to the larger population share of Hispanics, who tend to have higher population growth rates than other racial or ethnic groups.^{5,6}

Exhibit 3-1 Population Projections (2000 to 2020)			
	2000	2010	2020
Total Population:			
California	34,105,437	39,135,676	44,135,923
Los Angeles County	9,578,960	10,514,563	11,214,237
Working-Age Population:			
California	22,646,869	26,524,408	28,629,786
Los Angeles County	6,354,252	7,152,752	7,382,475

Source: California Department of Finance, Demographic Research Unit
Working-age population = all persons aged 15 to 64 years

In Los Angeles County, there has been negative net migration since 2005, meaning more of the region's population has been migrating out of the county than has arrived. The natural population increase has more than offset this loss of population, but overall growth is slower than at the state level, averaging 0.9 percent annually during 2000-2010 and 0.7 percent annually between 2010 and 2020. By 2020, the working-age population in Los Angeles County is projected to reach 7.4 million.

This pattern of a slowdown in the growth of working-age population reflects the large-scale demographic shift underway as the baby-boom generation, born between 1946 and 1964, ascends the age ladder and exits the workforce.

Much of the difference in the county-level trends compared to national and statewide trends can be understood by considering migration patterns and examining population compositions. At the state level, the population aged 30 to 39 years has declined during the

⁴ BLS *Monthly Labor Review* (11/09) "Labor force projections to 2018: older workers staying more active." The comparison is not precise as the California estimate includes the entire population within the age bracket, while the national estimates are based on labor force growth (the labor force includes only the civilian, non-institutional population aged 16 years and older). Still, the two growth rates are approximately comparable. We compare labor force growth rates directly on the following page.

⁵ According to the BLS, the share of Hispanics in the US labor force was 14.3 percent in 2008. In California, 35.1 percent of the working-age population in 2008 was Hispanic, and is projected to be 42.1 percent in 2020 (California Department of Finance Demographic Research Unit 2007).

⁶ In California, the average annual population growth rate for Hispanics is projected to be 2.8 percent from 2000 to 2010 and 2.3 percent from 2010 to 2020. This is more than double the projected total population growth rates of 1.4 percent and 1.2 percent, respectively.

2000 to 2010 period, as workers migrated out-of-state in search of better jobs following the bursting of the dot-com bubble and to follow construction jobs in neighboring states.

Exhibit 3-2 Population Projections (2000 to 2020) Average Annual Growth Rates (%)		
	2000-10	2010-20
<i>Total Population:</i>		
California	1.4	1.2
Los Angeles County	0.9	0.7
<i>Working-Age Population:</i>		
California	1.6	0.8
Los Angeles County	1.2	0.3

Source: California Department of Finance, Demographic Research Unit
Working-age population = all persons aged 15 to 64 years

In Los Angeles County, two age groups are expected to shrink over the same period due to out-migration into neighboring counties; one group includes persons aged 25 to 39 years and the other those aged 0 to 9 years. This is evidently a response of young families seeking more affordable housing that Los Angeles County lacks. The loss of these now-young workers and their children can be traced in the demographic projections for Los Angeles County past 2020, when the children reach working age. The loss of both parents and children from the current working-age population results in Los Angeles County experiencing a fall in its working-age population past 2020.

Working-Age Population versus Labor Force

Not everyone in the working-age population will be labor force participants. The discussion above has reviewed the demographics of California and Los Angeles County, but employment and employment growth are based on labor force growth, which is a consequence of both changes in population and in labor force participation rates.⁷

Participation rates are influenced by a number of factors, and differ by age, racial and ethnic composition and gender. For example, the participation rates of older workers (aged 55 and over), while lower than average, has been rising since 1980. The Bureau of Labor Statistics (BLS) mentions several factors behind this increase, but the most important one is the sheer number of baby-boomers reaching this age group.

⁷ The labor force participation rate of a group is the percent of group members who are either working or unemployed and seeking a new job.

It is also worth noting that the participation rates of younger workers, especially men aged 16-19 years, have been declining since 1990 and should continue to decline as school enrollment rates improve.

Thus the overall participation rate in the United States is projected to decline from 66.0 percent in 2008 to 64.5 percent in 2018 and to 60.4 in 2050.⁸ The overall decline is due to the aging of the population; the relatively small size of Generation X; and lower participation rates for the youngest working-age groups.

The share of older workers in the labor force is expected to continue increasing as future boomers remain longer in the labor force. Consequently, the share of prime-aged workers (24-54) will decrease until 2020, as boomers retire and leave the labor force. The BLS notes that two groups, older and younger workers, hold the most potential to increase their participation rates; they may therefore hold the key to increased growth in the labor force in the future. Given the importance of labor force growth to long-term economic growth, projections of the participation rates of these groups (and in particular that of older workers) will have the largest impact on our projections for economic activity in the region.

Exhibit 3-3 Labor Force (1995-2005) Average Annual Growth Rates (%)			
	1995-2000	2000-2005	1995-2005
United States	1.5	0.9	1.2
California	2.0	0.9	1.5
Los Angeles County	1.8	0.6	1.2

Source: Bureau of Labor Statistics

In California, labor force growth was 2.0 percent between 1995 and 2000, slowing to 0.9 percent from 2000 to 2005. These rates were slightly higher than the national rates of 1.5 percent and 0.9 percent. In Los Angeles County, the average annual growth rate in the labor force was 1.8 percent from 1995 to 2000, falling to 0.6 percent from 2000 to 2005.

Labor force participation rates fell during the recession as discouraged workers and previously marginally-attached workers left the labor force. As the economy improves, these workers will return to the labor force. From the trends discussed above, the general slowing in the growth of the labor force in Los Angeles County will be mediated by an increase early in the recovery period, but it will continue until 2020 coincident with the underlying demographic shift. Thereafter, the pace of growth will increase slowly.

⁸ BLS *Monthly Labor Review* (11/06), *ibid.*, and *Monthly Labor Review* (11/09), “Labor force projections to 2018: older workers staying more active.”

Projections of Industry Employment

The recession that began in December of 2007 appears to be over. The BLS projects the national economy returning to a path of long-run growth with average output growth projected at 2.4 percent.⁹ The long-run trend is based primarily on labor force dynamics and slowing productivity growth; however, the recovery period in the short-run is expected to be more robust as the economy compensates for the steep declines in 2008 and 2009.

Employment in consumer-related markets, as well as residential construction, financial services and durable goods manufacturing, will continue to be challenged through mid-2010. Tight credit and high unemployment negatively impact both consumer and business spending, and both goods-producing and service-providing sectors. Weak housing demand will limit new housing starts, and high unemployment will dampen demand for consumer goods. Employment conditions are not expected to improve until the third quarter of 2010.

In this section, we present industry employment projections for Los Angeles County. Current and historical data on employment are presented to provide context for the roadmap forward. The most recent data available covers the year 2008. With continuing employment declines into 2009, we instead look forward past the turning point in the economy and base our projections on the ten-year period from 2010 to 2020.

The National Outlook

Long-term industry employment projections reflect the historical shift in the United States from goods-producing sectors to service-providing sectors.¹⁰ Slower growth in productivity and slower labor force growth will contribute to declines in overall growth of employment and output. At the national level, the BLS estimates that employment will grow at an average 1.0 percent annual rate over the 2008 to 2018 decade, compared to the 0.7 percent average rate of the previous decade.¹¹

Nearly all employment growth will occur in the service-providing sectors, particularly health care and social assistance, educational services, and professional and business services. Growth in health care and social assistance is driven largely by expected demographic changes and advances in medical technology. Much of the employment growth in

⁹ *Monthly Labor Review* (11/09), “The U.S. economy to 2018: from recession to recovery.” We provide the outlook for the national level produced by the BLS. This is the most recent outlook, covering the ten-year period from 2008 through 2018, which does not precisely match our forecast period for Los Angeles County. However, the comments are nevertheless useful to provide a context for our regional projections.

¹⁰ The share of employment in service-providing sectors grew from 72.8 percent in 1998 to 77.2 percent in 2008 and is projected to reach 78.8 percent in 2018. The goods-producing sector share was 17.3 percent in 1998, 14.2 percent in 2008 and is projected to be 12.9 percent in 2018. The share of agriculture, forestry, fishing and hunting declined from 1.8 percent in 1998 to 1.4 percent in 2008 and is projected to fall to 1.2 percent in 2018.

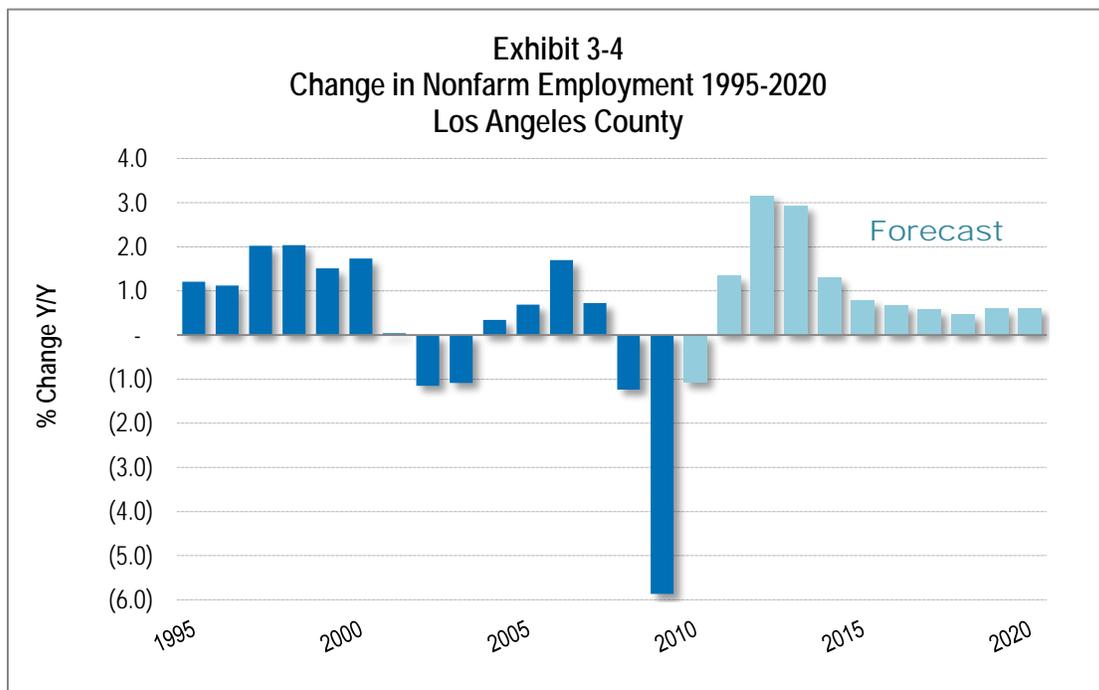
¹¹ BLS *Monthly Labor Review* (11/09), “Industry output and employment projections to 2018.”

professional and business services will be due to continued demand for advice on the implementation of new technologies and compliance with tax and environment regulations, as well as firms' increased outsourcing of business activities.

At the national level, construction is the only goods-producing industry projected to see employment growth from 2008 to 2018. Manufacturing employment will fall by 0.9 percent annually, with 69 of the 84 manufacturing industries expected to see employment declines over the decade due to continuing labor-saving techniques. Goods-producing subsectors with the biggest projected employment declines at the national level are computer and electronic product manufacturing and transportation equipment manufacturing. Employment gains over the decade are projected for: construction, medical equipment and supplies manufacturing, and miscellaneous manufacturing.

Los Angeles County Forecast by Sector

The contour of our nonfarm employment forecast for Los Angeles County is shown in Exhibit 3-4, along with the county's historical growth performance since 1995.



Sources: California Employment Development Department; Moody's Economy.com; LAEDC

The shape of this forecast can be described as follows:

- The county's economy entered a severe recession in December of 2007, with an employment decline of 1.2 percent in 2008 and an estimated 5.9 percent decline in

2009. Employment is expected to continue to fall in early 2010 before recovering, with a year-over-year loss of 1.1 percent.

- Employment will recover in 2011 with a growth rate of 1.3 percent, and rebound with 3.2 percent growth in 2012 and 2.9 percent in 2013.
- After 2013, economic growth is forecast to continue to be positive but to decelerate from the rapid pace of the post-recession recovery period. In 2014, the forecast growth in employment is 1.3 percent, falling to 0.8 percent in 2015.
- Over the longer term, the economy in Los Angeles County is forecast to grow at its trend rate of approximately 0.6 percent.

Most industry sectors will follow this general contour of post-recession recovery followed by moderation. However, there are differences among industries. Recovery strength in many cases is determined by the magnitude of the industry's decline during the recession. For example, construction employment fell by 7.9 percent in 2008, almost 20 percent in 2009, and is expected to decline further in 2010 by 12 percent. Its recovery in 2011 is forecast to be at 1.6 percent growth and 5.8 percent growth in 2012, much stronger than the average.

Exhibit 3-5 summarizes the industry forecast by sector over the forecast period and for three historical five-year periods. Broadly, Los Angeles County's economic growth over the forecast period will be powered by the post-recession recovery, led in large part by service-providing industries such as professional and business services, educational and health services, and leisure and hospitality, as well as by construction.

Exhibit 3-5 Employment Growth in Los Angeles County by Sector: History and Forecast						
Industry Sector	Annual Average Percent Change					
	1995-00	2000-05	2005-10 ¹	2010 ¹ -15	2015-20	2010 ¹ -20
Total Nonfarm Payroll Employment	1.7	-0.2	-1.2	1.9	0.6	1.2
Goods Producing Industries	0.1	-3.5	-5.1	1.6	-0.3	0.6
Natural Resources and Mining	-4.0	1.8	2.6	0.7	-2.1	-0.7
Construction	3.1	2.5	-7.1	3.1	1.5	2.3
Manufacturing - Durable Goods	-0.2	-5.1	-4.6	2.0	-0.4	0.8
Manufacturing - Nondurable Goods	-0.8	-5.1	-4.5	0.2	-1.6	-0.7
Service Providing Industries	2.2	0.5	-0.6	2.2	0.7	1.4
Wholesale Trade	1.3	0.0	-1.9	2.0	0.1	1.0
Retail Trade	1.6	1.1	-1.5	1.2	-0.3	0.4
Transportation, Warehousing, Utilities	2.4	-1.5	-1.7	0.8	-0.8	0.0
Information	5.0	-3.2	0.4	0.9	0.3	0.6
Financial Activities	0.1	1.7	-2.4	2.1	1.1	1.6
Professional and Business Services	2.6	-0.4	-2.0	3.1	1.0	2.1
Educational and Health Services	2.3	2.5	2.3	2.7	1.4	2.1
Leisure and Hospitality	2.2	1.8	0.3	2.8	1.2	2.0
Other Services	1.3	0.6	-1.0	1.6	0.0	0.8
Government	1.6	0.1	-0.0	0.6	0.7	0.7

¹ Employment data for 2009 included in this period are preliminary; data for 2010 are forecasts.
Sources: California Employment Development Department; Moody's Economy.com; LAEDC

Service-providing industries are in aggregate expected to grow at an average annual rate of 1.4 percent between 2010 and 2020, higher than goods-producing industries which will grow at an average annual rate of 0.6 percent.

Overall, the employment forecast incorporates a recovery period that begins in 2010, although early losses will still outweigh gains experienced later in the year. All private sectors will show employment gains by 2011 and will grow in 2012. Post-recession growth will improve in 2013. Thereafter, the recovery will moderate and employment growth will return toward its long term trend. The expected experience in individual sectors is as follows:

- Employment growth in *natural resources and mining* industries is expected to be negative after moderate growth during the recovery period. Continued consumer preference shifts in the face of higher prices will reduce the longer term demand for oil, yielding an overall annual average employment loss of 0.9 percent from 2010 to 2020.
- *Construction* industry employment experienced severe declines through 2009 and will continue to decline overall in 2010 by over 9 percent. Growth is expected to return slowly in 2011 and robustly in 2012 as major infrastructure projects are brought on line and excess housing inventory is soaked up, moderating thereafter to produce an overall annual average growth of 2.3 percent from 2010 through 2020.
- *Manufacturing* employment will continue its long-term decline in Los Angeles County, showing an average annual growth of 0.2 percent between 2010 and 2020 due to a moderate rebound in 2012 and 2013. *Durable goods manufacturing* will see moderate to strong growth during the recovery period as a consequence of construction activity. *Nondurable goods manufacturing* will continue its long-term decline beyond a small recovery in 2012 and 2013. Continued low-cost competition from lower income countries in Asia and Latin America will drive these industries from the area. This is especially true in the *apparel, paper, textiles, and plastics industries*. Moderate employment growth may occur in other manufacturing industries during the initial recovery years of 2011-2013 but the negative long-term factors will dominate in the years thereafter.
- *Wholesale trade* employment, which has been relatively flat since 2000, is forecast to remain challenged until consumer spending returns in 2011. However, an increasing amount of wholesale activity will occur on-line, where employment growth will be strong, reaching 3.9 percent per year on average from 2010 through 2020. As a result, overall employment in the wholesale trade sector is forecast to grow by 1.0 percent per year on average between 2010 and 2020.
- *Retail trade* activity in Los Angeles will be lackluster through the forecast period reflecting the subdued consumer spending. Growth during the recovery period will reach 2.5 percent in 2012, but overall sector employment is forecast to grow by only 0.4 percent per year on average between 2010 and 2020. Various retail sectors will outperform others, including building material and garden supply stores, health and personal care stores, clothing stores, and general merchandise stores.

- The *transportation, warehousing and utilities sector* will experience little employment growth over the forecast period, registering close to zero per year on average from 2010 through 2020. Following growth of 0.9 percent in 2011 and 2.8 percent in 2012, employment in the transportation and warehousing industries is forecast to slow and turn negative growth for the remaining years of the decade.
- Employment in the *information* sector, which includes motion picture production, broadcasting, publishing and the new media industries, will see an initial boost in 2010 due in the most part to the increased employment generated by filming activities responding to the newly-enacted California Film and Television Tax Credit Program. Employment in *motion picture and sound recording* activities are expected to jump by more than 10 percent in 2010 after a steep employment decline in 2009. Growth will continue through the duration of the five-year program but will fall off thereafter. Several other industries in this sector will be impacted by changing technology and consumer behavior. Employment declines are expected in the traditional *publishing* industries as demand for print products declines in favor of electronic forms of information. Similarly, demand for *telecommunications* will decline to be replaced by other media types. *Other information*, which essentially encompasses the storage and retrieval of information, will grow robustly through the recovery period. Overall, employment in the information sector is forecast to increase by 0.6 percent per year on average between 2010 and 2020.
- The *financial activities* sector contains the finance, insurance, real estate and leasing industries. After severe declines in employment of 4.2 percent in 2008 and 6.6 percent in 2009, financial activities are expected to bounce back during 2012 and 2013, growing at the moderate annual average rate of 1.6 percent between 2010 and 2020. Note, however, that these are cyclical industries and employment will decline during future economic downturns.
- The *professional and business services* sector contains professional, scientific and technical services, company management (headquarters locations), and administrative, support and waste services industries. Most of the firms in this sector provide services to other businesses in Los Angeles County. Already large, the region's business base will continue to grow. The service firms in this sector are beneficiaries of the trend by businesses to outsource activities formerly provided in-house. Although *management* activities are forecast to remain flat over the period, *professional, scientific and technical services* are forecast to grow relatively well at an average annual rate of 1.5 percent. This sector includes the region's architectural, design and engineering firms. Overall employment in the professional and business services sector is forecast to increase by 2.1 percent per year on average between 2010 and 2020, assisted by robust growth of the *administrative, support and waste management industry* during the post-recession recovery period of 7.4 percent in 2012 and 6.2 percent in 2013, and its continued strength through the forecast period.

- Industries in the *education and health services* sector are expected to grow at a healthy pace. Private *education* is growing strongly in Los Angeles, led by the region's top-quality universities. In addition, there will be substantial growth in the number of privately-owned technical and industry-specific occupational training institutions. With regard to *health care and social assistance*, the continued growth in the region's population, especially its senior population, means local demands for health care will increase substantially. Many hospitals will be constrained by budget problems, but those that are not will grow. Other health care providers will gain as more diagnosis and testing activity takes place outside the hospital setting. Employment in the private educational and health services sector will grow by 2.1 percent per year on average between 2010 and 2020.
- The *leisure and hospitality* sector will show better-than-average growth over the forecast period. The county's arts, entertainment and recreation facilities will gain in number and in quality, attracting a wider audience from around the world. Continued development of the downtown area around the convention center and the remake of other tourist areas will boost this industry even more. Overall employment in the leisure and hospitality sector is forecast to increase by 2.0 percent per year on average between 2010 and 2020.
- Finally, budget constraints will restrict the growth of *government* employment to that of population growth at 0.7 percent per year on average between 2010 and 2020, as state and local governments deliver public services to the county's population.

Detailed Industry Forecast for Los Angeles County

Exhibits 3-6 through 3-8 contain the industry details that lie behind the sector forecasts presented in Exhibit 3-5. Industries are typically selected at the three-digit NAICS code level. This provides enough specific information to be useful without getting lost in the details. In total, we present employment forecasts for 64 industries.

Industries are ranked by expected employment growth over the next five years. They are sorted into three groups according to their projected growth rates.

Exhibit 3-6 presents high growth industries. Employment in these industries is forecast to grow at a rate at least as great as the average of all non-farm employment over the five year period, which is forecast to be 1.2 percent per year on average. The fastest growing industry will be wholesale electronic markets and agents, employment in which is forecast to grow at an annual average of 3.9 percent between 2010 and 2020.

Exhibit 3-6 Employment Growth by Industry in Los Angeles County High Growth Industries							
Overall Rank	NAICS Industry Sector	NAICS	Annual Average Percent Change				
			2000-05	2005-10 ¹	2010 ¹ -15	2015-20	2010 ¹ -20
1	Wholesale Electronic Markets and Agents	425	10.8	-4.2	5.1	2.6	3.9
2	Administrative, Support, Waste Mgmt Services	56	-1.3	-2.6	4.2	1.8	3.0
3	Heavy and Civil Engineering Construction	237	-1.2	-5.3	3.3	1.6	2.5
4	Specialty Trade Contractors	238	2.9	-7.4	3.3	1.6	2.4
5	Health Care and Social Assistance	62	2.5	2.0	2.9	1.5	2.2
6	Accommodation and Food Services	72	1.9	0.4	2.9	1.3	2.1
7	Manufacturing: Nonmetallic Mineral Products	327	-6.5	-6.8	3.1	1.1	2.1
8	Manufacturing: Computer and Electronic Prods	334	-3.0	-3.5	3.1	0.8	1.9
9	Construction of Buildings	236	2.7	-7.2	2.5	1.0	1.7
10	Finance and Insurance	52	2.0	-3.1	2.1	1.3	1.7
11	Other Information Services ²	519	-14.4	15.7	2.1	1.2	1.7
12	Manufacturing: Furniture and Related Products	337	-5.1	-13.0	2.8	0.2	1.5
13	Professional, Scientific, and Technical Services	541	2.0	-0.3	2.5	0.5	1.5
14	Arts, Entertainment, and Recreation	71	1.7	-0.1	2.1	0.8	1.4
15	Manufacturing: Fabricated Metal Products	332	-4.7	-3.5	2.9	-0.1	1.4
16	Educational Services	611	2.5	3.5	2.0	0.8	1.4
17	Real Estate and Rental and Leasing	53	1.1	-1.2	1.9	0.9	1.4
18	Retail: Health and Personal Care Stores	446	0.9	-0.0	2.2	0.4	1.3
19	Religious, Civic, Professional Organizations	813	0.4	0.4	2.2	0.4	1.3
20	Manufacturing: Electrical Equipmt, Appliances	335	-4.7	-3.2	2.5	-0.0	1.2

¹ Employment data for 2009 included in this period are preliminary; data for 2010 are forecasts.

² The definition of this industry was changed in 1997 and 2002, making growth rates between periods non-comparable.

Sources: California Employment Development Department; Moody's Economy.com; LAEDC

Exhibit 3-7 presents moderate growth industries, with growth less than the average for all nonfarm employment but still positive growth over the forecast period.

Exhibit 3-7 Employment Growth by Industry in Los Angeles County Moderate Growth Industries							
Overall Rank	NAICS Industry Sector	NAICS	Annual Average Percent Change				
			2000-05	2005-10 ¹	2010 ¹ -15	2015-20	2010 ¹ -20
21	Retail: General Merchandise	452	2.5	0.5	2.1	0.3	1.2
22	Wholesalers: Nondurable Goods	424	0.9	0.0	2.1	0.2	1.1
23	Retail: Clothing Stores	448	2.4	-0.3	2.0	0.2	1.1
24	Retail: Building Materials, Garden Equipment	444	2.9	-3.2	1.9	0.2	1.1
25	Personal and Laundry Services	812	0.9	-0.8	1.7	0.1	0.9
26	Motion Picture and Sound Recording Industries	512	-1.6	1.0	1.2	0.5	0.9
27	Manufacturing: Primary Metals	331	-5.5	-6.0	2.4	-0.7	0.9
28	Local Government	93	0.3	0.2	0.8	0.9	0.8
29	Broadcasting (except Internet)	515	-0.6	-1.1	1.2	0.5	0.8
30	Manufacturing: Wood Products	321	-3.0	-5.6	0.8	0.3	0.6
31	Management of Companies and Enterprises	551	-4.6	-6.4	1.2	-0.2	0.5
32	State Government	92	0.3	0.2	0.4	0.5	0.4
33	Printing and Related Support Activities	323	-4.8	-6.4	1.1	-0.3	0.4
34	Retail: Food and Beverages	445	2.1	0.9	1.0	-0.5	0.2
35	Wholesalers: Durable Goods	423	-2.4	-3.0	1.1	-0.7	0.2
36	Utilities	221	0.5	1.8	0.4	-0.2	0.1
37	Manufacturing: Miscellaneous	339	-6.5	-3.3	1.1	-1.0	0.1
38	Transportation and Warehousing	48-49	-1.7	-2.1	0.9	-0.8	0.0
39	Internet Service Providers, Portals ²	518	-9.7	-1.0	0.3	-0.3	0.0
40	Manufacturing: Food	311	-1.0	-2.4	0.8	-0.8	0.0

¹ Employment data for 2009 included in this period are preliminary; data for 2010 are forecasts.

² The definition of this industry was changed in 1997 and 2002, making growth rates between periods non-comparable.

Sources: California Employment Development Department; Moody's Economy.com; LAEDC

Finally, Exhibit 3-8 lists the remaining industries, which are projected to experience employment declines over the forecast period. In this group are many manufacturing industries, retail industries and traditional media, which will fail to grow in spite of our expected recovery period.

Exhibit 3-8 Employment Growth by Industry in Los Angeles County Negative Growth Industries							
Overall Rank	NAICS Industry Sector	NAICS	Annual Average Percent Change				
			2000-05	2005-10 ¹	2010 ¹ -15	2015-20	2010 ¹ -20
41	Manufacturing: Beverage and Tobacco Prods	312	-0.2	2.5	0.7	-0.8	-0.0
42	Retail: Sporting Goods, Hobbies, Books, Music	451	-1.6	-3.1	0.7	-0.8	-0.0
43	Repair and Maintenance	811	0.6	-3.2	0.7	-0.8	-0.1
44	Retail: Motor Vehicles and Parts	441	1.1	-5.5	0.6	-0.9	-0.1
45	Retail: Electronics and Appliances	443	-2.3	-6.9	0.4	-1.0	-0.3
46	Retail: Gasoline Stations	447	-1.7	0.2	0.4	-1.0	-0.3
47	Publishing Industries (except Internet)	511	-4.9	-4.4	-0.2	-0.7	-0.5
48	Retail: Nonstore Retailers	454	0.1	-0.2	0.2	-1.2	-0.5
49	Manufacturing: Paper	322	-4.9	-7.2	-0.4	-0.6	-0.5
50	Manufacturing: Machinery Manufacturing	333	-7.4	-5.0	1.3	-2.3	-0.6
51	Federal Government - Civilian	91	-1.6	-2.3	-0.8	-0.4	-0.6
52	Logging	1133	3.1	-90.7	0.5	-1.7	-0.6
53	Manufacturing: Textile Mills	313	-5.2	-8.0	-0.1	-1.3	-0.7
54	Retail: Furniture and Home Furnishings	442	1.6	-6.7	-0.1	-1.4	-0.7
55	Mining	21	1.9	2.6	0.7	-2.1	-0.7
56	Manufacturing: Plastics and Rubber Products	326	-5.5	-5.9	1.0	-2.7	-0.9
57	Telecommunications	517	-4.7	-3.3	-0.7	-1.1	-0.9
58	Manufacturing: Transportation Equipment	336	-6.0	-3.8	-0.1	-2.0	-1.0
59	Manufacturing: Textile Product Mills	314	-7.5	-5.1	-0.9	-1.2	-1.0
60	Manufacturing: Apparel	315	-7.8	-4.7	-0.4	-2.1	-1.2
61	Manufacturing: Chemical Manufacturing	325	-3.0	-3.3	0.4	-2.9	-1.3
62	Retail: Miscellaneous Stores	453	-1.9	-3.0	-0.7	-1.9	-1.3
63	Manufacturing: Petroleum and Coal Products	324	-5.7	-0.8	-0.1	-3.2	-1.6
64	Manufacturing: Leather and Allied Products	316	-9.5	-33.8	-100.0	-	-100.0

¹ Employment data for 2009 included in this period are preliminary; data for 2010 are forecasts.
Sources: California Employment Development Department; Moody's Economy.com; LAEDC

Potential for Job Creation in Los Angeles County

Having determined which industries are likely to grow over the next ten years, we now turn to an examination of the industrial profile of Los Angeles County and its employment forecasts. The purpose of looking at the industrial profile is to identify those industries which already have a presence in Los Angeles County, and their relative strength (measured by level of employment). Growth rates may indicate areas of potential employment, but if a *robust* rate of growth is expected in a *small* industry, the absolute number of jobs that may be added can be very small, while a *large* industry with a *slow* rate of growth may nevertheless add many jobs.

We begin by examining employment levels by industry sector, as shown in Exhibit 3-9.¹²

Exhibit 3-9 Industrial Profile Forecast Los Angeles County								
Industry Sector	2005		2010 ¹		2020		Ave Annual % Change	
	Employed (000)	% of total	Employed (000)	% of total	Employed (000)	% of total	2005-10 ¹	2010 ¹ -20
Total Nonfarm Payroll Employment	4,023.7		3,790.4		4,284.4		-1.2	1.2
Goods Producing Industries	626.2	15.6	481.5	12.7	513.4	12.0	-5.1	0.6
Natural Resources and Mining	3.7	0.1	4.2	0.1	3.9	0.1	2.6	-0.7
Construction	148.7	3.7	102.7	2.7	128.5	3.0	-7.1	2.3
Manufacturing - Durable Goods	265.7	6.6	209.6	5.5	226.8	5.3	-4.6	0.8
Manufacturing - Nondurable Goods	208.0	5.2	165.0	4.4	154.3	3.6	-4.5	-0.7
Service Providing Industries	2,814.0	69.9	2,725.5	71.9	3,147.5	73.5	-0.6	1.4
Wholesale Trade	217.1	5.4	197.2	5.2	218.6	5.1	-1.9	1.0
Retail Trade	414.3	10.3	384.2	10.1	401.4	9.4	-1.5	0.4
Transportation, Warehousing, Utilities	161.7	4.0	148.2	3.9	148.8	3.5	-1.7	0.0
Information	207.5	5.2	211.4	5.6	224.8	5.2	0.4	0.6
Financial Activities	244.0	6.1	215.6	5.7	252.7	5.9	-2.4	1.6
Professional and Business Services	576.1	14.3	520.4	13.7	638.0	14.9	-2.0	2.1
Educational and Health Services	471.3	11.7	527.6	13.9	646.4	15.1	2.3	2.1
Leisure and Hospitality	377.7	9.4	383.9	10.1	468.0	10.9	0.3	2.0
Other Services	144.2	3.6	137.1	3.6	148.9	3.5	-1.0	0.8
Government	583.6	14.5	583.4	15.4	623.5	14.6	-0.0	0.7

¹ Employment data for 2009 included in this period are preliminary; data for 2010 are forecasts.
Sources: California Employment Development Department; Moody's Economy.com; LAEDC

¹² The data on employment, establishments and average weekly wages used in this section are taken from the Quarterly Census of Employment and Wages conducted by the California Employment Development Department and the Bureau of Labor Statistics. These data do not include businesses without employees (such as self-proprietorships) or businesses that hire family members as employees and therefore are likely to understate actual employment.

Overall, the county is expected to experience an average annual decline in non-farm employment of 1.2 percent between 2005 and 2010, reflecting the recession that began in December of 2007 which reversed the employment gains of 2005 through 2007. The post-recession recovery will lift the annual average growth rate for total nonfarm payroll between 2010 and 2020 to 1.2 percent.

Employment levels and industrial shares for three years are displayed: historical data for 2005 and forecast data for 2010 and 2020. Private sector employment accounted for 85.5 percent of total nonfarm employment in 2005 and is forecast to fall to 84.6 percent in 2010 but rise to 85.4 percent by 2020.

The remaining employment shares (of each industry) are shown as percentages of total non-farm employment. For example, employment in goods-producing industries accounted for 15.6 percent of non-farm employment in 2005. This share is on the decline and is forecast to fall to 12.7 percent in 2010 and to 12.0 percent in 2020.

This reflects the changing industrial structure of Los Angeles County, similar to that which is occurring on the national scale, towards a more service-oriented economy. Thus the flip side of the decline in the share of manufacturing employment is the increase in employment in service-providing industries, which employed 69.9 percent of non-farm employment in 2005 and is expected to rise to 71.9 percent in 2010 and 73.5 percent by 2020. The industry sectors that are responsible for this increasing share are professional and business services, education and health services, and leisure and hospitality.

Exhibit 3-10 shows the largest 30 industries in Los Angeles County in 2008, as measured by employment, along with their forecast employment levels for 2020. Local government tops the list with 470,280 employees in 2008, followed by the health care and social assistance industry with 398,260 employees, and the accommodation and food services industry with 328,430 employees.

The relative rankings are not expected to change significantly over the forecast period, with the exception of the following:

- ♦ Employment in the health care and social assistance industry will grow at a faster rate than local government employment over the forecast period, resulting in a larger industry by 2020;
- ♦ Employment in administrative, support and waste management industries is expected to grow at a faster rate than professional, scientific and technical services, thus gaining in relative ranking; and
- ♦ Wholesalers of durable goods will lose relative employment ranking as this industry suffers from the structural change affecting the region's industrial composition.

Exhibit 3-10 Top 30 Industries by Employment (2008) Los Angeles County				
Rank	NAICS Industry Sector	NAICS	Employment	
			2008	2020 (forecast)
1	Local Government	93	470,280	496,400
2	Health Care and Social Assistance	62	398,260	513,370
3	Accommodation and Food Services	72	328,430	389,780
4	Professional, Scientific and Technical Services	541	269,570	284,850
5	Administrative, Support, Waste Management	56	256,400	302,220
6	Finance and Insurance	52	156,310	168,540
7	Transportation and Warehousing	48-49	148,560	134,760
8	Motion Picture and Sound Recording Studios	512	129,900	147,190
9	Wholesalers: Durable Goods	423	105,400	92,600
10	Educational Services	611	105,130	133,040
11	Specialty Trade Contractors	238	95,170	86,270
12	Wholesalers: Nondurable Goods	424	92,160	94,720
13	Retail: Food and Beverage Stores	445	90,060	91,840
14	State Government	92	82,350	82,200
15	Real Estate, Rental and Leasing	53	79,420	84,180
16	Arts, Entertainment and Recreation	71	73,070	78,170
17	Retail: General Merchandise Stores	452	66,200	74,020
18	Management of Companies	551	56,630	50,890
19	Religious, Civic and Professional Organizations	813	56,580	63,750
20	Retail: Clothing Stores	448	56,080	57,030
21	Manufacturing: Apparel	315	55,240	42,820
22	Manufacturing: Computer and Electronic Prods	334	54,360	61,540
23	Federal Government (Civilian)	91	51,070	44,890
24	Manufacturing: Transportation Equipment	336	50,680	40,620
25	Manufacturing: Fabricated Metal Products	332	49,060	46,500
26	Personal and Laundry Services	812	48,710	49,410
27	Retail: Motor Vehicle and Parts Dealers	441	47,670	38,110
28	Manufacturing: Food	311	41,900	38,310
29	Repair and Maintenance	811	40,770	35,710
30	Construction of Buildings	236	35,830	29,270

Sources: California Employment Development Department; Moody's Economy.com; LAEDC

Average earnings among industries vary widely. Exhibit 3-11 shows the top 30 industries ranked by average weekly earnings.¹³

¹³ The EDD cautions that average weekly earnings are affected by the percentage of part-time employees, the number of workers who worked for the full year and the number of highly-paid employees. Industries with high proportions of part-time workers will show average pay levels appreciably less than the pay levels of regular full-time employees in these industries. For example, in an industry such as retail, where a large proportion may be part time, full time employees in these industries will earn more than the average weekly earnings shown. Nonetheless, it is helpful to compare relative earnings in order to identify attractive industries to target.

The industry with the highest average weekly earnings in 2008 was mining, paying \$2,739 per week, followed by: broadcasting (\$2,014 per week); petroleum and coal products manufacturing (\$1,955); and other information services (\$1,837). In twenty-six industries, average weekly earnings exceeded \$970, which was the average weekly earnings for all private industries in Los Angeles County in 2008.

Exhibit 3-11 Top 30 Industries by Average Weekly Earnings (2008) Los Angeles County			
Rank	NAICS Industry Sector	NAICS	Average Weekly Earnings
1	Mining	21	\$ 2,739
2	Broadcasting (except Internet)	515	2,014
3	Manufacturing: Petroleum and Coal Products	324	1,955
4	Other Information Services	519	1,837
5	Utilities	221	1,800
6	Finance and Insurance	52	1,800
7	Arts, Entertainment and Recreation	71	1,785
8	Management of Companies	551	1,733
9	Motion Picture and Sound Recording Industries	512	1,686
10	Manufacturing: Computer and Electronic Products	334	1,673
11	Professional, Scientific and Technical Services	541	1,563
12	Manufacturing: Transportation Equipment	336	1,559
13	Publishing Industries	511	1,550
14	Telecommunications	517	1,513
15	Heavy and Civil Engineering Construction	237	1,467
16	Internet Service Providers and Portals	518	1,204
17	Manufacturing: Miscellaneous	339	1,168
18	Manufacturing: Beverage and Tobacco Products	312	1,159
19	Wholesalers: Durable Goods	423	1,129
20	Manufacturing: Machinery	333	1,127
21	Construction of Buildings	236	1,114
22	Wholesale Electronic Markets	425	1,089
23	Manufacturing: Chemicals	325	1,083
24	Real Estate, Rental and Leasing	53	1,015
25	Manufacturing: Paper	322	991
26	Manufacturing: Electrical Equipment and Appliances	335	983
27	Manufacturing: Primary Metal	331	950
28	Retail: Nonstore Retailers	454	941
29	Manufacturing: Fabricated Metal Products	332	939
30	Wholesalers: Nondurable Goods	424	924

Sources: California Employment Development Department

Finally, we examine the job creation potential of industries in Exhibit 3-12. This is consequence of two factors: the size of the industry and its growth potential. A small industry growing quickly may add many jobs but may yet add fewer jobs than a large industry growing slowly.

The exhibit shows forecast data for 2010 and 2020. Industries are ranked by their projected employment gains during this period. Taken together, these twenty-five industries are expected to add more than 507,500 jobs during the period from 2010 to 2020.

Exhibit 3-12 Top 25 Industries by Projected Job Creation (2010 to 2020) Los Angeles County						
Rank	NAICS Industry Sector	NAICS	Employment		Change 2010 ¹ -20	
			2010 ¹	2020	Δ Jobs	Annual Ave % Change
1	Health Care and Social Assistance	62	411,770	513,370	101,600	2.2
2	Administrative, Support, Waste Management	56	225,330	302,220	76,890	3.0
3	Accommodation and Food Services	72	316,210	389,780	73,570	2.1
4	Local Government	93	456,920	496,400	39,480	0.8
5	Professional, Scientific and Technical Services	541	246,610	284,860	38,240	1.5
6	Finance and Insurance	52	142,320	168,550	26,230	1.7
7	Specialty Trade Contractors	238	67,860	86,270	18,410	2.4
8	Educational Services	611	115,790	133,040	17,250	1.4
9	Motion Picture and Sound Recording Studios	512	134,920	147,190	12,270	0.9
10	Real Estate, Rental and Leasing	53	73,290	84,180	10,890	1.4
11	Manufacturing: Computer / Electronic Prods	334	50,890	61,540	10,650	1.9
12	Arts, Entertainment and Recreation	71	67,710	78,170	10,460	1.4
13	Wholesalers: Nondurable Goods	424	84,760	94,720	9,970	1.1
14	Wholesale Electronic Markets	425	21,390	31,220	9,840	3.9
15	Retail: General Merchandise Stores	452	65,700	74,020	8,320	1.2
16	Religious, Civic and Professional Orgs	813	56,020	63,750	7,740	1.3
17	Manufacturing: Fabricated Metal Products	332	40,400	46,500	6,100	1.4
18	Retail: Clothing Stores	448	51,210	57,030	5,820	1.1
19	Construction of Buildings	236	24,710	29,270	4,560	1.7
20	Personal and Laundry Services	812	45,210	49,410	4,200	0.9
21	Retail: Health and Personal Care Stores	446	28,420	32,410	3,990	1.3
22	State Government	92	78,9440	82,200	3,260	0.4
23	Heavy and Civil Engineering	237	10,130	12,910	2,780	2.5
24	Retail: Building Materials, Garden Equipment	444	22,630	25,160	2,530	1.1
25	Management of Companies	551	48,440	50,890	2,450	0.5

¹ Employment data for 2009 included in this period are preliminary; data for 2010 are forecasts.

Sources: California Employment Development Department; Moody's Economy.com; LAEDC

The industry with the largest expected employment gains from 2010 to 2020 is health care and social assistance, which is forecast to add over 101,000 jobs. As we saw in Exhibit 3-10, this is the largest private industry in Los Angeles County. In Exhibit 3-6 we noted that it is

also an industry with one of the highest expected growth rates, thus it is not surprising to find that its job creation potential tops the list.

The industry with the second largest job creation potential is the administrative, support and waste management industry, expected to add 76,890 jobs between 2010 and 2020, followed by accommodation and food services, which is forecast to add 73,570 jobs during the same period. Both of these are also large, high growth industries.

Fourth on the list is the professional, scientific and technical services industry, another large industry with relatively-high growth potential. Also represented in the list, however, are wholesale industries, finance and insurance, real estate, educational services, construction, and two manufacturing industries that may be smaller in scale but will experience some growth over the forecast period.

Potential for Job Creation in the City WIB SDA

Having determined which industries are likely to grow over the next five years in Los Angeles County, we now examine the industrial profile of the City of Los Angeles WIB SDA in comparison to Los Angeles County. Employment by industry sector in 2008 for the two regions is shown in Exhibit 3-13.¹⁴

Exhibit 3-13 Industrial Profile (2008) Los Angeles County and City of Los Angeles WIB SDA					
Industry Sector	Los Angeles County		City of LA WIB SDA		WIB SDA as % of LAC
	Employed	% of total	Employed	% of total	
Total Nonfarm Payroll Employment	4,070,480		1,890,050		46.4
Goods Producing Industries	583,980	14.3	211,460	11.2	36.2
Natural Resources and Mining	4,365	0.1	1,475	0.1	33.8
Construction	145,200	3.6	56,520	3.0	38.9
Manufacturing - Durable Goods	243,250	6.0	73,490	3.9	30.2
Manufacturing - Nondurable Goods	191,160	4.7	79,980	4.2	41.8
Service Providing Industries	2,882,800	70.8	1,321,750	69.9	45.8
Wholesale Trade	223,640	5.5	83,380	4.4	37.3
Retail Trade	416,650	10.2	160,370	8.5	38.5
Transportation, Warehousing, Utilities	163,080	4.0	66,060	3.5	40.5
Information	210,130	5.2	115,760	6.1	55.1
Financial Activities	235,730	5.8	116,640	6.2	49.5
Professional and Business Services	582,610	14.3	267,150	14.1	45.9
Educational and Health Services	503,390	12.4	219,580	11.6	43.6
Leisure and Hospitality	401,500	9.9	171,190	9.1	42.6
Other Services	146,060	3.6	60,600	3.2	41.5
Government	603,710	14.8	356,840	18.9	59.1

Sources: California Employment Development Department; LAEDC

Nonfarm payroll employment in the City WIB SDA accounted for 46.4 percent of employment in Los Angeles County. The industrial structure in the City WIB SDA is weighted somewhat more heavily towards the government, which accounted for 18.9 percent of the nonfarm employment in the City WIB SDA compared to 14.8 percent in the county as a whole. In fact, government employment in the WIB SDA measured 59.1 percent of all government employment in the county (compared to 46.4 percent overall).

Most goods-producing sectors are less represented in the WIB SDA, while the information sector, which includes motion picture production, is more heavily represented.

¹⁴ As with the Los Angeles County data presented earlier, these data are from the Quarterly Census of Employment and Wages and do not include businesses without employees (such as self-proprietorships) or those which hire family members as employees. Hence, actual employment is likely to be understated.

To better examine the industrial performance of the City WIB SDA, we segment larger industry sectors into their 3-digit NAICS industries. For example, health care and social assistance (NAICS 62) is a sector which includes: ambulatory health care services (NAICS 621), such as physicians' offices; hospitals (NAICS 622); nursing and residential care facilities (NAICS 623); and social assistance (NAICS 624), such as community food services, child day care services and emergency relief services. Breaking larger industry sectors into their component parts allows a clearer picture of industry performance in the WIB SDA.

Exhibit 3-14 shows the largest 25 industries in the WIB SDA in 2008 as measured by employment. In this exhibit and others below, we focus on the private sector.

Exhibit 3-14 Top 25 Industries by Employment (2008) City of Los Angeles WIB SDA				
Rank	NAICS Industry Sector	NAICS	Employment	
			2008	% of total
1	Professional and Technical Services	541	137,116	7.2
2	Food Services and Drinking Places	722	121,356	6.4
3	Administrative and Support Services	561	103,007	5.4
4	Motion Picture and Sound Recording Industries	512	75,833	4.0
5	Ambulatory Health Care Services	621	68,035	3.6
6	Educational Services	611	51,256	2.7
7	Hospitals	622	45,935	2.4
8	Wholesalers: Nondurable Goods	424	38,807	2.1
9	Specialty Trade Contractors	238	38,417	2.0
10	Retail: Food and Beverage Stores	445	36,665	1.9
11	Wholesalers: Durable Goods	423	34,650	1.8
12	Manufacturing: Apparel	315	32,632	1.7
13	Credit Intermediation and Related Activities	522	32,624	1.7
14	Social Assistance	624	27,683	1.5
15	Insurance Carriers and Related Activities	524	27,616	1.5
16	Nursing and Residential Care Facilities	623	26,670	1.4
17	Real Estate	531	26,314	1.4
18	Management of Companies and Enterprises	551	24,153	1.3
19	Personal and Laundry Services	812	24,074	1.3
20	Retail: Clothing and Clothing Accessories	448	23,397	1.2
21	Retail: General Merchandise Stores	452	22,237	1.2
22	Membership Organizations and Associations	813	20,044	1.1
23	Accommodation	721	19,820	1.0
24	Manufacturing: Computer and Electronic Products	334	17,169	0.9
25	Manufacturing: Fabricated Metal Products	332	16,653	0.9

Sources: California Employment Development Department; LAEDC

The professional and technical services industry tops the list with 137,116 employees in the City WIB SDA in 2008, followed by food services and drinking places with 121,356 and administrative and support services with 103,007.

Exhibit 3-15 shows the top 30 industries in the City WIB SDA by actual job creation over the seven year period from 2001 to 2008. The exhibit also shows the employment level in 2008 and the average annual growth rate in the WIB SDA for each industry.

Exhibit 3-15 Top 30 Industries by Job Creation (2001 to 2008) City of Los Angeles WIB SDA					
Rank	NAICS Industry Sector	NAICS	Jobs Created 2001 to 2008	Employment in 2008	Ave Annual % Change
1	Motion Picture and Sound Recording Industries	512	30,028	75,833	7.5
2	Professional and Technical Services	541	25,548	137,116	3.0
3	Food Services and Drinking Places	722	19,613	121,356	2.6
4	Ambulatory Health Care Services	621	12,703	68,035	3.0
5	Educational Services	611	10,821	51,256	3.4
6	Specialty Trade Contractors	238	5,646	38,417	2.3
7	Social Assistance	624	4,346	27,683	2.5
8	Support Activities for Transportation	488	4,160	16,093	4.4
9	Wholesalers: Nondurable Goods	424	4,139	38,807	1.6
10	Retail: Clothing and Accessories	448	4,101	23,397	2.8
11	Electronic Markets and Agents and Brokers	425	3,758	9,923	7.0
12	Personal and Laundry Services	812	3,757	24,074	2.5
13	Construction of Buildings	236	3,457	14,030	4.1
14	Performing Arts and Spectator Sports	711	2,669	15,053	2.8
15	Real Estate	531	2,599	26,314	1.5
16	Retail: Food and Beverages	445	2,475	36,665	1.0
17	Financial Investment and Related Activity	523	2,055	16,151	2.0
18	Retail: General Merchandise Stores	452	2,043	22,237	1.4
19	Credit Intermediation and Related Activities	522	1,977	32,624	0.9
20	Other Information Services	519	1,946	4,167	9.4
21	Accommodation	721	1,868	19,820	1.4
22	Retail: Building Materials and Garden Supplies	444	1,572	9,982	2.5
23	Amusement, Gambling and Recreation Industries	713	1,374	11,878	1.8
24	Repair and Maintenance	811	1,122	16,479	1.0
25	Hospitals	622	1,102	45,935	0.3
26	Transit and Ground Passenger Transportation	485	998	6,451	2.4
27	Manufacturing: Beverage and Tobacco Products	312	822	2,857	5.0
28	Retail: Health and Personal Care Stores	446	740	11,751	0.9
29	Administrative and Support Services	561	657	103,007	0.1
30	Funds, Trusts and Other Financial Vehicles	525	632	1,335	9.4

Sources: California Employment Development Department; LAEDC

The industry which recorded the largest number of jobs gained from 2001 to 2008 was motion picture and sound recording industries, adding more than 30,000 jobs between 2001 and 2008. The second largest job creation occurred in professional and technical services, adding 25,548 jobs.

In addition to the potential for industries to create jobs, which is a function of both their expected growth and their size, we are also interested in the *specialization* of economic activity in the City WIB SDA. For example, it is possible that an industry has significant job creation potential in Southern California but yet does not maintain a large presence in the WIB SDA (or none at all). Without a specific business attraction strategy, the region is unlikely to see employment growth in such an industry.

On the other hand, an industry with a presence in the WIB SDA that is larger (as a percentage of total employment in the WIB SDA) than its presence in Southern California would indicate that the City WIB SDA has a concentration of this industry and thus may have the potential for higher employment creation.

Such relative concentration is measured by *location quotients*. A location quotient for an industry in the WIB SDA shows the percentage of its total employment in an industry compared to the percentage in Southern California (or other reference region). For example, if 4 percent of employment in the WIB SDA is in the motion picture industry, while in Southern California only 2 percent is employed in the motion picture industry, then the location quotient for the motion picture industry in the WIB SDA is 2. This means that the WIB SDA is relatively more specialized in motion pictures than the region as a whole.¹⁵ A location quotient of 1 would indicate that the local industry concentration is identical to that of the larger region.

Exhibit 3-16 on the following page shows the top 30 industries in the City WIB SDA by their 2008 employment location quotients compared to the five-county Southern California region. The location quotients for the City WIB SDA compared to the state as a whole are also shown to provide an additional indication of each industry's employment concentration.

The industry with the highest location quotient in the City WIB SDA in 2008 was air transportation. This is due to the presence of the Los Angeles International Airport. Relative to total employment in the WIB SDA, this industry is quite significant.

The industry with the second highest location quotient in the City WIB SDA in 2008 was museums, parks and historical sites. The presence of several employers in the WIB SDA lends this industry some importance to the region, including the Getty Museum, the Simon Wiesenthal Center, the American Film Institute, the Museum of Contemporary Arts and the Museum of Tolerance.

The third most concentrated industry is motion picture and sound recording. The WIB SDA has many companies who support the entertainment industry cluster of Los Angeles County such as Paramount Pictures, MGM, Universal Music Publishing and Warner Music.

¹⁵ Of course, *Southern California's* employment structure is only one reference. We can alternatively use the *county's* employment structure. However, we prefer the larger Southern California region comparison for this analysis given the size of the City WIB SDA.

Exhibit 3-16 Top 30 Industries by Employment Location Quotients (2008) City WIB SDA vs. Southern California and the State				
Rank	NAICS Industry Sector	NAICS	Location Quotient (SoCal ¹)	Location Quotient (CA)
1	Air Transportation	481	2.69	2.39
2	Museums, Parks and Historical Sites	712	2.18	1.42
3	Motion Picture and Sound Recording	512	2.13	3.39
4	Rail Transportation	482	2.13	3.98
5	Water Transportation	483	2.10	2.36
6	Broadcasting (not Internet)	515	2.05	1.80
7	Manufacturing: Apparel	315	1.94	3.18
8	Manufacturing: Textile Mills	313	1.76	2.94
9	Financial Investment and Related Activity	523	1.63	1.26
10	Other Information Services	519	1.58	0.85
11	Performing Arts and Spectator Sports	711	1.56	1.63
12	Educational Services	611	1.46	1.30
13	Couriers and Messengers	492	1.45	1.43
14	Personal and Laundry Services	812	1.45	1.14
15	Lessors, Nonfinancial Intangible Assets	533	1.42	1.28
16	Rental and Leasing Services	532	1.33	1.10
17	Funds, Trusts and Other Financial Vehicles	525	1.30	0.85
18	Membership Organizations	813	1.29	0.91
19	Publishing Industries	511	1.24	0.76
20	Transit and Ground Passenger Transportation	485	1.23	1.20
21	Social Assistance	624	1.22	0.92
22	Manufacturing: Leather and Allied Products	316	1.20	1.52
23	Support Activities for Transportation	488	1.19	1.32
24	Professional and Technical Services	541	1.18	0.88
25	Manufacturing: Beverage and Tobacco Products	312	1.14	0.44
26	Oil and Gas Extraction	211	1.10	0.69
27	Wholesalers: Nondurable Goods	424	1.10	1.06
28	Manufacturing: Petroleum and Coal Products	324	1.07	0.65
29	Monetary Authorities: Central Bank	521	1.06	0.98
30	Retail: Miscellaneous	453	1.05	0.90

¹ The Southern California region is defined by the five counties of Los Angeles, Orange, Riverside, San Bernardino and Ventura.

Sources: California Employment Development Department; LAEDC

Having reviewed the performance of industries in Los Angeles County and in the City of Los Angeles WIB SDA and forecast the employment in the region, we derive a method for identifying the most promising industries to target for job retention efforts in the next section.

In this section, we identify potential target industries in the City of Los Angeles WIB SDA for job retention and expansion efforts. We develop two composite indices reflective of each industry's performance. The first index is indicative of industry performance in Los Angeles County; the second is specific to the SDA. From these indicators, we identify those industries which are the most promising targets.

Methodology

In the previous section, we reviewed the performance of industries in Los Angeles County along four criteria: projected employment growth rate from 2010 to 2020; industry size, measured by employment level in 2008; employee earnings, measured by average weekly earnings paid in 2008; and projected job creation potential from 2010 to 2020. Specific to the WIB SDA, we also reported the top industries measured by employment level in the WIB SDA, the industries with the greatest number of jobs created in the WIB SDA since 2001, and the location quotients of industries in the WIB SDA using the five-county Southern California region as our reference region.

Each of these measures provides an indication of whether an industry has the potential to be an attractive target for job retention. For example, the employment growth rate indicates whether an industry has growth potential in the region. While important, this by itself may be insufficient, since a slow-growing industry may yet have the ability to produce many jobs if it has a substantial job base; therefore, we also consider job creation potential. Industries paying high wages are generally attractive. We consider the size of the industry since an industry that maintains a large presence in the region implies that industry-specific factors necessary for success are already present.

For the purposes of this exercise, we evaluate only private industries.

Los Angeles County Composite Index

We derive a composite index of the four Los Angeles County criteria that will allow us to compare industries with varying performance on the individual criteria. The composite index is derived as follows. We first rank all industries for each criterion and separate them into three groups (the top-ranked, the middle-ranked and the lowest-ranked) according to definitions outlined below. The top-ranked industries are given a "1", the middle-ranked a "0" and the lowest-ranked a "-1". The composite index is the sum of the four individual

entries for each industry (and therefore weighs each criterion equally). The groups for each criterion are defined as follows:

- ❖ *Employment growth rate in Los Angeles County:*
 - In the top-ranked group are industries whose projected growth rate exceeds the average of all industries;
 - In the middle-ranked group are industries below the average of all industries but still with positive projected employment growth;
 - Industries with negative projected employment growth are in the lowest-ranked group.
 - Employment growth rates are shown in Exhibits 3-6, 3-7 and 3-8.

- ❖ *Industry Size in Los Angeles County:*
 - In the top-ranked group are industries whose employment levels exceed the average for all industries;
 - In the middle-ranked group are industries below the average but larger than 10 percent of employment in the largest industry;
 - The remaining industries are in the lowest-ranked group.
 - Employment by industry for the top 30 industries in Los Angeles County is shown in Exhibit 3-10.

- ❖ *Average Earnings in Los Angeles County:*
 - In the top-ranked group are industries whose average weekly earnings exceed the average for all industries;
 - In the middle-ranked group are industries below the average but higher than one-quarter of the top-paying industry;
 - The remaining industries are in the lowest-ranked group.
 - Average earnings by industry in Los Angeles County are shown for the top 30 industries in Exhibit 3-11.

- ❖ *Projected Job Creation in Los Angeles County:*
 - In the top-ranked group are industries whose projected job creation from 2010 to 2020 exceed the average for all industries;
 - In the middle-ranked group are industries below the average but still with positive projected job creation;
 - Industries which are projected to see job destruction between 2010 and 2020 are in the lowest-ranked group.
 - Job creation potential for the top 25 industries in Los Angeles County is shown in Exhibit 3-12.

City of Los Angeles WIB SDA Composite Index

We derive a composite index of the three City of Los Angeles WIB SDA criteria using the same procedure as outlined above. The groups for each criterion in the WIB SDA Composite Index are defined as follows:

- ❖ *Industry Size in the City WIB SDA:*
 - In the top-ranked group are industries whose employment levels exceed the average of all industries in the City WIB SDA;
 - In the middle-ranked group are industries below the average of all industries but larger than 5 percent of employment in the largest industry;
 - The remaining industries are in the lowest-ranked group.
 - Industry capacity is shown for the top 25 industries in the WIB SDA in Exhibit 3-14.

- ❖ *Job Creation in the City of Los Angeles WIB SDA from 2001 to 2008:*
 - In the top-ranked group are industries whose historical job creation from 2001 to 2008 exceeded the average for all industries;
 - In the middle-ranked group are industries below the average but still with positive historical job creation;
 - The remaining industries, those which contracted, are in the lowest-ranked group.
 - Job creation from 2001 to 2008 for the top 30 industries in the WIB SDA is shown in Exhibit 3-15.

- ❖ *Location Quotient in 2008:*
 - In the top-ranked group are industries with a location quotient of greater than 1.2;
 - In the middle-ranked group are industries with a location quotient between 0.9 and 1.2;
 - The remaining industries are in the lowest-ranked group.
 - Location quotients for the top 30 industries in the WIB SDA are shown in Exhibit 3-16.

Results

Exhibit 4-1 lists those industries with a non-negative Los Angeles County Composite Index, grouped by their index value and listed according to their NAICS codes. The individual scores for each criterion are shown along with the composite index. These industries are potential targets given their performance in Los Angeles County. We have shaded rows that are retail industries, since these will not be considered targets.

There are four industries with a composite index of “4”. This means that they are top-ranked industries in all four criteria in Los Angeles County: they are high-growth, large, relatively well-paying and have high job creation potential. These industries are: finance and insurance; real estate and rental and leasing; professional, scientific and technical services; and arts, entertainment and recreation.

Exhibit 4-1 Potential Target Industries Using the Los Angeles County Composite Index						
NAICS Industry Sector	NAICS	LAC Criteria				Index
		Growth	Size	Earnings	Job Creation	
Finance and Insurance	52	1	1	1	1	4
Real Estate and Rental and Leasing	53	1	1	1	1	4
Professional, Scientific and Technical Services	541	1	1	1	1	4
Arts, Entertainment and Recreation	71	1	1	1	1	4
Specialty Trade Contractors	238	1	1	0	1	3
Manufacturing: Computer and Electronic Products	334	1	0	1	1	3
Motion Picture and Sound Recording Industries	512	0	1	1	1	3
Wholesalers: Durable Goods	423	0	1	1	0	2
Wholesalers: Nondurable Goods	424	0	1	0	1	2
Wholesale Electronic Markets	425	1	-1	1	1	2
Administrative, Support, Waste Management	56	1	1	-1	1	2
Educational Services	611	1	1	-1	1	2
Health Care and Social Assistance	62	1	1	-1	1	2
Accommodation and Food Services	72	1	1	-1	1	2
Construction of Buildings	236	1	-1	1	0	1
Heavy and Civil Engineering Construction	237	1	-1	1	0	1
Manufacturing: Fabricated Metal Products	332	1	0	0	0	1
Manufacturing: Electrical Equipment and Appliances	335	1	-1	1	0	1
Retail: General Merchandise	452	0	1	-1	1	1
Other Information Services	519	1	-1	1	0	1
Management of Companies	551	0	0	1	0	1
Religious, Civic, Professional Organizations	813	1	0	-1	1	1
Utilities	221	0	-1	1	0	0
Manufacturing: Miscellaneous	339	0	-1	1	0	0
Retail: Food and Beverage	445	0	1	-1	0	0
Transportation and Warehousing	48-49	0	1	-1	0	0
Broadcasting (except Internet)	515	0	-1	1	0	0
ISPs, Search Portals and Data Processing	518	0	-1	1	0	0

Source: LAEDC

There are three industries with a composite index of “3”, or top-ranked in three of the four criteria in Los Angeles County. These industries are: specialty trade contractors; computer and electronic products manufacturing; and motion picture and sound recording industries.

Following these, there are seven industries with a composite index of “2”; eight industries with a composite index of “1”; and six industries with a composite index of “0.” We include the latter for reference but these are unlikely to make good target industries unless the value of their WIB SDA Composite Index is favorable.

Exhibit 4-2 below and on the following page presents industries with a non-negative City of Los Angeles WIB SDA Composite Index, grouped by their index value and listed according to their NAICS codes. There are five industries with a composite index of “3”, indicating that they are top-ranked in all three criteria in the WIB SDA: they have a relatively large presence in the SDA; they have experienced high levels of actual job creation in the SDA since 2001; and they have a higher employment concentration in the WIB SDA compared to the five-county Southern California region.

These industries include: motion picture and sound recording industries; financial investment; educational services; social assistance; and personal and laundry services. The first four of these industries would make promising targets if their Los Angeles County composite index score is acceptable.

Exhibit 4-2 Potential Target Industries Using the City of Los Angeles WIB SDA Composite Index					
NAICS Industry Sector	NAICS	City of LA WIB SDA Criteria			Index
		Size	Jobs Created	LQ	
Motion Picture and Sound Recording Industries	512	1	1	1	3
Financial Investment and Related Activities	523	1	1	1	3
Educational Services	611	1	1	1	3
Social Assistance	624	1	1	1	3
Personal and Laundry Services	812	1	1	1	3
Wholesalers: Nondurable Goods	424	1	1	0	2
Retail: Clothing and Clothing Accessories	448	1	1	0	2
Transit and Ground Passenger Transportation	485	0	1	1	2
Support Activities for Transportation	488	1	1	0	2
Credit Intermediation and Related Activity	522	1	1	0	2
Real Estate	531	1	1	0	2
Professional, Scientific, and Technical Services	541	1	1	0	2
Hospitals	622	1	1	0	2
Arts, Entertainment, and Recreation	711	0	1	1	2
Accommodation	721	1	1	0	2
Religious, Civic, Professional Organizations	812	1	0	1	2
Construction of Buildings	236	1	1	-1	1
Specialty Trade Contractors	238	1	1	-1	1
Manufacturing: Apparel	315	1	-1	1	1
Retail: Food and Beverage	445	1	1	-1	1
Retail: General Merchandise	452	1	1	-1	1
Air Transportation	481	1	-1	1	1
Other Information Services	519	-1	1	1	1
Funds, Trusts and Other Financial Vehicles	525	0	0	1	1
Rental and Leasing Services	532	0	0	1	1
Ambulatory Health Care Services	621	1	1	-1	1
Nursing and Residential Care Facilities	623	1	0	0	1
Food Services and Drinking Places	722	1	1	-1	1

Exhibit 4-2 (continued)					
NAICS Industry Sector	NAICS	City of LA WIB SDA Criteria			Index
		Size	Jobs Created	LQ	
Manufacturing: Beverage and Tobacco Products	312	-1	1	0	0
Electronic Markets and Agents and Brokers	425	0	1	-1	0
Retail: Building Materials and Garden Supply	444	0	1	-1	0
Retail: Miscellaneous Stores	453	0	0	0	0
Rail Transportation	482	-1	0	1	0
Water Transportation	483	-1	0	1	0
Couriers and Messengers	492	0	-1	1	0
Publishing Industries (except Internet)	511	0	-1	1	0
Broadcasting (except Internet)	515	0	-1	1	0
Insurance Carriers and Related Activities	524	1	-1	0	0
Lessors of Nonfinancial Intangible Assets	533	-1	0	1	0
Management of Companies and Enterprises	551	1	-1	0	0
Administrative and Support Services	561	1	0	-1	0
Museums, Parks and Historical Sites	712	-1	0	1	0
Amusement, Gambling and Recreation Industries	713	0	1	-1	0
Repair and Maintenance	811	0	1	-1	0

Source: LAEDC

Discussion

We have developed two indicators for industry targeting. First, we have a composite index showing each industry's performance in Los Angeles County. Second, we have a composite index for industry performance in the City of Los Angeles WIB SDA. Given the results of these indicators, we focus on industries that are most likely to be promising targets for job retention activities, including both export-oriented and population-serving industries. These industries are listed in Exhibit 4-3, and are individually described on the following pages.

Exhibit 4-3 Identified Target Industries	
NAICS Industry Sector	NAICS
Professional and Technical Services	541
Ambulatory Health Care Services	621
Hospitals	622
Nursing and Residential Care Facilities	623
Social Assistance	624
Motion Picture and Sound Recording Industries	512
Manufacturing: Fabricated Metal Products	332
Manufacturing: Machinery	333
Manufacturing: Computer and Electronic Products	334
Manufacturing: Electrical Equipment and Appliances	335
Wholesalers: Durable Goods	423
Wholesalers: Nondurable Goods	424
Electronic Markets and Agents and Brokers	425
Warehousing and Storage	493
Construction of Buildings	236
Heavy and Civil Engineering Construction	237
Specialty Trade Contractors	238
Administrative and Support Services	561
Waste Management and Remediation	562
Educational Services	611
Repair and Maintenance	811

Professional, Scientific and Technical Services

This industry includes establishments which specialize in performing professional, scientific and technical activities for others. These activities typically require a high degree of expertise and training. Included are activities such as legal services, architectural, engineering, interior and industrial design, computer design and programming, management consulting, advertising, market research and environmental consulting.

- This is a large industry which employed more than 270,000 people in Los Angeles County in 2008, including more than 49,200 in the legal service subsector; another 41,500 in accounting, tax preparation and payroll services; almost 41,500 in architectural and engineering services; and more than 41,600 in management and technical consulting.
- The industry employed more than 137,100 people in the City WIB SDA in 2008.
- The industry is expected to grow at an average rate of 1.5 percent per year in Los Angeles County from 2010 to 2020.
- Average annual earnings in this industry in Los Angeles County were \$81,296 in 2008.
- Not only is this a large industry with good growth potential, it also employs a wide variety of relatively high-wage occupations, many of which require a community college degree or technical training, and which provide the opportunity for career advancement through the development of specialized expertise gained with on-the-job experience.
- Much of this industry forms the backbone of the Professional and Business Services industry cluster; other major components of this cluster are in the administrative and support services industry discussed below.

Health Care (Ambulatory Health Care, Hospitals and Nursing and Residential Care) and Social Assistance

This is a large and growing industry sector which includes establishments providing health care, including: ambulatory health care services such as doctors' offices, dentistry practices, medical laboratories and home health care services; hospitals; and nursing and residential care facilities. Social assistance services include individual and family services, community food and housing services, vocational rehabilitations services and child day care services.

- The health care sector employed more than 338,000 people in 2008 in Los Angeles County, and there were 55,480 employed in social assistance. The health care sector is forecast to grow at an average rate of 2.2 percent per year from 2010 to 2020.
- In the City WIB SDA, employment in health care numbered 140,640 in 2008, and 27,683 in social assistance.
- Average annual earnings in the health care sector were \$50,816 in 2008 in Los Angeles County.
- These are large industries with high growth potential given the ongoing demographic shift and the advancement of medical technology. Many of the occupations employed in these industries can be filled with community college education or technical training, and will provide the opportunity for career advancement through on-the-job experience.
- These industries comprise the majority of the Health Services and Biomedical industry cluster. Other components of this cluster are: pharmaceutical and medicine

manufacturing; electromedical and therapeutic apparatus manufacturing; and medical equipment and supplies manufacturing. Electromedical and therapeutic apparatus manufacturing is included in the computer and electronic products manufacturing industry discussed below; the other two industries are poor targets in general given our criteria.

Motion Picture and Sound Recording Industries

This industry is composed of establishments involved in the production and distribution of motion pictures and sound recordings, including those creating film or sound content, providing technical postproduction services, and those contracting with performers. In spite of increased competition from other states, these industries have shown growth recently as a result of the California Film and Television Tax Credit program. We anticipate that increased focus on protecting this important component of our regional economy will continue to provide opportunities.

- Employment in motion picture and sound recording industries in Los Angeles County was 130,390 in 2008.
- In the City WIB SDA, employment numbered 75,833 in 2008.
- Average annual earnings in the industry in Los Angeles County were \$87,655 in 2008.
- Many of the occupations in this industry can be cross-trained for other technology industries, such as software publishers, computer and electronic products manufacturing, internet publishing, and computer systems design.
- This industry comprises more than half of the Entertainment industry cluster, which also includes broadcasting, agents and managers, and independent artists, writers and performers.

Manufacturing (Selected Products)

Manufacturing employment as a whole has been in decline in Los Angeles County and nationwide. Nevertheless, several manufacturing industries appear to be promising targets for employment growth in the City of Los Angeles WIB SDA based upon their performance on our criteria. These include: fabricated metal products; machinery; computer and electronic products; and electrical equipment and appliances.

- Employment in these four industries was 132,680 people in Los Angeles County in 2008, and almost 40,042 people in the City WIB SDA.
- Average annual earnings in 2008 in Los Angeles County were \$65,952.
- While manufacturing is in general on a long-term decline in employment at the national level, we believe opportunities remain in these specific industries given current market conditions in Los Angeles.
- The expected retirement of aging skilled craftsmen in some specialized manufacturing industries presents opportunities for apprenticeships and new entrants.
- Occupations in these industries can be filled by job seekers with community college degrees or technical training, and can be highly-paid given the requisite skills.

Wholesaling (Durable Goods, Nondurable Goods and Electronic Markets) and Warehousing and Storage

Firms engaged in wholesale trade sell merchandise to other businesses and normally operate from a warehouse or office, which typically has little or no display of merchandise. Electronic markets are those in which firms arrange transactions that facilitate wholesale trade using the internet or other electronic means. Warehousing and storage firms provide facilities to store goods and may offer logistics services such as labeling, packaging and ticketing, but do not sell the goods they handle.

- Employment in wholesaling industries 2008 was 223,760 in Los Angeles County, and 16,805 in warehousing. Growth in Los Angeles County between 2010 and 2020 is forecast to be only 0.2 percent per year on average for durable goods wholesaling, but 1.1 percent for nondurable goods wholesaling and 3.9 percent per year for electronic markets.
- In the City WIB SDA, employment in 2008 was 83,380 in wholesaling of which 9,923 was in electronic markets, and 3,228 in warehousing and storage.
- Average annual earnings in 2008 in Los Angeles County in wholesaling were \$54,102, and \$44,581 in warehousing and storage.
- We include these industries because they show promise during the forecast period, with consumer demand expected to improve and with expected growth in electronic markets. Additionally, wholesaling is a large industry, and occupations in wholesaling do not require specialized skills, making it a potential target for challenged job entrants.
- However, projected growth in these industries is dependent on continued investment in trade infrastructure in the Los Angeles region, since competition from other water-borne trade entry points is expected to intensify in the next decade.
- These industries define the Wholesale Trade industry cluster.

Construction (Buildings, Heavy and Civil Engineering and Specialty Trades)

Industries in this sector include establishments involved in the construction of buildings or engineering projects such as highways and utility systems, and firms providing specific components of construction projects such as masonry, plumbing and electrical work.

- Employment in 2008 was 145,650 in Los Angeles County; in the City WIB SDA, there were 56,523 employed.
- Average annual earnings in 2008 were \$53,117 in Los Angeles County.
- This large industry will experience a relatively strong recovery after the devastating declines in 2008 and 2009. Federal stimulus funds used in construction of many infrastructure projects will employ thousands of workers in highway, transit, infrastructure, water and other projects. Additionally, federal, state and local mandates regarding energy efficiency and greening of existing buildings have the potential to drive employment in retrofitting and efficiency implementations.
- As with some manufacturing industries, the aging of skilled craftsmen in specialty trades may provide opportunities for apprenticeships and new entrants.

- We note, however, that the recent employment declines in these industries have left a large pool of unemployed but skilled workers that will be available to fill early job openings.
- These industries define the Construction industry cluster.

Administrative and Support Services

Establishments in this industry are engaged in activities which support the day-to-day operations of other organizations, such as management, personnel administration, clerical activities and cleaning activities. Activities include: billing and recordkeeping; personnel; travel agents; facilities support; temporary help; telephone call centers; collection agencies; and court reporting.

- Employment in administrative and support services in Los Angeles County was 247,874 in 2008. It is expected to experience healthy growth at an average annual rate of 3.0 percent in Los Angeles County from 2010 to 2020.
- In the City WIB SDA, employment numbered 103,007 in 2008.
- Average annual earnings in the industry in Los Angeles County were \$32,900 in 2008.
- The recent trend has been to contract with or purchase services from businesses that specialize in such administrative and support activities, rather than conducting them in-house. This industry will continue to experience robust growth.
- There are a wide variety of occupations in this industry which can be filled with community college degrees or technical training, and which can provide opportunities for career advancement through on-the-job experience.
- Many of the activities in this industry are included in the Professional and Business Services industry cluster.

Waste Management and Remediation

This industry is composed of establishments engaged in the collection, treatment and disposal of waste materials, including: local hauling of waste; materials recovery facilities, such as recyclers; remediation service providers, such as contamination clean-up; and septic pumping. We anticipate that increased focus on the treatment and recycling of waste materials will provide new opportunities in this industry.

- Employment in waste management in Los Angeles County was 9,016 in 2008.
- In the City WIB SDA, employment numbered 2,874 in 2008.
- Average annual earnings in the industry in Los Angeles County were \$51,767 in 2008.
- This industry defines the population-serving Waste Management and Remediation Services industry cluster.

Educational Services

This industry is composed of privately-held establishments involved in providing a wide variety of instruction and training, including schooling services for K-12, colleges and universities, business and secretarial schools, computer training, professional and management training, language schools, and technical and trade schools.

- Employment in private educational services in Los Angeles County was 94,792 in 2008.
- In the City WIB SDA, employment numbered 51,256 in 2008.
- Average annual earnings in the industry in Los Angeles County were \$41,426 in 2008.
- Increasing pressure on state and local budgets will limit enrolment in publicly-provided educational institutions, creating demand for these services in the private sector.
- We caution, however, that unfolding investigations into the public funding of private colleges may dampen this sector in the near term.
- Some of the establishments in this industry are included in the Higher Education industry cluster, which also includes public institutions of higher education.

Repair and Maintenance

This subsector includes industries which restore machinery, equipment and other products to working order. Included are activities such as automotive repair and maintenance, electronic and precision equipment repair and maintenance, and commercial and industrial machinery and equipment repair and maintenance.

- This is a small subsector which employed almost 41,000 people in Los Angeles County in 2008, of which 75 percent were in automotive repair and maintenance.
- The industry employed 16,479 people in the City WIB SDA in 2008.
- Average annual earnings in Los Angeles County were \$33,002 in 2008.
- This industry is not included in any export-oriented or population-serving industry cluster. We anticipate that retrofitting of vehicles and equipment to comply with new environmental regulations and mandates will generate new opportunities in the sub-industries of this subsector. Additionally, occupations in repair and maintenance do not require specialized skills, making it a potential target for challenged job entrants.

In this section, we examine the occupational composition of the twenty-one most promising industries for job retention and expansion as identified in the previous section.

For each identified industry, we first examine its occupational composition by major occupational group. Major occupational groups are aggregations used to classify workers using the 2000 Standard Occupational Classification (SOC) System. Major groups include broad descriptive categories such as production occupations, management occupations and business and financial operations occupations.

Within these major groups are 821 detailed occupations. Detailed occupations are differentiated according to the job skills, abilities and work activities required. They are not generally industry-specific but are common to several industries. For example, retail salespersons are employed in a full spectrum of industries.

For each identified industry, detailed occupations are reported for those major occupational groups with sufficient employment share. Education and training requirements are provided, along with the median annual earnings in Los Angeles County for each detailed occupation and the total number of people employed in this occupation across all industries in Los Angeles County.

We begin with a description of the occupational structure of Los Angeles County.

Occupations in Los Angeles County

The occupational employment structure in Los Angeles County by major occupational group is shown in Exhibit 5-1, along with the median annual earnings of each group. Major groups are listed in numerical order.

Exhibit 5-1 Employment by Major Occupational Group (May 2009) Los Angeles County				
SOC	Occupation Group Title	Employment	% of total employment	Median annual earnings
11-0000	Management occupations	228,020	5.8	\$ 117,780
13-0000	Business and financial operations occupations	207,570	5.2	71,190
15-0000	Computer and mathematical science occupations	86,850	2.2	80,000
17-0000	Architecture and engineering occupations	73,990	1.9	85,430
19-0000	Life, physical and social science occupations	38,360	1.0	69,080
21-0000	Community and social services occupations	56,740	1.4	49,910
23-0000	Legal occupations	39,990	1.0	122,050
25-0000	Education, training and library occupations	264,540	6.7	55,950
27-0000	Arts, design, entertainment, sports and media occupations	118,260	3.0	75,420
29-0000	Healthcare practitioners and technical occupations	175,960	4.4	79,110
31-0000	Healthcare support occupations	96,640	2.4	28,200
33-0000	Protective service occupations	110,710	2.8	51,220
35-0000	Food preparation and serving related occupations	318,080	8.0	21,490
37-0000	Building and grounds cleaning and maintenance occupations	101,600	2.6	26,740
39-0000	Personal care and service occupations	94,860	2.4	26,460
41-0000	Sales and related occupations	393,490	9.9	37,990
43-0000	Office and administrative support occupations	763,810	19.3	35,910
45-0000	Farming, fishing and forestry occupations	3,010	0.1	25,310
47-0000	Construction and extraction occupations	116,720	3.0	48,870
49-0000	Installation, maintenance and repair occupations	119,020	3.0	45,950
51-0000	Production occupations	283,250	7.2	30,850
53-0000	Transportation and material moving occupations	270,740	6.8	32,030

Source: BLS: Occupational Employment Statistics Survey, May 2009

The largest occupational group is office and administrative support occupations, making up more than 19 percent of all employment in Los Angeles County in May of 2009, or more than 763,810 jobs. Life, physical and social science occupations is the second-largest group with ten percent of all jobs. The highest-paid on average were legal occupations, followed closely by management occupations.

Exhibit 5-2 on the following pages presents the top 50 detailed occupations in Los Angeles County by employment. Because each detailed occupation may be common to many

industries, the exhibit provides a list of those industries which employ this occupation. These industries are listed in order of employment in May of 2009. Median annual earnings in Los Angeles County for each occupation are also shown.

Because each detailed occupation may be common to many industries, the exhibit provides a list of those industries which employ each occupation (listed in order of employment in May of 2009). Industries which are among our identified targets are *italicized*.

The single largest detailed occupation is retail salespersons, with almost 114,800 employed in Los Angeles County in May of 2009 with median annual earnings of \$20,730. As shown, this occupation is common to many industries. The second largest detailed occupation is general office clerks, with more than 107,000 employed earning median annual earnings of \$27,060.

Following this exhibit are the occupational data sheets for each identified target industry. These are presented in the same order as in Exhibit 4-4. For each industry, we report the employment in Los Angeles County and in the City WIB SDA in 2008, and the average annual earnings. We provide a breakdown of the occupational makeup of each industry by major group, and for each major group with a significant share of the industry's employment, we provide a list of the detailed occupations therein, including: the education and training required; the median annual earnings in Los Angeles County; and the total number of persons employed in Los Angeles County in that detailed occupational group in 2009.

Exhibit 5-2
Top 50 Detailed Occupations by Employment (May 2009)
Los Angeles County

Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
1	41-2031	Retail salespersons	Retail stores such as clothing, building materials, electronics and appliance stores, etc.; motor vehicle dealers; florists; <i>employment services</i> ; electronic shopping and mail-order houses; <i>wholesalers</i> ; wired telecommunications carriers; museums, parks and historical sites.	114,890	\$ 20,730
2	43-9061	Office clerks, general	Local and state government; <i>colleges and universities</i> ; elementary and secondary schools; <i>temporary employment services</i> ; <i>hospitals</i> ; offices of real estate agents; <i>offices of physicians</i> ; <i>accounting and bookkeeping services</i> ; <i>legal services</i> ; insurance agencies; management of companies; <i>junior colleges</i> ; <i>electronic markets</i> ; insurance carriers; <i>management and technical consulting services</i> ; <i>residential building construction</i> ; activities related to real estate; <i>computer systems design services</i> ; <i>architectural and engineering services</i> ; banks and credit unions; religious organizations; <i>service to buildings</i> .	107,170	27,060
3	41-2011	Cashiers	Retail stores; restaurants; movie theatres; amusement parks and arcades; <i>automotive repair and maintenance</i> ; local government; <i>hospitals</i> ; spectator sports; performing arts companies.	92,130	19,130
4	53-7062	Laborers and freight, stock, and material movers, hand	<i>Temporary employment agencies</i> ; <i>warehousing and storage</i> ; couriers; <i>wholesalers</i> ; general and specialized freight trucking; building material and supplies dealers; <i>motion picture and video industries</i> ; grocery stores; furniture stores; building equipment contractors.	73,940	22,560
5	11-1021	General and operations managers	Management of companies; <i>management and technical consulting services</i> ; <i>computer systems design services</i> ; local government; <i>architectural and engineering services</i> ; grocery stores; <i>electronic markets</i> ; <i>residential building construction</i> ; <i>office administrative services</i> ; restaurants; <i>accounting and bookkeeping services</i> ; retail stores; insurance agencies; <i>advertising services</i> .	67,790	108,670

Exhibit 5-2 (continued)					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
6	35-3021	Combined food preparation and serving workers, including fast food	Restaurants; grocery stores; elementary and secondary schools; special food services; specialty food stores; <i>hospitals</i> ; accommodation; amusement parks and arcades; <i>community care facilities for the elderly</i> ; <i>motion picture and video industries</i> ; <i>nursing care facilities</i> .	62,9200	\$ 18,700
7	43-6011	Executive secretaries and administrative assistants	Local government; <i>temporary agencies</i> ; elementary and secondary schools; <i>management and technical consulting services</i> ; <i>colleges and universities</i> ; management of companies; <i>architectural and engineering services</i> ; <i>accounting and bookkeeping services</i> ; offices of real estate agents and brokers; financial investment activities; <i>residential building construction</i> ; <i>hospitals</i> ; <i>computer systems design and related services</i> ; religious organizations; <i>office administrative services</i> ; insurance carriers; <i>scientific research and development services</i> .	61,740	45,160
8	29-1111	Registered nurses	<i>Hospitals</i> ; <i>offices of physicians</i> ; <i>temporary employment agencies</i> ; local, state and federal government; <i>home health care services</i> ; <i>outpatient care centers</i> ; <i>nursing care facilities</i> ; elementary and secondary schools; <i>psychiatric and substance abuse hospitals</i> ; insurance carriers.	61,270	80,170
9	35-3031	Waiters and waitresses	Restaurants; accommodation; drinking places; caterers; <i>temporary agencies</i> ; local government; gambling industries; <i>community care facilities for the elderly</i> ; civic and social organizations.	59,950	18,860
10	43-5081	Stock clerks and order fillers	Department stores; grocery stores; <i>warehousing and storage</i> ; retail stores; <i>wholesalers</i> ; <i>electronic markets</i> ; <i>hospitals</i> ; <i>temporary employment agencies</i> ; local governments; management of companies; <i>advertising</i> .	56,390	21,530

Exhibit 5-2 (continued)					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
11	43-3031	Bookkeeping, accounting, and auditing clerks	<i>Accounting and bookkeeping services</i> ; local government; management of companies; elementary and secondary schools; banks and credit unions; building equipment contractors; <i>hospitals</i> ; <i>electronic markets</i> ; <i>temporary employment agencies</i> ; activities related to real estate; <i>offices of physicians</i> ; <i>residential building construction</i> ; insurance carriers; <i>office administrative services</i> ; <i>legal services</i> ; <i>colleges and universities</i> .	56,330	\$ 36,810
12	43-4051	Customer service representatives	Insurance carriers; <i>temporary employment agencies</i> ; management of companies; banks and credit unions; wireless telecommunication carriers; <i>management and technical consulting services</i> ; local government; <i>office administrative services</i> ; <i>hospitals</i> ; <i>electronic markets</i> ; <i>computer systems design</i> ; <i>business support services</i> ; <i>wholesalers</i> ; mail order houses; retail stores; <i>construction</i> .	55,020	34,130
13	37-2011	Janitors and cleaners, except maids and housekeepers	<i>Services to buildings</i> ; elementary and secondary schools; local government; management of companies; <i>hospitals</i> ; <i>colleges and universities</i> ; religious organizations; <i>temporary employment agencies</i> ; activities related to real estate.	52,180	22,790
14	33-9032	Security guards	<i>Investigation and security services</i> ; local government; elementary and secondary schools; drinking places; <i>hospitals</i> ; lessors of real estate; amusement parks and arcades; management of companies; <i>temporary employment agencies</i> ; <i>colleges and universities</i> ; spectator sports.	52,010	23,410
15	25-2021	Elementary school teachers, except special education	Elementary and secondary schools; <i>individual and family services</i> ; religious organizations.	51,750	57,670
16	25-9041	Teacher assistants	Elementary and secondary schools; <i>colleges and universities</i> ; <i>child day care services</i> ; <i>junior colleges</i> ; other schools and instruction; religious organizations; local government; <i>individual and family services</i> ; civic and social organizations.	50,340	29,530

Exhibit 5-2 (continued)					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
17	43-1011	First-line supervisors/managers of office and administrative support workers	Banks and credit unions; local and state government; <i>offices of physicians</i> ; retail stores; management of companies; elementary and secondary schools; insurance carriers; <i>offices of dentists</i> ; <i>hospitals</i> ; <i>legal services</i> ; <i>business support services</i> ; insurance agencies; <i>management and technical consulting services</i> ; <i>temporary employment agencies</i> ; <i>colleges and universities</i> ; accommodation.	49,390	\$ 52,720
18	41-4012	Sales representatives, wholesale / manufacturing, except technical and scientific products	<i>Electronic markets</i> ; <i>wholesalers</i> ; management of companies; printing and related support activities; beverage and tobacco product manufacturing; <i>building finishing contractors</i> ; other manufacturing; software publishers; <i>temporary employment agencies</i> ; <i>motion picture and video industries</i> .	43,800	52,230
19	13-1199	Business operations specialists, all other	Local, state and federal government; <i>colleges and universities</i> ; <i>hospitals</i> ; management of companies; insurance carriers; <i>electronic markets</i> ; <i>management and technical consulting services</i> ; <i>office administrative services</i> ; elementary and secondary schools; banks and credit unions; <i>architectural and engineering services</i> ; <i>wholesalers</i> ; <i>scientific research services</i> ; activities related to real estate; <i>computer systems design services</i> ; social advocacy orgs.	42,620	63,220
20	13-2011	Accountants and auditors	<i>Accounting and bookkeeping services</i> ; local government; management of companies; <i>computer systems design</i> ; activities related to real estate; <i>management and technical consulting services</i> ; <i>architectural and engineering services</i> ; <i>office administrative services</i> ; <i>motion picture and video industries</i> ; <i>colleges and universities</i> ; federal government; insurance carriers; elementary and secondary schools; <i>hospitals</i> ; financial investment activities; <i>legal services</i> .	35,940	63,770
21	25-2031	Secondary school teachers (not special or vocational education)	Local government; <i>hospitals</i> .	35,690	63,300

Exhibit 5-2 (continued)					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
22	31-1012	Nursing aides, orderlies, and attendants	<i>Nursing care facilities; hospitals; community care facility for the elderly; local government; office of physicians; home health care services; state and federal government; outpatient care centers.</i>	31,970	\$ 23,980
23	49-9042	Maintenance and repair workers, general	Lessors of real estate; local government; activities related to real estate; accommodation; elementary and secondary schools; <i>colleges and universities;</i> beverage and tobacco product manufacturing; management of companies; professional organizations; fruit, vegetable and specialty foods manufacturing; plastics product manufacturing; <i>semiconductor and electronic components manufacturing;</i> nonmetallic mineral product manufacturing; <i>warehousing and storage; services to building;</i> federal government; pharmaceutical and medicine manufacturing; <i>facilities support services; nursing care facilities; community care facility for the elderly; commercial machinery repair.</i>	31,380	38,030
24	43-5071	Shipping, receiving, and traffic clerks	Couriers; <i>warehousing and storage;</i> department stores; <i>wholesalers; electronic markets;</i> retail stores; cut and sew apparel manufacturing; management of companies; <i>semiconductor and electronic components manufacturing; medical equipment and supplies manufacturing; motion picture and video industries.</i>	31,060	26,820
25	43-6014	Secretaries, except legal, medical, and executive	Elementary and secondary schools; local government; religious organizations; <i>colleges and universities; accounting and bookkeeping services; architectural and engineering services;</i> building equipment contractors; activities related to real estate; <i>management and technical consulting services;</i> federal government; <i>residential building construction;</i> offices of real estate agents; management of companies; <i>hospitals; electronic markets;</i> insurance carriers and agencies.	31,060	34,010
26	53-7064	Packers and packagers, hand	Grocery stores; plastics product manufacturing; <i>wholesalers; warehousing and storage;</i> bakeries and tortilla manufacturing; animal slaughtering and processing; converted paper product manufacturing; cut and sew apparel manufacturing; fruit, vegetable and specialty foods manufacturing; <i>electronic markets.</i>	34,300	18,480

Exhibit 5-2 (continued)					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
27	35-2011	Cooks, fast food	Limited-service restaurants; full-service restaurant; amusement parks and arcades; grocery stores; gasoline stations; accommodation.	30,280	\$ 18,550
28	53-3033	Truck drivers, light or delivery services	Couriers; <i>wholesalers</i> ; retail stores; automobile dealers; building material and supplies dealers; freight trucking; local messengers; <i>warehousing and storage</i> ; <i>electronic markets</i> ; consumer goods rental; florists; bakeries and tortilla manufacturing; management of companies.	29,620	29,330
29	43-4171	Receptionists and information clerks	<i>Offices of physicians</i> ; <i>personal care services</i> ; <i>legal services</i> ; <i>offices of dentists</i> ; offices of real estate agents; <i>hospitals</i> ; elementary and secondary schools; local government; <i>accounting and bookkeeping services</i> ; religious organizations; insurance agencies; activities related to real estate; building equipment contractors; <i>management and technical consulting services</i> ; management of companies; <i>colleges and universities</i> ; banks and credit unions; <i>outpatient care centers</i> ; automobile dealers; <i>architectural and engineering services</i> ; <i>motion picture and video industries</i> ; <i>office administrative services</i> .	29,390	26,490
30	41-1011	First-line supervisors/managers of retail sales workers	Retail stores; gasoline stations; automobile dealers; consumer goods rental; automotive equipment rental and leasing; lessors of real estate; management of companies; beverage and tobacco product manufacturing; wireless telecommunication carriers.	29,220	37,800
31	35-2021	Food preparation workers	Limited-service restaurants; full-service restaurants; grocery stores; elementary and secondary schools; special food services; <i>nursing care facilities</i> ; local government; <i>hospitals</i> ; <i>community care facility for the elderly</i> ; religious organizations; bakeries and tortilla manufacturing; <i>colleges and universities</i> .	28,040	19,080
32	51-6031	Sewing machine operators	Cut and sew apparel manufacturing; textile product mills; household and institutional furniture manufacturing; accessories and other apparel manufacturing; printing activities; textile mills; apparel knitting mills.	27,900	18,900

Exhibit 5-2 (continued)					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
33	53-3032	Truck drivers, heavy and tractor-trailer	Freight trucking (general and specialized); nonmetallic mineral product manufacturing; <i>wholesalers</i> ; support activities for road transportation; <i>warehousing and storage</i> ; <i>waste management and remediation service</i> ; couriers; building material and supplies dealers; freight transportation arrangement; management of companies; <i>electronic markets</i> ; machinery and equipment rental and leasing; <i>utility system construction</i> ; dairy product manufacturing; <i>highway, street and bridge construction</i> ; <i>building foundation and exterior contractors</i> .	26,310	\$ 40,330
34	35-2014	Cooks, restaurant	Full-service restaurants; accommodation; limited-service restaurants; other amusements and recreation industries; local government; gambling industries.	25,600	23,660
35	47-2061	Construction laborers	<i>Residential building construction</i> ; <i>specialty trade contractors</i> ; <i>building foundation and exterior contractors</i> ; <i>nonresidential building construction</i> ; <i>utility system construction</i> ; <i>highway, street and bridge construction</i> ; <i>building contractors</i> ; local government; <i>services to buildings and dwellings</i> ; <i>architectural and engineering services</i> ; <i>land subdivision</i> ; <i>waste management and remediation services</i> ; management of companies.	25,540	36,440
36	23-1011	Lawyers	Legal services; local, state and federal government; management of companies; insurance carriers; <i>computer systems design services</i> .	25,350	144,230
37	43-9199	Office and administrative support workers, all other	<i>Colleges and universities</i> ; local government; <i>junior colleges</i> ; <i>hospitals</i> ; management of companies; <i>accounting and bookkeeping services</i> ; federal government; newspaper, book and directory publishers; <i>office administrative services</i> ; insurance carriers; state government.	24,540	26,880
38	33-3051	Police and sheriff's patrol officers	Local, state and federal government; <i>colleges and universities</i> ; <i>junior colleges</i> .	22,910	83,550

Exhibit 5-2 (continued)					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
39	41-3099	Sales representatives, services, all other	<i>Management and technical consulting services; computer systems design services; banks and credit unions; telecommunications resellers; ISPs and web search portals; advertising services; building equipment contractors; services to buildings and dwellings; telecommunications carriers; insurance carriers; accommodation; residential building construction; insurance agencies; cable and other subscription programming; business support services.</i>	22,380	\$ 50,750
40	35-1012	First-line supervisors/managers of food prep and serving	Limited-service restaurants; full-service restaurants; elementary and secondary schools; grocery stores; special food services; drinking places; specialty food stores; local government; <i>nursing care facilities; community care facility for the elderly; hospitals;</i> amusement parks and arcades.	22,030	27,390
41	31-9092	Medical assistants	<i>Offices of physicians; hospitals; outpatient care centers; offices of other health practitioners; state government; other health care services;</i> local government.	21,970	28,580
42	43-6013	Medical secretaries	<i>Offices of physicians; offices of dentists; hospitals; offices of other health practitioners; outpatient care centers; medical and diagnostic laboratories; home health care services; nursing care facilities.</i>	21,180	29,760
43	37-2012	Maids and housekeeping cleaners	Accommodation; <i>hospitals;</i> private households; <i>services to buildings and dwellings; nursing care facilities; community care facility for the elderly;</i> activities related to real estate; religious organizations; lessors of real estate; <i>residential mental health facilities.</i>	20,950	21,090
44	51-2092	Team assemblers	<i>Medical equipment and supplies manufacturing; semiconductor and electronic components manufacturing; electrical equipment and appliances manufacturing; motor vehicle parts manufacturing; plastics product manufacturing; architectural and structural metals manufacturing; electronic instrument manufacturing; household and institutional furniture manufacturing; nonmetallic mineral product manufacturing; commercial and service industry machinery manufacturing; aerospace product and parts manufacturing.</i>	19,990	23,060

Exhibit 5-2 (continued)					
Rank	SOC	Occupation title	Employing industries	Total employment in LAC	Median annual earnings
45	29-2061	Licensed practical and licensed vocational nurses	<i>Hospitals; nursing care facilities; home health care services; offices of physicians; local government; community care facility for the elderly; outpatient care centers; federal government; residential mental health facilities; psychiatric and substance abuse hospitals; other hospitals.</i>	19,950	\$ 47,580
46	35-3022	Counter attendants: cafeteria, concessions, coffee shops	Limited-service restaurants; elementary and secondary schools; special food services; grocery stores; full-service restaurants; accommodation; specialty food stores; local government; <i>junior colleges.</i>	19,920	19,030
47	13-1111	Management analysts	<i>Engineering services;</i> direct insurance; insurance agencies; <i>research and development services;</i> telephone call centers.	19,770	76,730
48	41-2021	Counter and rental clerks	Automotive rental centers; <i>automotive repair centers;</i> fitness and recreational sports centers; sporting goods stores; <i>photographic services.</i>	19,050	20,460
49	11-9199	Managers, all other	<i>All industries</i>	19,040	111,410
50	43-3021	Billing and posting clerks and machine operators	<i>Offices of physicians; accounting and bookkeeping services;</i> management of companies; <i>hospitals; offices of dentists; wholesalers; offices of other health practitioners; legal services; medical and diagnostic laboratories; office administrative services;</i> insurance carriers; insurance agencies; local government; <i>electronic markets; outpatient care centers; medical equipment and supplies manufacturing.</i>	19,020	33,230

Source: BLS

Professional, Scientific and Technical Services

NAICS 541

Employment



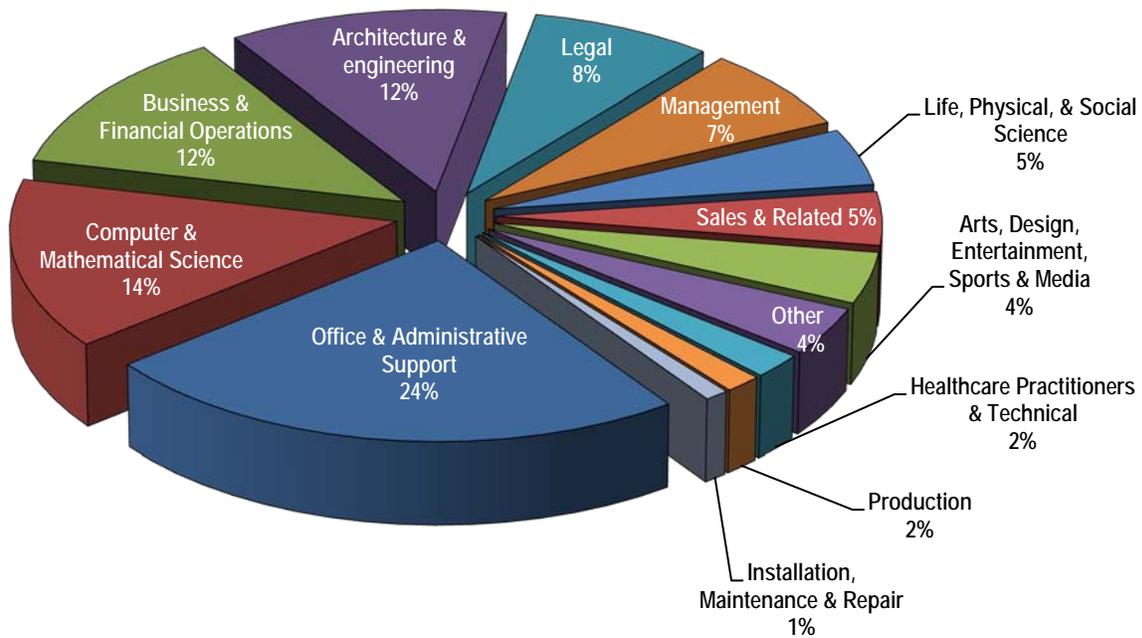
LA County 270,747 Jobs
LA City WIB 137,116 Jobs

Average Annual Earnings



LA County \$81,296

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-1011	First-line supervisors/managers of office and administrative support workers	Work Experience	\$ 49,390	52,720
43-3031	Bookkeeping, accounting, and auditing clerks	Moderate-Term On-the-Job Training	36,810	56,330
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	34,130	55,020
43-4171	Receptionists and information clerks	Short-Term On-the-Job Training	26,490	29,390
43-6011	Executive secretaries and administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6012	Legal secretaries	Post-Secondary Vocational Education	49,100	11,000
43-6014	Secretaries, except legal, medical, and executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Computer and mathematical science occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
15-1021	Computer programmers	Bachelor's Degree	\$ 80,040	7,150
15-1031	Computer software engineers, applications	Bachelor's Degree	89,900	13,070
15-1032	Computer software engineers, systems software	Bachelor's Degree	98,290	12,750
15-1041	Computer support specialists	Associate Degree	46,360	14,110
15-1051	Computer systems analysts	Bachelor's Degree	79,710	11,610
15-1071	Network and computer systems administrators	Bachelor's Degree	72,070	8,620
Business and financial operations occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
13-1111	Management analysts	Work Experience, Plus a Bachelor's or Higher	\$ 76,730	19,770
13-1199	Business operations specialists, all other	Bachelor's Degree	63,220	41,620
13-2011	Accountants and auditors	Bachelor's Degree	63,770	35,940
Architecture and engineering occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
17-1011	Architects, except landscape and naval	Bachelor's Degree	\$ 81,690	2,060
17-2051	Civil engineers	Bachelor's Degree	87,890	7,850
17-3011	Architectural and civil drafters	Post-Secondary Vocational Education	52,210	4,720
Legal occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
23-1011	Lawyers	First Professional Degree	\$ 144,230	25,350
23-2011	Paralegals and legal assistants	Associate Degree	57,020	8,470

Ambulatory Health Care Services

NAICS 621

Employment



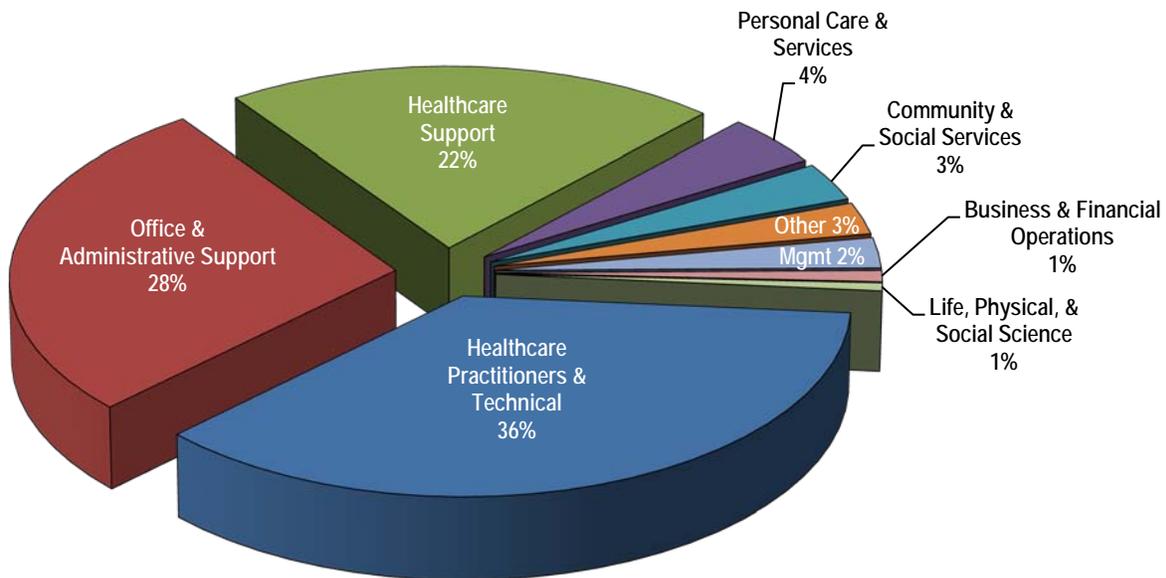
LA County 166,022 Jobs
LA City WIB 68,035 Jobs

Average Annual Earnings



LA County \$52,722

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Healthcare practitioners and technical occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
29-1021	Dentists, general	First Professional Degree	\$ 109,760	4,020
29-1062	Family and general practitioners	First Professional Degree	156,510	3,650
29-1069	Physicians and surgeons, all other	First Professional Degree	*	6,510
29-1111	Registered nurses	Associates Degree	80,170	61,270
29-1123	Physical therapists	Master's Degree	78,520	4,020
29-2012	Medical and clinical laboratory technicians	Associate Degree	38,170	4,940
29-2021	Dental hygienists	Associate Degree	83,790	3,340
29-2034	Radiologic technologists and technicians	Associate Degree	59,780	4,260
29-2041	Emergency medical technicians and paramedics	Post-Secondary Vocational Education	27,480	2,760
29-2061	Licensed practical and licensed vocational nurses	Post-Secondary Vocational Education	45,580	19,950
29-2071	Medical records and health information technicians	Associates Degree	33,970	4,410
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-1011	First-line supervisors/managers of office and administrative support workers	Work Experience	\$ 52,720	49,390
43-3021	Billing and posting clerks and machine operators	Moderate-Term On-the-Job Training	33,230	19,020
43-3031	Bookkeeping, accounting, and auditing clerks	Moderate-Term On-the-Job Training	36,810	56,330
43-4171	Receptionists and information clerks	Short-Term On-the-Job Training	26,490	29,390
43-6011	Executive secretaries and administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6013	Medical secretaries	Post-Secondary Vocational Education	29,760	21,180
43-6014	Secretaries, except legal, medical, and executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Healthcare support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
31-1011	Home health aides	Short-Term On-the-Job Training	\$ 20,870	12,650
31-1012	Nursing aides, orderlies, and attendants	Short-Term On-the-Job Training	23,980	31,970
31-9091	Dental assistants	Moderate-Term On-the-Job Training	29,160	11,110
31-9092	Medical assistants	Moderate-Term On-the-Job Training	28,580	21,970

Hospitals

NAICS 622

Employment



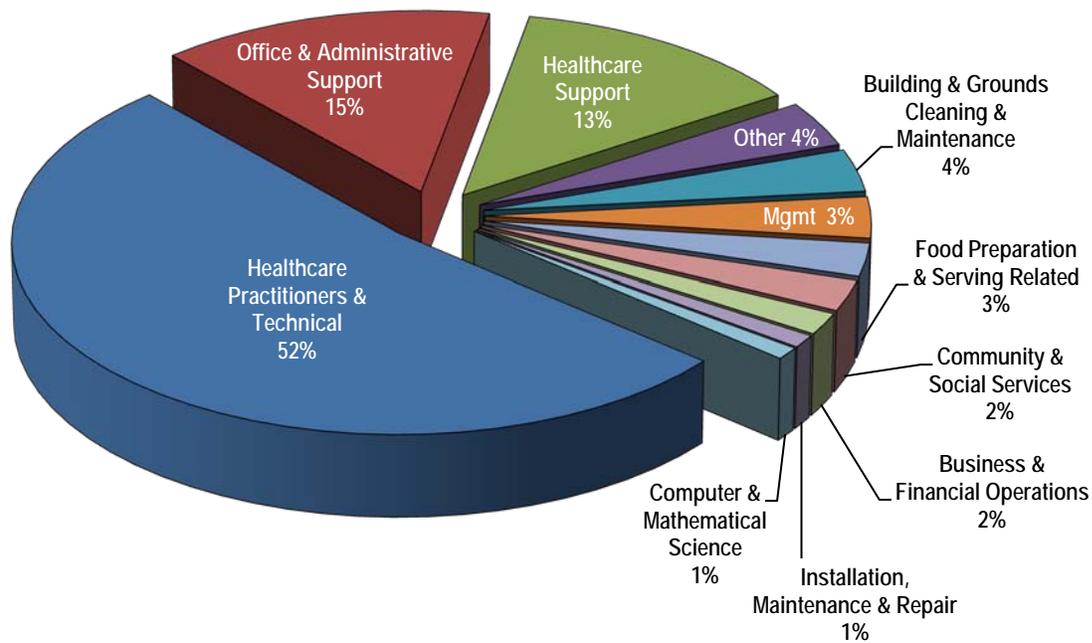
LA County 107,820 Jobs
LA City WIB 45,935 Jobs

Average Annual Earnings



LA County \$61,212

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Healthcare practitioners and technical occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
29-1051	Pharmacists	First Professional Degree	\$ 119,550	6,150
29-1069	Physicians & surgeons, all other	First Professional Degree	*	6,510
29-1111	Registered nurses	Associates Degree	80,170	61,270
29-1123	Physical therapists	Master's Degree	78,520	4,020
29-1126	Respiratory therapists	Associates Degree	64,590	3,580
29-2011	Medical & clinical laboratory technologists	Bachelor's Degree	74,360	4,540
29-2012	Medical & clinical laboratory technicians	Associate Degree	38,170	4,940
29-2034	Radiologic technologists & technicians	Associate Degree	59,780	4,260
29-2052	Pharmacy technicians	Moderate-Term On-the-Job Training	35,180	6,330
29-2055	Surgical technologists	Post-Secondary Vocational Education	43,880	2,610
29-2061	Licensed practical & licensed vocational nurses	Post-Secondary Vocational Education	47,580	19,950
29-2071	Medical records & health information technicians	Associate Degree	33,970	4,410
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-4111	Interviewers, except eligibility and loan	Short-Term On-the-Job Training	\$ 32,540	7,340
43-6013	Medical secretaries	Post-Secondary Vocational Education	29,760	21,180
43-6014	Secretaries, except legal, medical, and executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Healthcare support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
31-1012	Nursing aides, orderlies, and attendants	Short-Term On-the-Job Training	\$ 23,980	31,970
31-9092	Medical assistants	Moderate-Term On-the-Job Training	28,580	21,970

Nursing and Residential Care Facilities

NAICS 623

Employment



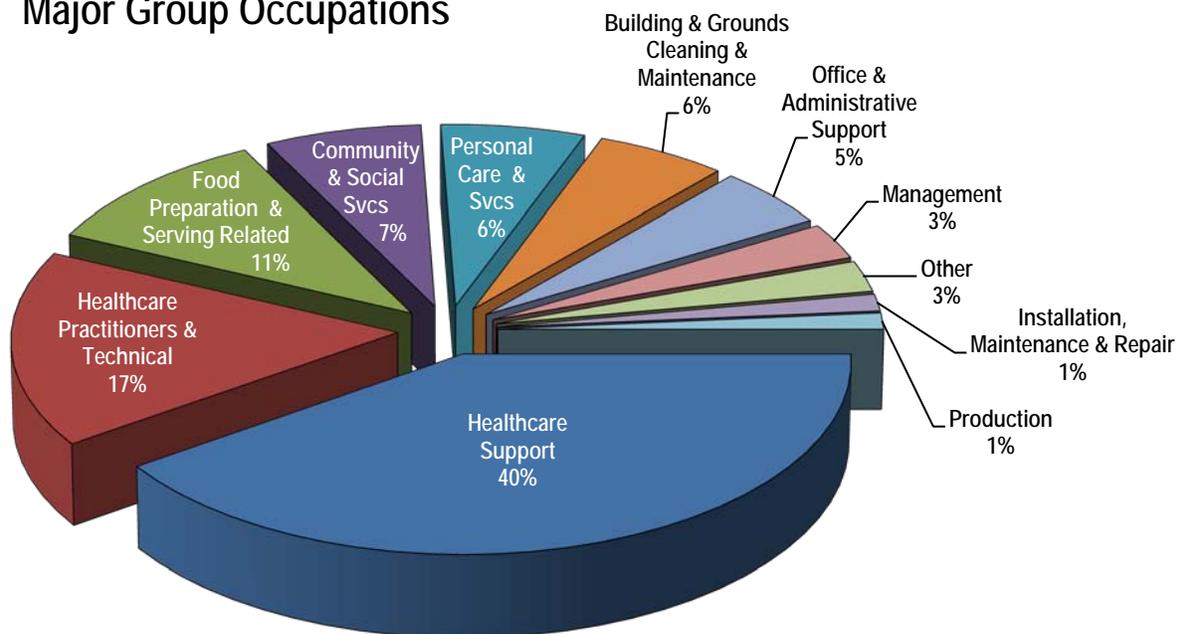
LA County 64,269 Jobs
LA City WIB 26,670 Jobs

Average Annual Earnings



LA County \$28,449

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Healthcare support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
31-1011	Home health aides	Short-Term On-the-Job Training	\$ 20,870	12,650
31-1012	Nursing aides, orderlies, & attendants	Moderate-Term On-the-Job Training	23,980	31,970
Healthcare practitioners and technical occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
29-1111	Registered nurses	Associates Degree	\$ 80,170	61,270
29-2061	Licensed practical & licensed vocational nurses	Post-Secondary Vocational Education	47,580	19,950
Food preparation and serving related occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
35-2012	Cooks, institution & cafeteria	Moderate-Term On-the-Job Training	\$ 25,410	5,430
35-2021	Food preparation workers	Short-Term On-the-Job Training	19,080	28,040
35-3021	Combined food preparation & serving workers, including fast food	Short-Term On-the-Job Training	18,700	62,920
35-3041	Food servers, nonrestaurant	Short-Term On-the-Job Training	20,480	2,790
Community and social services occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
21-1093	Social & human service assistants	Moderate-Term On-the-Job Training	\$ 34,470	8,810
Personal care and service occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
39-9011	Child care workers	Short-Term On-the-Job Training	\$ 21,600	15,040
39-9032	Recreation workers	Bachelor's Degree	23,810	10,920
Building and grounds cleaning and maintenance occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
37-2011	Janitors & cleaners, except maids & housekeeping cleaners	Short-Term On-the-Job Training	\$ 22,790	52,180
37-2012	Maids & housekeeping cleaners	Short-Term On-the-Job Training	21,090	20,950

Social Assistance

NAICS 624

Employment



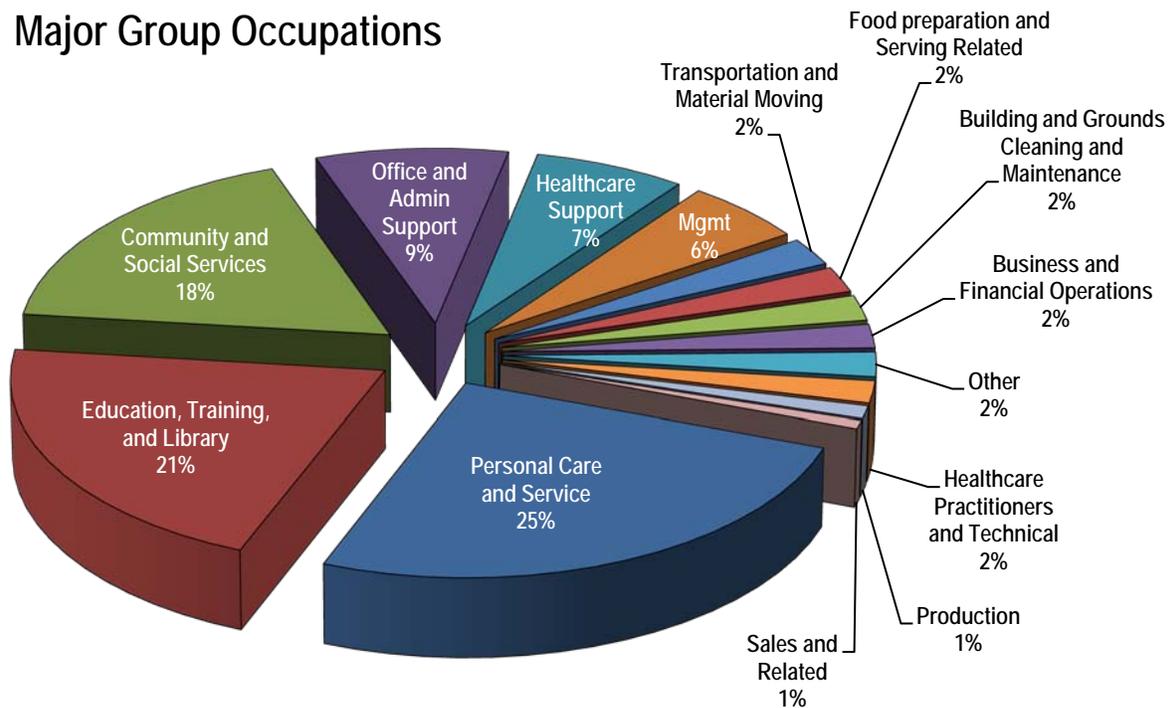
LA County 55,480 Jobs
LA City WIB 27,683 Jobs

Average Annual Earnings



LA County \$28,662

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Personal care and service occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
39-9011	Child care workers	Short-Term On-the-Job Training	\$ 21,600	15,040
39-9021	Personal and home care aides	Short-Term On-the-Job Training	20,630	12,310
39-9032	Recreation workers	Bachelor's Degree	23,810	10,920
Education, training, and library occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
25-2011	Preschool teachers, except special education	Post-Secondary Vocational Education	\$ 28,870	13,510
25-9041	Teacher assistants	Short-Term On-the-Job Training	29,530	50,340
Community and social services occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
21-1012	Educational, vocational, and school counselors	Master's Degree	\$ 52,710	7,900
21-1015	Rehabilitation counselors	Master's Degree	52,240	1,350
21-1021	Child, family, and school social workers	Bachelor's Degree	50,620	8,150
21-1023	Mental health and substance abuse social workers	Master's Degree	40,430	5,040
21-1093	Social and human service assistants	Moderate-Term On-the-Job Training	34,470	8,810
21-1099	Community and social service specialists, all other	Bachelor's Degree	38,340	3,740
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-3031	Bookkeeping, accounting, and auditing clerks	Moderate-Term On-the-Job Training	\$ 36,810	56,330
43-6011	Executive secretaries and administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6014	Secretaries, except legal, medical, and executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170

Motion Picture and Sound Recording Industries

NAICS 512

Employment



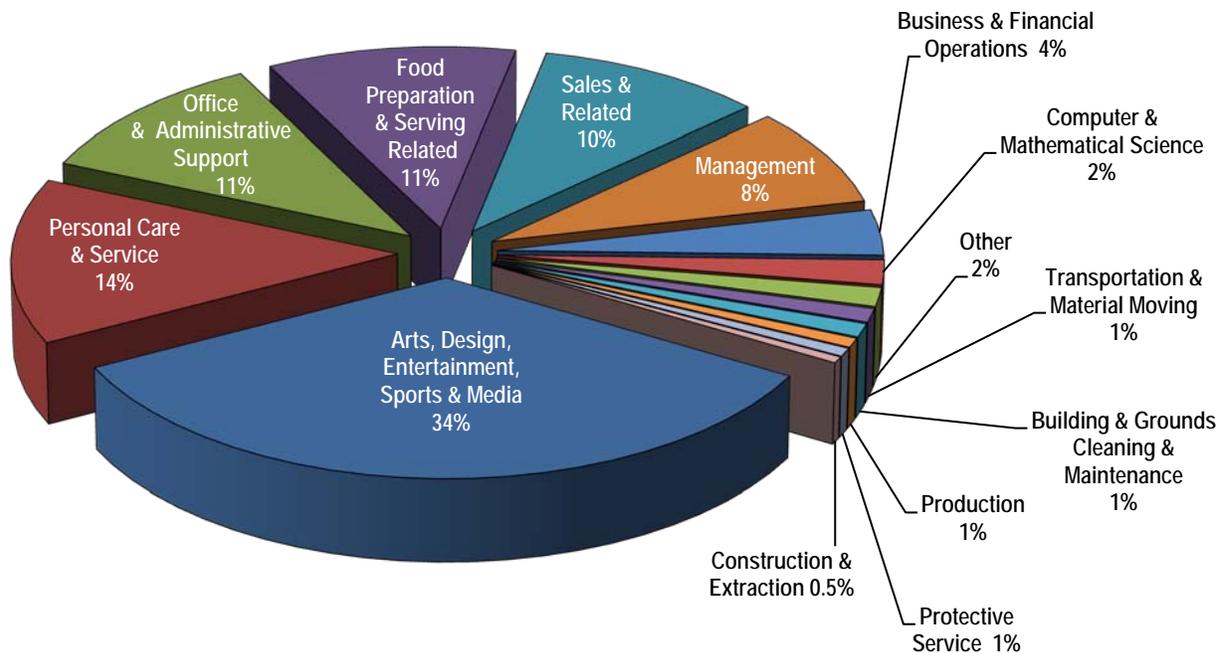
LA County 130,390 Jobs
LA City WIB 75,833 Jobs

Average Annual Earnings



LA County \$87,655

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Arts, design, entertainment, sports, media occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
27-1014	Multi-media artists and animators	Bachelor's Degree	\$ 68,420	4,920
27-1024	Graphic designers	Bachelor's Degree	51,930	10,150
27-2011	Actors	Long-Term On-the-Job Training	*	12,900
27-2012	Producers and directors	Work Experience, Plus Bachelor's or Higher	115,010	15,210
27-4011	Audio and video equipment technicians	Long-Term On-the-Job Training	41,850	3,850
27-4014	Sound engineering technicians	Post-Secondary Vocational Education	56,800	2,380
27-4031	Camera operators, television, video, and motion picture	Moderate-Term On-the-Job Training	46,520	2,150
27-4032	Film and video editors	Bachelor's Degree	69,410	5,460
27-4099	Media and communication equipment workers, all other	Moderate-Term On-the-Job Training	55,760	3,280
Personal care and service occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
39-1021	First-line supervisors/managers of personal service workers	Work Experience	\$ 40,660	3,900
39-3021	Motion picture projectionists	Short-term on-the-job training	23,430	590
39-3031	Ushers, lobby attendants, and ticket takers	Short-Term On-the-Job Training	20,150	3,220
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	\$ 34,130	55,020
43-6011	Executive secretaries and administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6014	Secretaries, except legal, medical, and executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Food preparation and serving related occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
35-3021	Combined food preparation and serving workers, including fast food	Short-Term On-the-Job Training	\$ 18,700	62,920
35-3022	Counter attendants, cafeteria, food concession, and coffee shop	Short-Term On-the-Job Training	19,030	19,920
Sales and related occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
41-2011	Cashiers	Short-Term On-the-Job Training	\$ 19,130	92,130
41-3011	Advertising sales agents	Moderate-Term On-the-Job Training	48,270	4,720

Fabricated Metal Product Manufacturing

NAICS 332

Employment



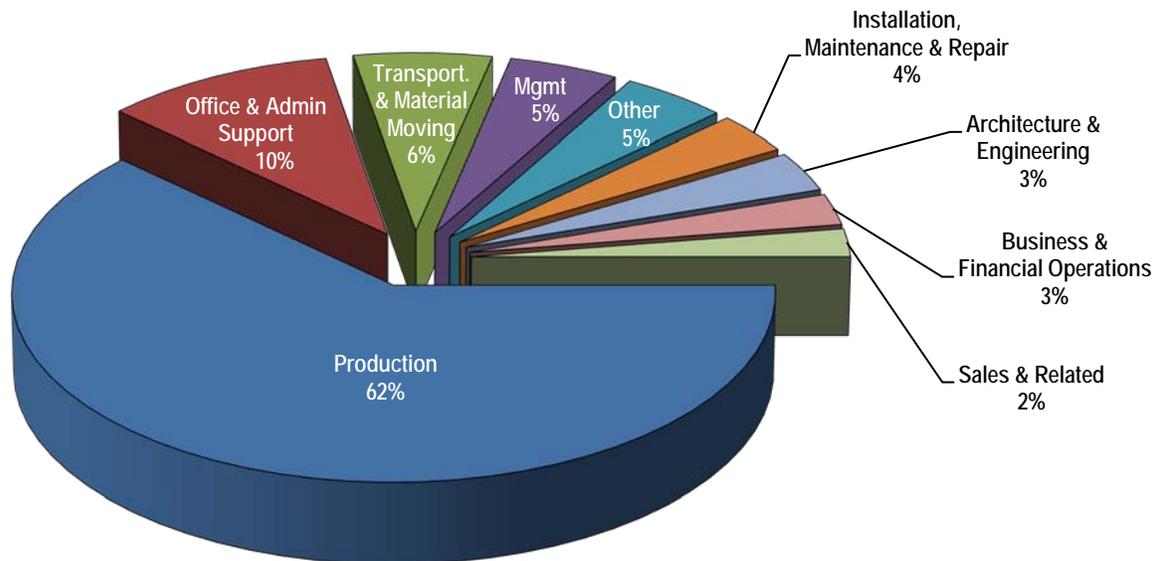
LA County 48,924 Jobs
LA City WIB 16,653 Jobs

Average Annual Earnings



LA County \$48,827

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Production occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
51-1011	First-line supervisors/managers of production & operating workers	Work Experience	\$ 50,310	17,380
51-2041	Structural metal fabricators & fitters	Moderate-Term On-the-Job Training	36,440	1,680
51-2092	Team assemblers	Moderate-Term On-the-Job Training	23,060	19,990
51-2099	Assemblers & fabricators, all other	Moderate-Term On-the-Job Training	24,610	7,050
51-4011	Computer-controlled machine tool operators, metal & plastic	Moderate-Term On-the-Job Training	31,910	3,160
51-4031	Cutting, punching, & press machine setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	26,480	5,780
51-4033	Grind, lapp, polish, & buff mach tool setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	27,350	3,630
51-4034	Lathe & turning machine tool setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	29,890	1,760
51-4041	Machinists	Long-Term On-the-Job Training	34,080	10,540
51-4081	Multiple machine tool setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	30,760	920
51-4111	Tool & die makers	Long-Term On-the-Job Training	48,440	1,490
51-4121	Welders, cutters, solderers, & brazers	Post-Secondary Vocational Education	31,950	6,180
51-4193	Plating & coating machine setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	24,310	1,750
51-9061	Inspectors, testers, sorters, samplers, & weighers	Moderate-Term On-the-Job Training	31,100	14,320
51-9121	Coating, painting, & spraying machine setters, operators, & tenders	Moderate-Term On-the-Job Training	23,200	1,990
51-9198	Helpers--production workers	Short-Term On-the-Job Training	20,560	13,250
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	\$ 36,810	56,330
43-5071	Shipping, receiving, & traffic clerks	Short-Term On-the-Job Training	26,820	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Transportation and material moving occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
53-7051	Industrial truck & tractor operators	Short-Term On-the-Job Training	\$ 32,140	17,720
53-7062	Laborers & freight, stock, & material movers	Short-Term On-the-Job Training	22,560	73,940
53-7064	Packers & packagers	Short-Term On-the-Job Training	19,020	30,550
Management occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
11-3051	Industrial production managers	Bachelor's Degree	\$ 90,340	4,960
11-1021	General & operations managers	Work Experience, Plus a Bachelor's or Higher	108,670	67,790

Machinery Manufacturing

NAICS 333

Employment



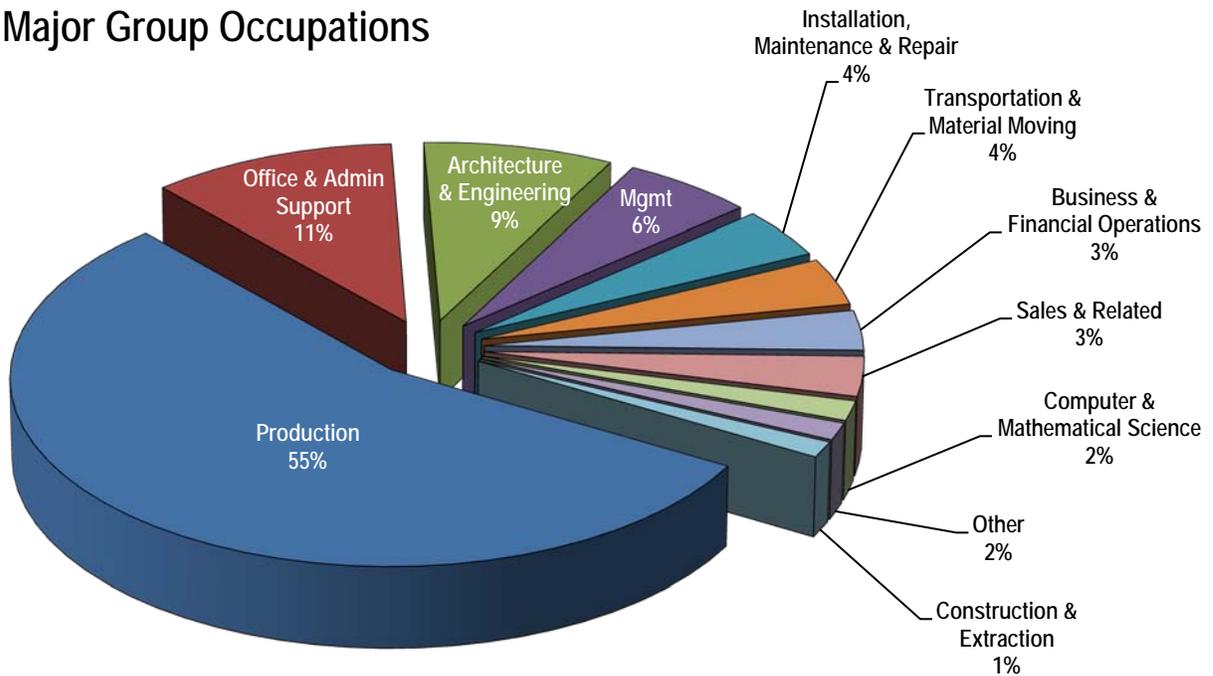
LA County 18,518 Jobs
LA City WIB 7,656 Jobs

Average Annual Earnings



LA County \$58,629

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Production occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
51-1011	First-line supervisors/managers of production & operating workers	Work Experience	\$ 50,310	17,380
51-2022	Electrical & electronic equipment assemblers	Short-Term On-the-Job Training	25,720	4,390
51-2023	Electromechanical equipment assemblers	Short-Term On-the-Job Training	24,060	1,890
51-2031	Engine & other machine assemblers	Short-Term On-the-Job Training	29,440	560
51-2041	Structural metal fabricators & fitters	Moderate-Term On-the-Job Training	36,440	1,680
51-2092	Team assemblers	Moderate-Term On-the-Job Training	23,060	19,990
51-2099	Assemblers & fabricators, all other	Moderate-Term On-the-Job Training	24,610	7,050
51-4011	Computer-controlled machine tool operators, metal & plastic	Moderate-Term On-the-Job Training	31,910	3,160
51-4031	Cutting, punching, & press machine setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	26,480	5,780
51-4033	Grind, lapp, polish, & buff machine tool setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	27,350	3,630
51-4034	Lathe & turning machine tool setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	29,890	1,760
51-4041	Machinists	Long-Term On-the-Job Training	34,080	10,540
51-4072	Molding, coremaking, & cast machine setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	21,470	2,770
51-4081	Multiple machine tool setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	30,760	920
51-4111	Tool & die makers	Long-Term On-the-Job Training	48,440	1,490
51-4121	Welders, cutters, solderers, & brazers	Post-Secondary Vocational Education	31,950	6,180
51-9061	Inspectors, testers, sorters, samplers, & weighers	Moderate-Term On-the-Job Training	31,100	14,320
51-9121	Coating, painting, & spraying machine setters, operators, & tenders	Moderate-Term On-the-Job Training	23,200	1,990
51-9198	Helpers--production workers	Short-Term On-the-Job Training	20,560	13,250
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	\$ 36,810	56,330
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	34,130	55,020
43-5061	Production, planning, & expediting clerks	Short-Term On-the-Job Training	46,080	13,120
43-5071	Shipping, receiving, & traffic clerks	Short-Term On-the-Job Training	26,820	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Architecture and engineering occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
17-2112	Industrial engineers	Bachelor's Degree	\$ 81,900	5,630
17-2141	Mechanical engineers	Bachelor's Degree	87,720	5,400
17-3013	Mechanical drafters	Post-Secondary Vocational Education	53,380	1,100

Computer and Electronic Product Manufacturing

NAICS 334

Employment



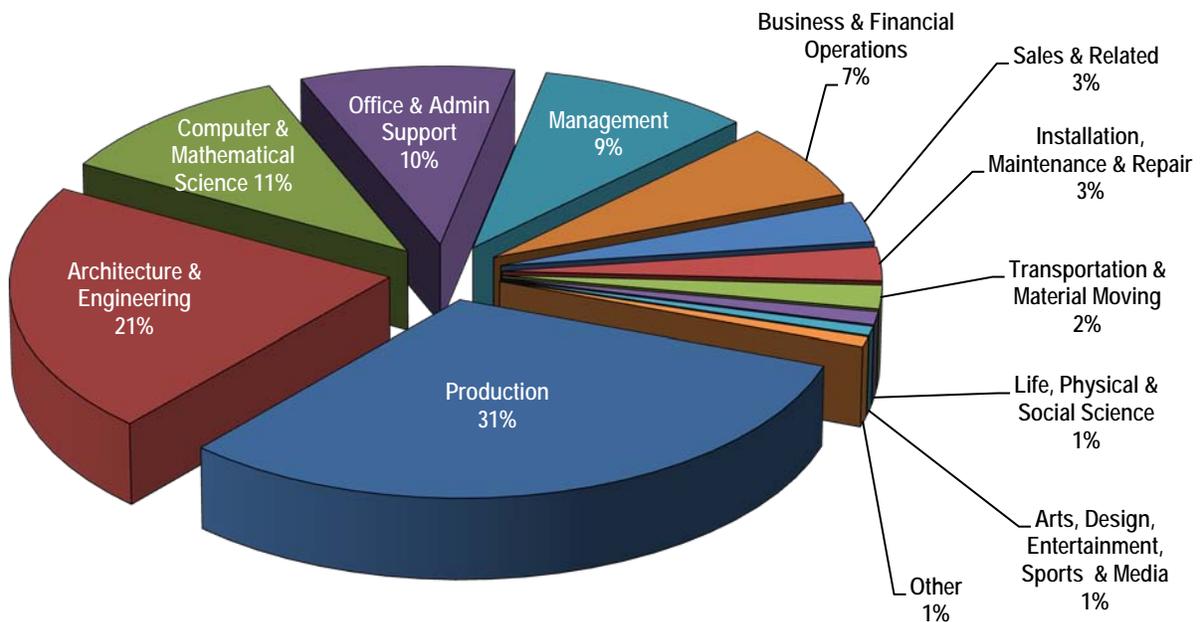
LA County 54,140 Jobs
LA City WIB 17,169 Jobs

Average Annual Earnings



LA County \$86,976

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

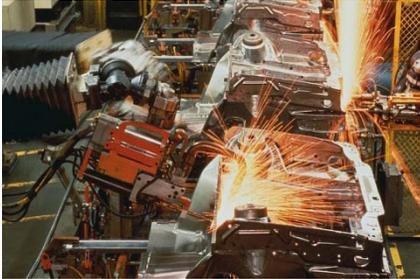
Detailed Occupations

Production occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
51-1011	First-line supervisors/managers of production & operating workers	Work Experience	\$ 50,310	17,380
51-2022	Electrical & electronic equipment assemblers	Short-Term On-the-Job Training	25,720	4,390
51-2023	Electromechanical equipment assemblers	Short-Term On-the-Job Training	24,060	1,890
51-2092	Team assemblers	Moderate-Term On-the-Job Training	23,060	19,990
51-4041	Machinists	Long-Term On-the-Job Training	34,080	10,540
51-9061	Inspectors, testers, sorters, samplers, & weighers	Moderate-Term On-the-Job Training	31,100	14,320
51-9141	Semiconductor processors	Associate Degree	32,660	550
Architecture and engineering occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
17-2061	Computer hardware engineers	Bachelor's Degree	\$ 110,160	1,080
17-2071	Electrical engineers	Bachelor's Degree	88,320	4,040
17-2072	Electronics engineers, except computer	Bachelor's Degree	97,380	5,430
17-2112	Industrial engineers	Bachelor's Degree	81,900	5,630
17-2141	Mechanical engineers	Bachelor's Degree	87,720	5,400
17-2199	Engineers, all other	Bachelor's Degree	98,930	12,000
17-3023	Electrical & electronic engineering technicians	Associate Degree	54,970	3,540
17-3026	Industrial engineering technicians	Associate Degree	49,490	1,350
Computer and mathematical science occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
15-1031	Computer software engineers, applications	Bachelor's Degree	\$ 89,900	13,070
15-1032	Computer software engineers, systems software	Bachelor's Degree	98,290	12,750
15-1041	Computer support specialists	Associate Degree	46,360	14,110
15-1051	Computer systems analysts	Bachelor's Degree	79,710	11,610
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	\$ 34,130	55,020
43-5061	Production, planning, & expediting clerks	Short-Term On-the-Job Training	46,080	13,120
43-5071	Shipping, receiving, & traffic clerks	Short-Term On-the-Job Training	26,820	31,060
43-6011	Executive secretaries & administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740

Electrical Equipment and Appliance Manufacturing

NAICS 335

Employment



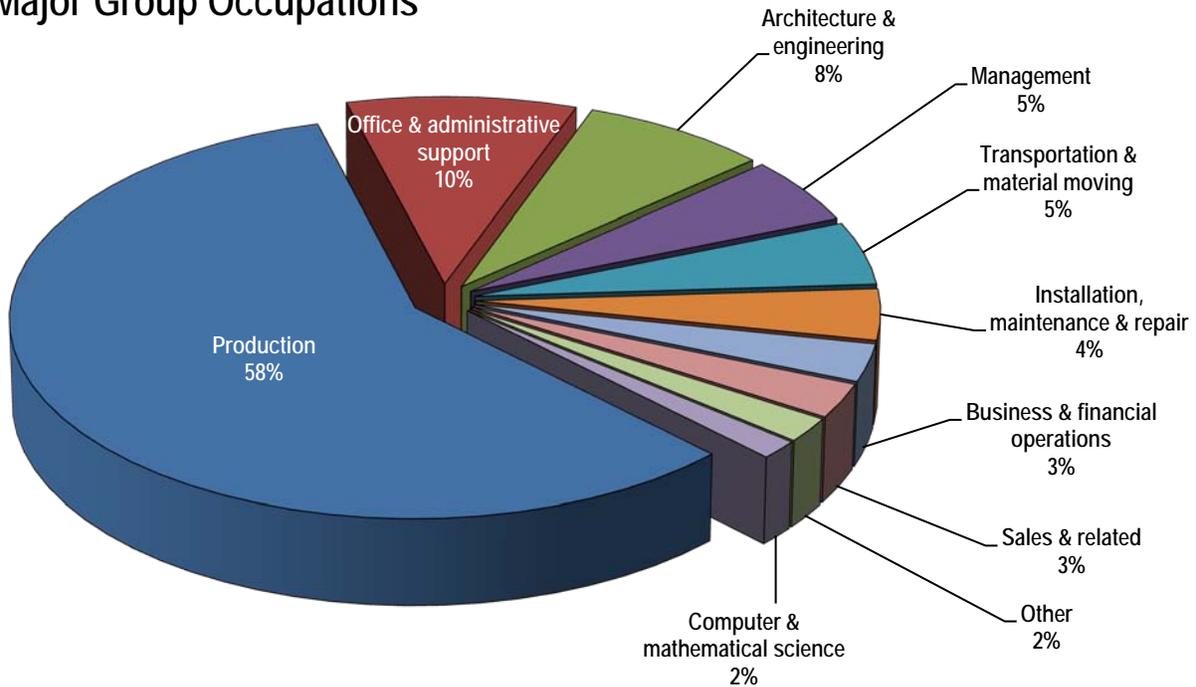
LA County 11,102 Jobs
LA City WIB 2,187 Jobs

Average Annual Earnings



LA County \$51,116

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Production occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
51-1011	First-line supervisors/managers of production & operating workers	Work Experience	\$49,400	18,810
51-2021	Coil winders, tapers, & finishers	Short-Term On-the-Job Training	23,380	540
51-2022	Electrical & electronic equipment assemblers	Short-Term On-the-Job Training	23,160	5,750
51-2023	Electromechanical equipment assemblers	Short-Term On-the-Job Training	24,410	2,330
51-2092	Team assemblers	Moderate-Term On-the-Job Training	21,280	22,880
51-2099	Assemblers & fabricators, all other	Moderate-Term On-the-Job Training	23,030	7,030
51-4011	Computer-controlled machine tool operators, metal & plastic	Moderate-Term On-the-Job Training	29,850	3,820
51-4021	Extruding & drawing machine setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	26,720	1,560
51-4031	Cutting, punching, & press machine setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	25,390	7,130
51-4041	Machinists	Long-Term On-the-Job Training	33,120	10,890
51-4072	Molding, coremaking, & casting machine setters, operators, & tenders, metal & plastic	Moderate-Term On-the-Job Training	20,780	3,010
51-4121	Welders, cutters, solderers, & brazers	Post-Secondary Vocational Education	29,880	7,740
51-4199	Metal workers & plastic workers, all other	Moderate-Term On-the-Job Training	29,110	1,430
51-9061	Inspectors, testers, sorters, samplers, & weighers	Moderate-Term On-the-Job Training	29,320	15,200
51-9198	Helpers--production workers	Short-Term On-the-Job Training	19,900	14,600
Office and administrative support occupations		Education/Training	Median Annual Earnings	Employment in LAC
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	\$36,410	57,780
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	32,800	60,720
43-5071	Shipping, receiving, & traffic clerks	Short-Term On-the-Job Training	26,790	34,360
Architectural and engineering occupations		Education/Training	Median Annual Earnings	Employment in LAC
17-2071	Electrical engineers	Bachelor's Degree	\$88,810	4,460
17-2112	Industrial engineers	Bachelor's Degree	79,720	5,790
17-2141	Mechanical engineers	Bachelor's Degree	87,600	5,550
17-3023	Electrical & electronic engineering technicians	Associate Degree	55,180	4,190

Durable Goods Wholesaling

NAICS 423

Employment



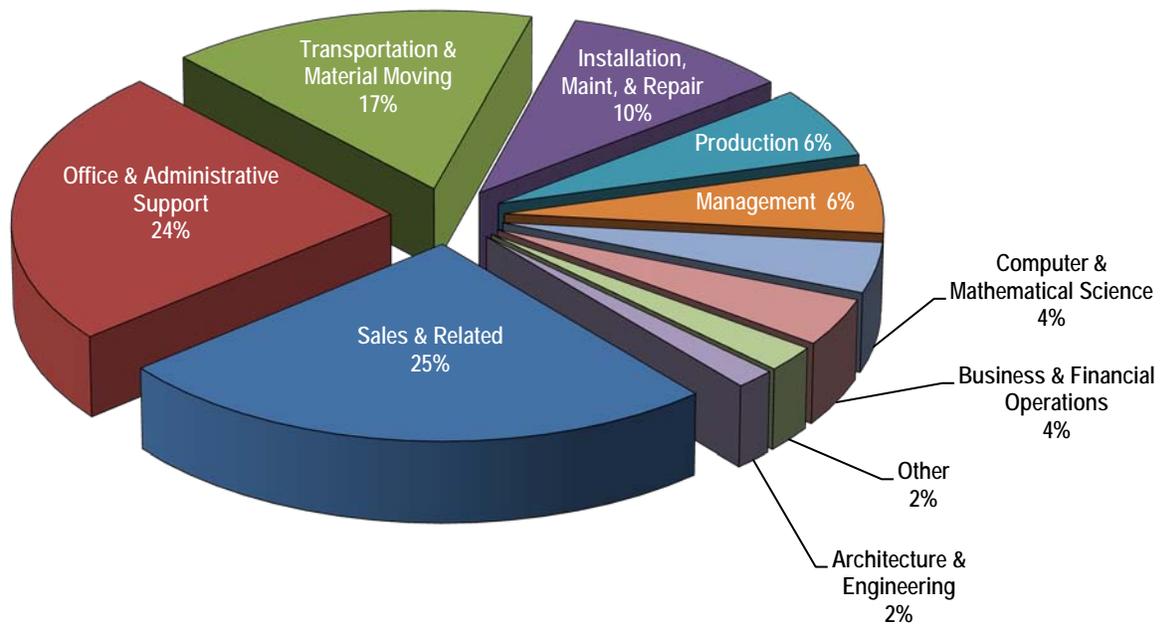
LA County 105,681 Jobs
LA City WIB 34,650 Jobs

Average Annual Earnings



LA County \$58,704

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Sales and related occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
41-1012	First-line supervisors/managers of non-retail sales workers	Work Experience	\$ 67,610	6,940
41-2022	Parts salespersons	Moderate-Term On-the-Job Training	28,240	4,770
41-2031	Retail salespersons	Short-Term On-the-Job Training	20,730	114,890
41-4011	Sales representatives, wholesale & manufacturing, technical & scientific products	Moderate-Term On-the-Job Training	71,420	10,000
41-4012	Sales representatives, wholesale & manufacturing, except technical & scientific products	Moderate-Term On-the-Job Training	52,230	43,800
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-1011	First-line supervisors/managers of office & administrative support workers	Work Experience	\$ 52,720	49,390
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	36,810	56,330
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	34,130	55,020
43-4151	Order clerks	Short-Term On-the-Job Training	28,230	11,150
43-5071	Shipping, receiving, & traffic clerks	Short-Term On-the-Job Training	26,820	31,060
43-5081	Stock clerks & order fillers	Short-Term On-the-Job Training	21,530	56,390
43-6011	Executive secretaries & administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6014	Secretaries, except legal, medical, & executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Transportation and material moving occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
53-3032	Truck drivers, heavy & tractor-trailer	Moderate-Term On-the-Job Training	\$ 40,330	26,310
53-3033	Truck drivers, light or delivery services	Short-Term On-the-Job Training	29,330	29,620
53-7051	Industrial truck & tractor operators	Short-Term On-the-Job Training	32,140	17,720
53-7062	Laborers & freight, stock, & material movers	Short-Term On-the-Job Training	22,560	73,940
Installation, maintenance and repair occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
49-2011	Computer, automated teller, & office machine repairers	Post-Secondary Vocational Education	\$ 37,010	2,660
49-3031	Bus & truck mechanics & diesel engine specialists	Post-Secondary Vocational Education	44,580	4,110
49-3042	Mobile heavy equipment mechanics, except engines	Post-Secondary Vocational Education	67,360	3,270

Nondurable Goods Wholesaling

NAICS 424

Employment



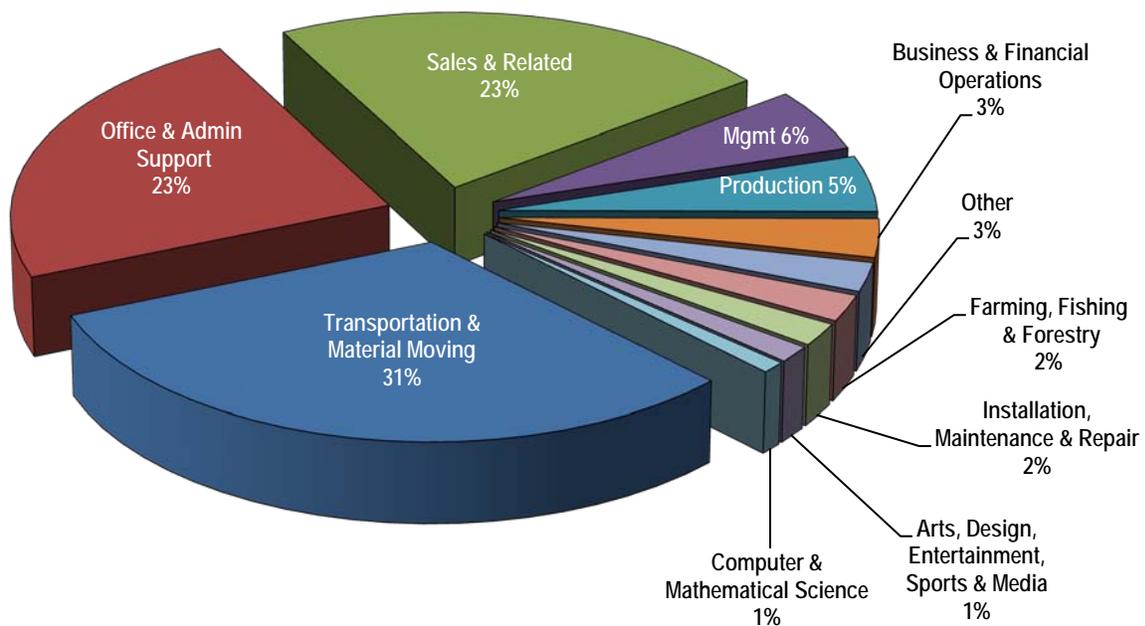
LA County 91,159 Jobs
LA City WIB 38,807 Jobs

Average Annual Earnings



LA County \$48,026

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Transportation and material moving occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
53-3031	Driver/sales workers	Short-Term On-the-Job Training	\$ 23,202	8,390
53-3032	Truck drivers, heavy & tractor-trailer	Moderate-Term On-the-Job Training	40,330	26,310
53-3033	Truck drivers, light or delivery services	Short-Term On-the-Job Training	29,330	29,620
53-7051	Industrial truck & tractor operators	Short-Term On-the-Job Training	32,140	17,720
53-7062	Laborers & freight, stock, & material movers	Short-Term On-the-Job Training	22,560	73,940
53-7064	Packers & packagers	Short-Term On-the-Job Training	19,020	30,550
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-1011	First-line supervisors/managers of office & administrative support workers	Work Experience	\$ 52,720	49,390
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	36,810	56,330
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	34,130	55,020
43-4151	Order clerks	Short-Term On-the-Job Training	28,230	11,150
43-5071	Shipping, receiving, & traffic clerks	Short-Term On-the-Job Training	26,820	31,060
43-5081	Stock clerks & order fillers	Short-Term On-the-Job Training	21,530	56,390
43-6014	Secretaries, except legal, medical, & executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Sales and related occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
41-1012	First-line supervisors/managers of non-retail sales workers	Work Experience	\$ 67,610	6,940
41-2031	Retail salespersons	Short-Term On-the-Job Training	20,730	114,890
41-4011	Sales representatives, wholesale & manufacturing, technical & scientific products	Moderate-Term On-the-Job Training	71,420	10,000
41-4012	Sales representatives, wholesale & manufacturing, except technical & scientific products	Moderate-Term On-the-Job Training	52,230	43,800
Management occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
11-2022	Sales managers	Work Experience, Plus a Bachelor's or Higher	\$ 126,720	15,260
11-1021	General & operations managers	Work Experience, Plus a Bachelor's or Higher	108,670	67,790

Wholesale Electronic Markets

NAICS 425

Employment



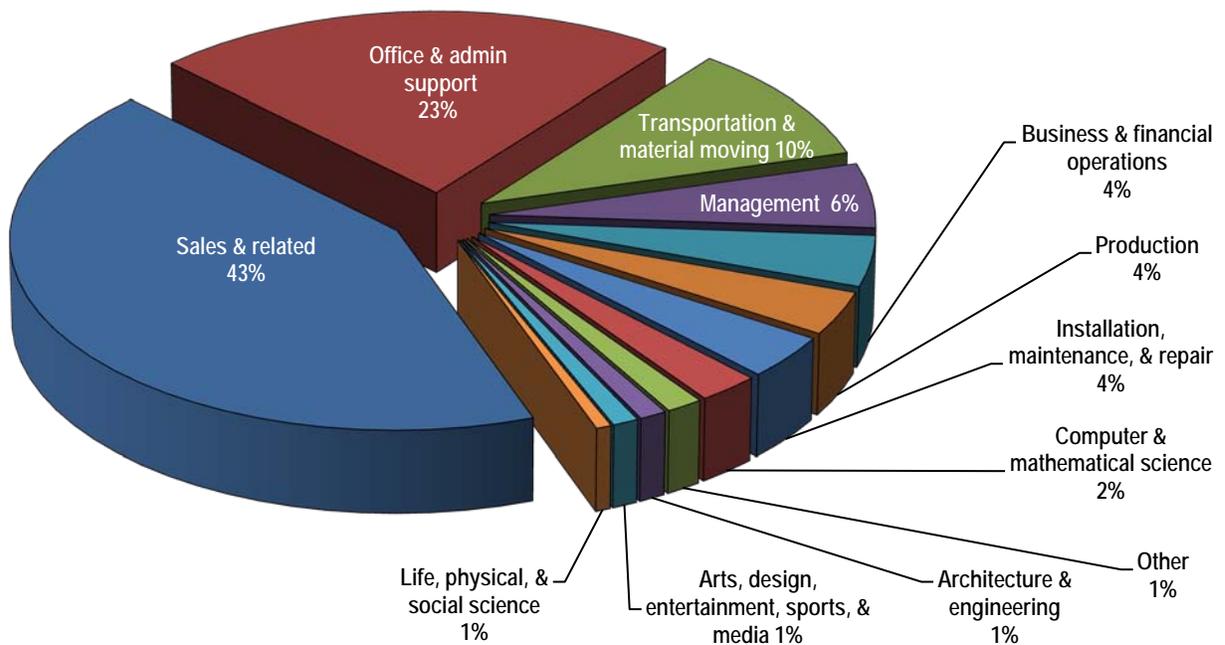
LA County 26,921 Jobs
LA City WIB 9,923 Jobs

Average Annual Earnings



LA County \$56,609

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Sales and related occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
41-1012	First-line supervisors/managers of non-retail sales workers	Work Experience	\$ 67,610	6,940
41-2031	Retail salespersons	Short-Term On-the-Job Training	20,730	114,890
41-4011	Sales representatives, wholesale & manufacturing, technical & scientific products	Moderate-Term On-the-Job Training	71,420	10,000
41-4012	Sales representatives, wholesale & manufacturing, except technical & scientific products	Moderate-Term On-the-Job Training	52,230	43,800
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-1011	First-line supervisors/managers of office & administrative support workers	Work Experience	\$ 52,720	49,390
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	36,810	56,330
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	34,130	55,020
43-4151	Order clerks	Short-Term On-the-Job Training	28,230	11,150
43-5071	Shipping, receiving, & traffic clerks	Short-Term On-the-Job Training	26,820	31,060
43-5081	Stock clerks & order fillers	Short-Term On-the-Job Training	21,530	56,390
43-6011	Executive secretaries & administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6014	Secretaries, except legal, medical, & executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Transportation and material moving occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
53-3032	Truck drivers, heavy & tractor-trailer	Moderate-Term On-the-Job Training	\$ 40,330	26,310
53-3033	Truck drivers, light or delivery services	Short-Term On-the-Job Training	29,330	29,620
53-7062	Laborers & freight, stock, & material movers, h&	Short-Term On-the-Job Training	22,560	73,940
Management occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
11-2022	Sales managers	Work Experience, Plus a Bachelor's or Higher	\$ 126,720	15,260
11-1021	General & operations managers	Work Experience, Plus a Bachelor's or Higher	108,670	67,790

Warehousing and Storage

NAICS 493

Employment



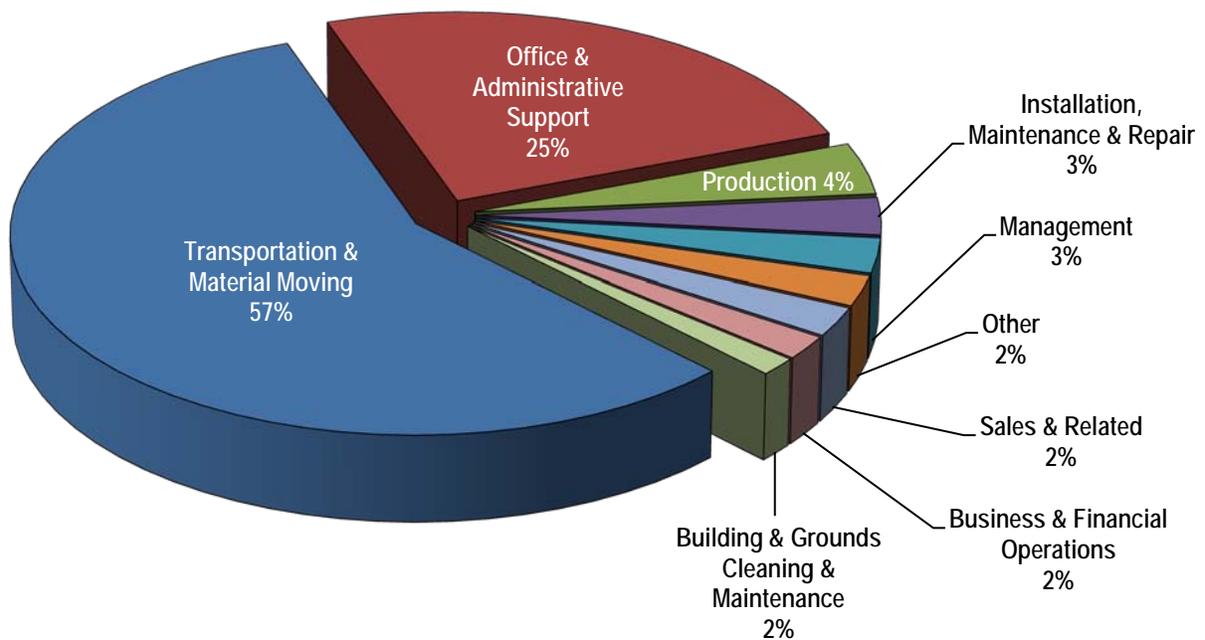
LA County 16,805 Jobs
LA City WIB 3,228 Jobs

Average Annual Earnings



LA County \$44,581

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Transportation and material moving operations		Education/Training	Median Annual Earnings	Total Employment in LAC
53-1021	First-line supervisors/managers of helpers, laborers, & material movers	Work Experience	\$ 44,200	7,090
53-1031	First-line supervisors/managers of transportation & material-moving machine & vehicle operators	Work Experience	59,560	7,180
53-3032	Truck drivers, heavy & tractor-trailer	Moderate-Term On-the-Job Training	40,330	26,310
53-3033	Truck drivers, light or delivery services	Short-Term On-the-Job Training	29,330	29,620
53-7051	Industrial truck & tractor operators	Short-Term On-the-Job Training	32,140	17,720
53-7062	Laborers & freight, stock, & material movers	Short-Term On-the-Job Training	22,560	73,940
53-7064	Packers & packagers	Short-Term On-the-Job Training	19,020	30,550
Office and administrative support occupations		Education/Training	Median Annual Earnings	Employment in LAC
43-1011	First-line supervisors/managers of office & administrative support workers	Work Experience	\$ 52,720	49,390
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	34,130	55,020
43-5071	Shipping, receiving, & traffic clerks	Short-Term On-the-Job Training	26,820	31,060
43-5081	Stock clerks & order fillers	Short-Term On-the-Job Training	21,530	56,390
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170

Construction of Buildings

NAICS 236

Employment



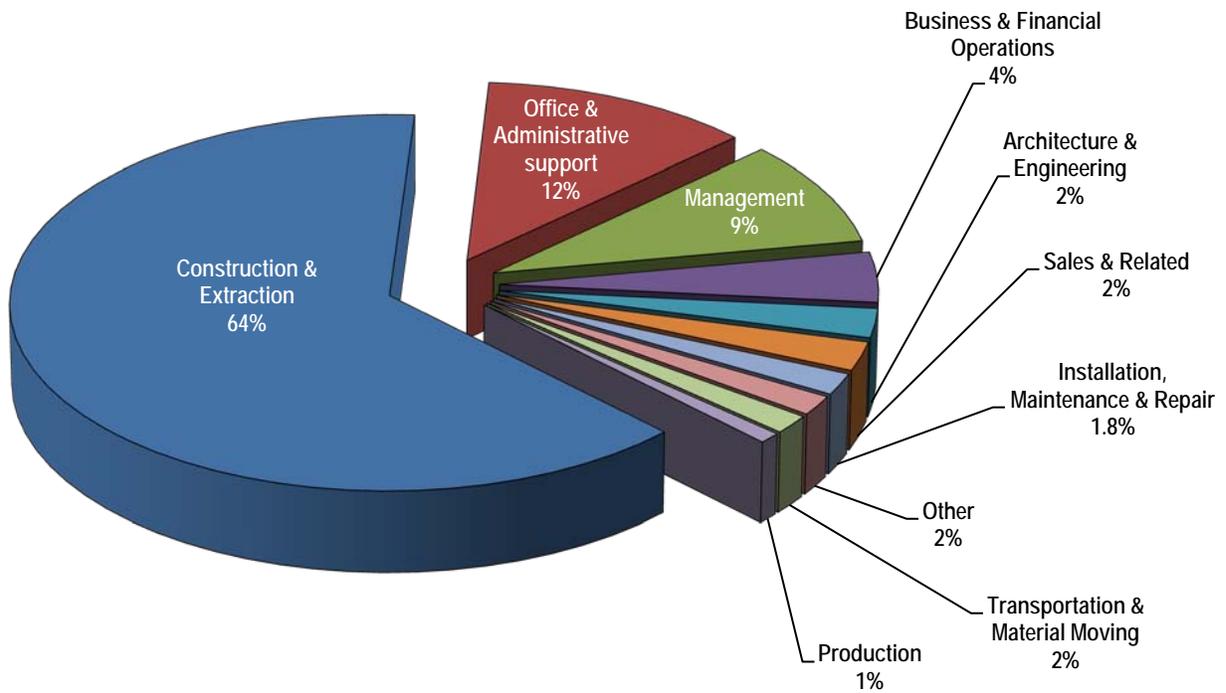
LA County 35,930 Jobs
LA City WIB 14,030 Jobs

Average Annual Earnings



LA County \$57,912

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Construction and extraction occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
47-1011	First-line supervisors/managers of construction trades & extraction workers	Work Experience	\$ 68,470	9,380
47-2031	Carpenters	Long-Term On-the-Job Training	48,740	13,660
47-2051	Cement masons & concrete finishers	Long-Term On-the-Job Training	53,080	3,540
47-2061	Construction laborers	Moderate-Term On-the-Job Training	36,440	25,540
47-2073	Operating engineers & other construction equipment operators	Moderate-Term On-the-Job Training	70,920	3,870
47-2141	Painters, construction & maintenance	Moderate-Term On-the-Job Training	35,290	5,770
47-2152	Plumbers, pipefitters, & steamfitters	Long-Term On-the-Job Training	50,120	7,520
47-3012	Helpers--carpenters	Short-Term On-the-Job Training	24,040	620
Office and administrative support occupations		Education/Training	Median Annual Earnings	Employment in LAC
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	\$ 36,810	56,330
43-6011	Executive secretaries & administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6014	Secretaries, except legal, medical, & executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Management occupations		Education/Training	Median Annual Earnings	Employment in LAC
11-1021	General & operations managers	Work Experience, Plus a Bachelor's or Higher	\$ 108,670	67,790
11-9021	Construction managers	Bachelor's Degree	105,530	4,240
Business and financial operations		Education/Training	Median Annual Earnings	Employment in LAC
13-1051	Cost estimators	Bachelor's Degree	\$ 62,860	4,870
Architecture and engineering occupations		Education/Training	Median Annual Earnings	Employment in LAC
17-2051	Civil engineers	Bachelor's Degree	\$ 87,890	7,850

Heavy and Civil Engineering Construction

NAICS 237

Employment



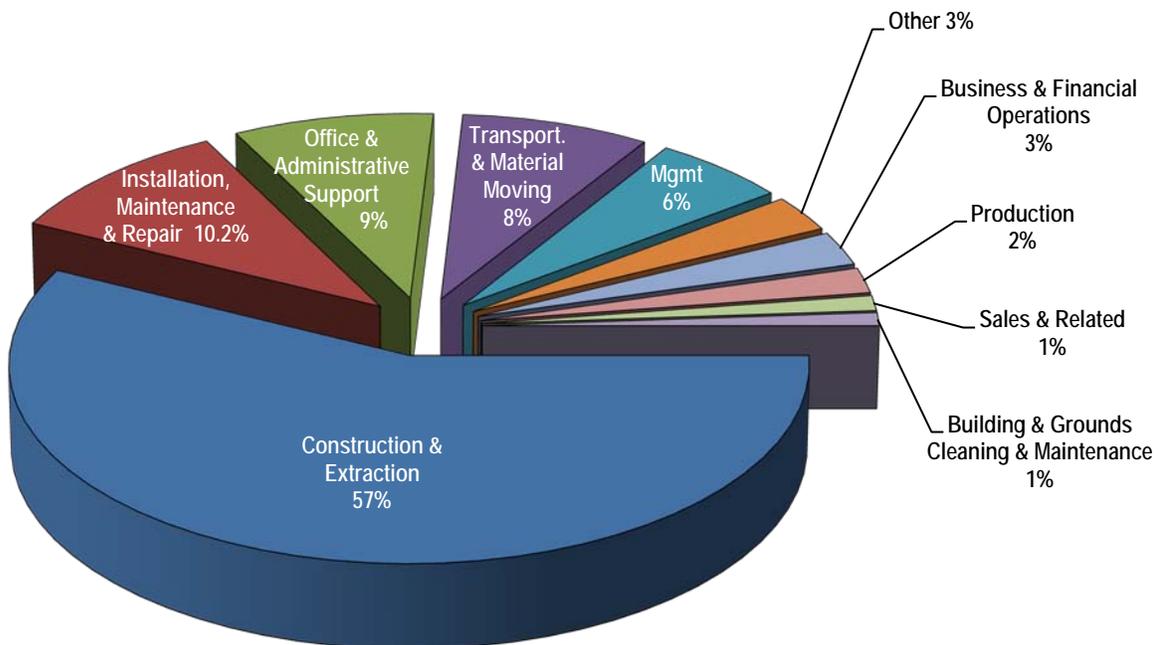
LA County 14,109 Jobs
LA City WIB 4,076 Jobs

Average Annual Earnings



LA County \$76,288

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Construction and extraction occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
47-1011	First-line supervisors/managers of construction trades & extraction workers	Work Experience	\$ 68,470	9,380
47-2031	Carpenters	Long-Term On-the-Job Training	48,740	13,660
47-2051	Cement masons & concrete finishers	Long-Term On-the-Job Training	53,080	3,540
47-2061	Construction laborers	Moderate-Term On-the-Job Training	36,440	25,540
47-2071	Paving, surfacing, & tamping equipment operators	Moderate-Term On-the-Job Training	55,920	420
47-2073	Operating engineers & other construction equipment operators	Moderate-Term On-the-Job Training	70,920	3,870
47-2151	Pipelayers	Moderate-Term On-the-Job Training	54,180	410
47-2152	Plumbers, pipefitters, & steamfitters	Long-Term On-the-Job Training	50,120	7,520
Installation, maintenance and repair occupations		Education/Training	Median Annual Earnings	Employment in LAC
49-3042	Mobile heavy equipment mechanics, except engines	Post-Secondary Vocational Education	\$ 67,360	3,270
49-9042	Maintenance & repair workers, general	Long-Term On-the-Job Training	38,030	31,380
49-9051	Electrical power-line installers & repairers	Long-Term On-the-Job Training	78,310	1,070
49-9052	Telecommunications line installers & repairers	Long-Term On-the-Job Training	51,350	5,600
Office and administrative support occupations		Education/Training	Median Annual Earnings	Employment in LAC
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	\$ 36,810	56,330
43-6011	Executive secretaries & administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6014	Secretaries, except legal, medical, & executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Transportation and material moving occupations		Education/Training	Median Annual Earnings	Employment in LAC
53-3032	Truck drivers, heavy & tractor-trailer	Moderate-Term On-the-Job Training	\$ 40,330	26,310
53-7032	Excavating & loading machine & dragline operators	Moderate-Term On-the-Job Training	45,440	220
53-7062	Laborers & freight, stock, & material movers	Short-Term On-the-Job Training	22,560	73,940
Management occupations		Education/Training	Median Annual Earnings	Employment in LAC
11-9021	Construction managers	Bachelor's Degree	\$ 105,530	4,240
11-1021	General & operations managers	Work Experience, Plus a Bachelor's or Higher	108,670	67,790

Specialty Trade Contractors

NAICS 238

Employment



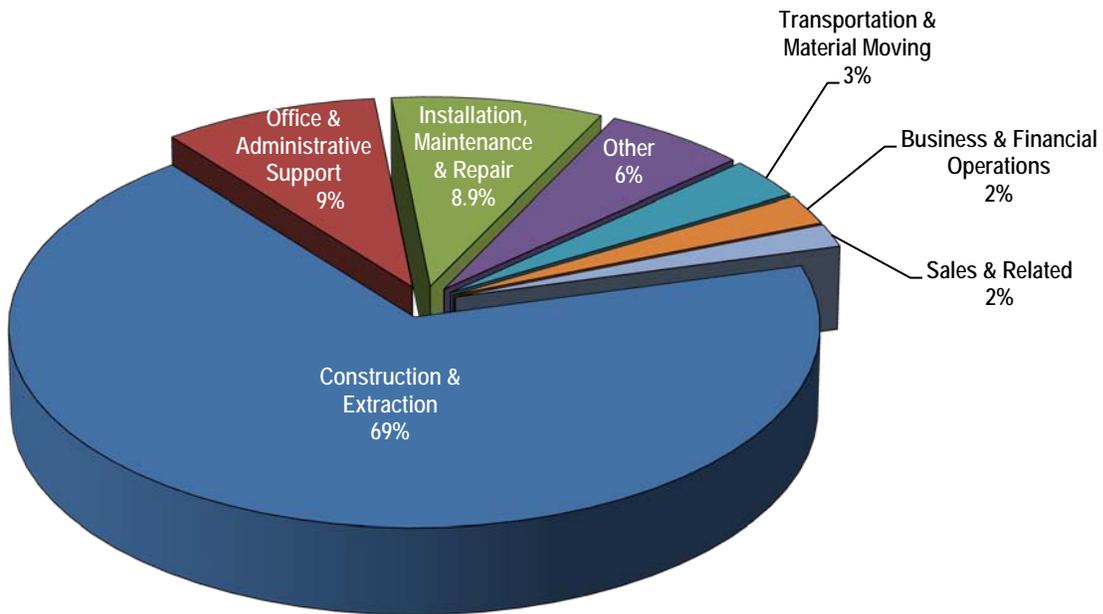
LA County 95,613 Jobs
LA City WIB 38,417 Jobs

Average Annual Earnings



LA County \$47,896

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Construction and extraction occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
47-1011	First-line supervisors/managers of construction trades & extraction workers	Work Experience	\$ 68,470	9,380
47-2021	Brickmasons & blockmasons	Long-Term On-the-Job Training	52,380	740
47-2031	Carpenters	Long-Term On-the-Job Training	48,740	13,660
47-2051	Cement masons & concrete finishers	Long-Term On-the-Job Training	53,080	3,540
47-2061	Construction laborers	Moderate-Term On-the-Job Training	36,440	25,540
47-2073	Operating engineers & other construction equipment operators	Moderate-Term On-the-Job Training	70,920	3,870
47-2081	Drywall & ceiling tile installers	Moderate-Term On-the-Job Training	47,300	4,740
47-2111	Electricians	Long-Term On-the-Job Training	49,700	10,810
47-2141	Painters, construction & maintenance	Moderate-Term On-the-Job Training	35,290	5,770
47-2152	Plumbers, pipefitters, & steamfitters	Long-Term On-the-Job Training	50,120	7,520
47-2181	Roofers	Moderate-Term On-the-Job Training	50,000	1,980
47-2211	Sheet metal workers	Moderate-Term On-the-Job Training	50,880	2,120
47-3011	Helpers--brickmasons, blockmasons, stonemasons, & tile & marble setters	Short-Term On-the-Job Training	24,200	960
47-3013	Helpers--electricians	Short-Term On-the-Job Training	30,110	1,390
47-3015	Helpers--pipelayers, plumbers, pipefitters, & steamfitters	Short-Term On-the-Job Training	28,510	1,610
Office and administrative support occupations		Education/Training	Median Annual Earnings	Employment in LAC
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	\$ 36,810	56,330
43-6014	Secretaries, except legal, medical, & executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Installation, maintenance and repair occupations		Education/Training	Median Annual Earnings	Employment in LAC
49-9021	Heating, air conditioning, & refrigeration mechanics & installers	Long-Term On-the-Job Training	\$ 46,570	4,060
Transportation and material moving occupations		Education/Training	Median Annual Earnings	Employment in LAC
53-3032	Truck drivers, heavy & tractor-trailer	Moderate-Term On-the-Job Training	\$ 40,330	26,310

Administrative and Support Services

NAICS 561

Employment



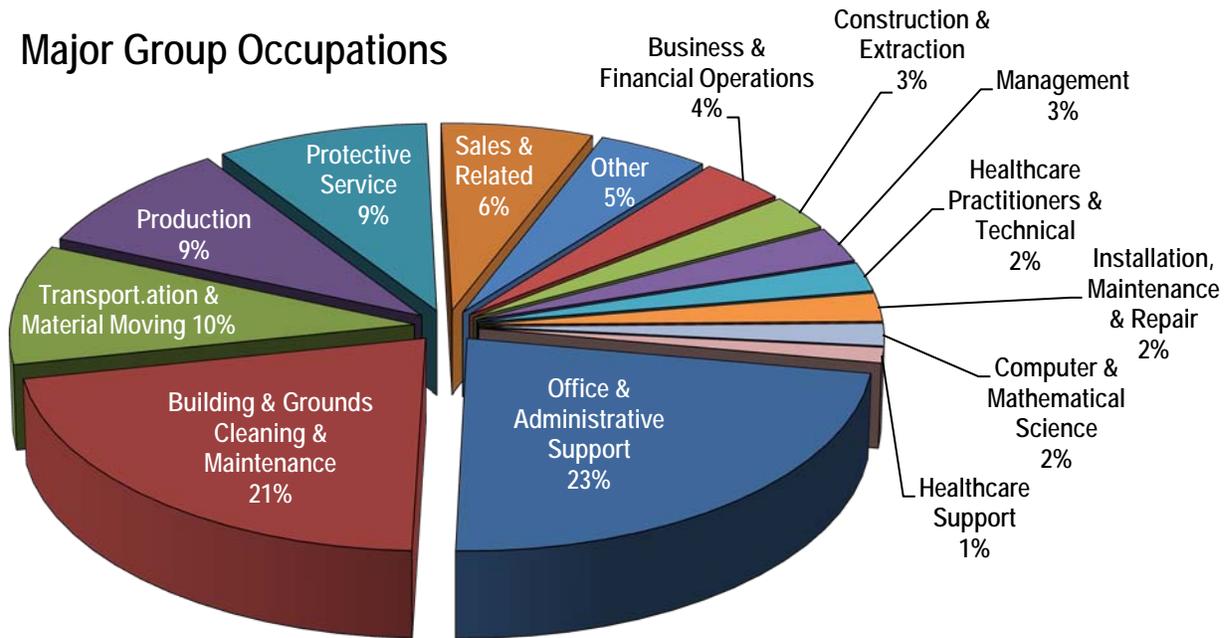
LA County 247,874 Jobs
LA City WIB 103,007 Jobs

Average Annual Earnings



LA County \$32,900

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-1011	First-line supervisors/managers of office & administrative support workers	Work Experience	\$ 52,720	49,390
43-3011	Bill & account collectors	Short-Term On-the-Job Training	35,480	13,300
43-3031	Bookkeeping, accounting, & auditing clerks	Moderate-Term On-the-Job Training	36,810	56,330
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	34,130	55,020
43-6011	Executive secretaries & administrative assistants	Moderate-Term On-the-Job Training	45,160	61,740
43-6014	Secretaries, except legal, medical, & executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Building and grounds cleaning and maintenance occupations		Education/Training	Median Annual Earnings	Employment in LAC
37-2011	Janitors & cleaners, except maids & housekeeping cleaners	Short-Term On-the-Job Training	\$ 22,790	52,180
37-2012	Maids & housekeeping cleaners	Short-Term On-the-Job Training	21,090	20,950
37-3011	Landscaping & groundskeeping workers	Short-Term On-the-Job Training	25,080	18,780
Transportation and material moving occupations		Education/Training	Median Annual Earnings	Employment in LAC
53-7062	Laborers & freight, stock, & material movers	Short-Term On-the-Job Training	\$ 22,560	73,940
53-7064	Packers & packagers	Short-Term On-the-Job Training	19,020	30,550
Production occupations		Education/Training	Median Annual Earnings	Employment in LAC
51-2092	Team assemblers	Moderate-Term On-the-Job Training	\$ 23,060	19,990
51-9198	Helpers--production workers	Short-Term On-the-Job Training	20,560	13,250
Protective service occupations		Education/Training	Median Annual Earnings	Employment in LAC
33-9032	Security guards	Short-Term On-the-Job Training	\$ 23,410	52,010
Sales and related occupations		Education/Training	Median Annual Earnings	Employment in LAC
41-3041	Travel agents	Post-Secondary Vocational Education	\$ 29,140	3,580
41-9041	Telemarketers	Short-Term On-the-Job Training	26,080	7,270

Waste Management and Remediation Services

NAICS 562

Employment



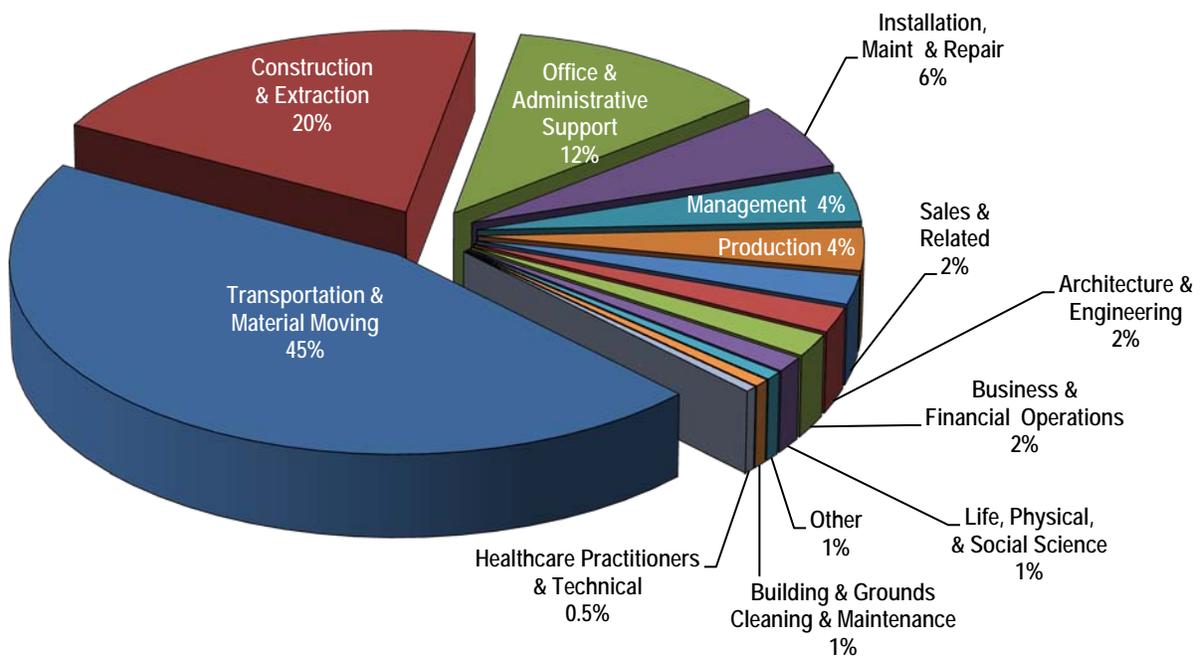
LA County 9,016 Jobs
LA City WIB 2,874 Jobs

Average Annual Earnings



LA County \$51,766

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Transportation and material moving occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
53-1031	First-line supervisors/managers of transportation and material-moving machine and vehicle operators	Work Experience	\$ 59,560	7,180
53-3032	Truck drivers, heavy and tractor-trailer	Moderate-Term On-the-Job Training	40,330	26,310
53-3033	Truck drivers, light or delivery services	Short-Term On-the-Job Training	29,330	29,620
53-7032	Excavating and loading machine and dragline operators	Moderate-Term On-the-Job Training	45,440	220
53-7051	Industrial truck and tractor operators	Short-Term On-the-Job Training	32,140	17,720
53-7062	Laborers and freight, stock, and material movers, hand	Short-Term On-the-Job Training	22,560	73,940
53-7081	Refuse and recyclable material collectors	Short-Term On-the-Job Training	38,960	3,860
Construction and extraction occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
47-1011	First-line supervisors/managers of construction trades and extraction workers	Work Experience	\$ 68,470	9,380
47-2061	Construction laborers	Moderate-Term On-the-Job Training	36,440	25,540
47-2073	Operating engineers and other construction equipment operators	Moderate-Term On-the-Job Training	70,920	3,870
47-4041	Hazardous materials removal workers	Moderate-Term On-the-Job Training	36,460	950
47-4071	Septic tank servicers and sewer pipe cleaners	Moderate-Term On-the-Job Training	34,750	290
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-3031	Bookkeeping, accounting, and auditing clerks	Moderate-Term On-the-Job Training	\$ 36,810	56,330
43-4051	Customer service representatives	Moderate-Term On-the-Job Training	34,130	55,020
43-6014	Secretaries, except legal, medical, and executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170
Installation, maintenance and repair occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
49-3031	Bus and truck mechanics and diesel engine specialists	Post-Secondary Vocational Education	\$ 44,580	4,110
49-9042	Maintenance and repair workers, general	Long-Term On-the-Job Training	38,030	31,380

Educational Services

NAICS 611

Employment



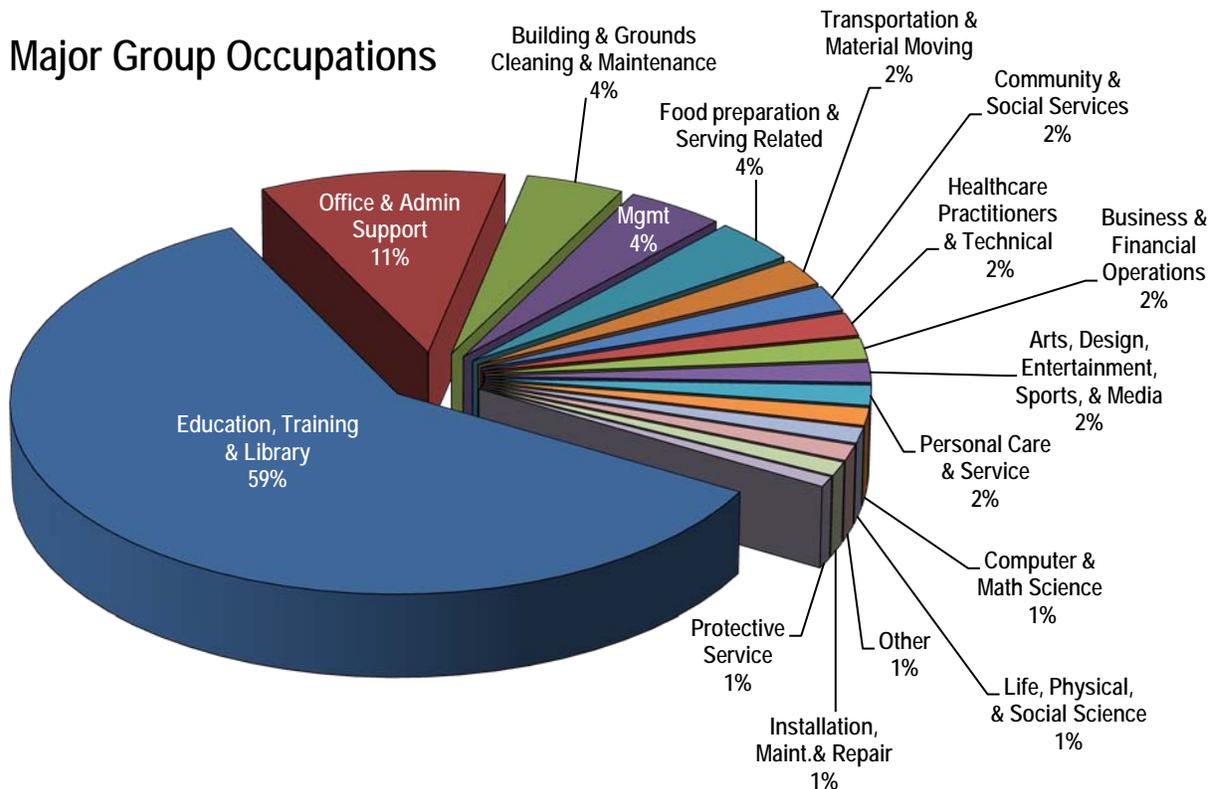
LA County 94,792 Jobs
LA City WIB 51,256 Jobs

Average Annual Earnings



LA County \$41,426

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

Education, training and library occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
25-1191	Graduate teaching assistants	Bachelor's Degree	\$ 30,140	*
25-1199	Postsecondary teachers, all other	Master's Degree	78,860	9,420
25-2012	Kindergarten teachers, except special education	Bachelor's Degree	55,300	6,550
25-2021	Elementary school teachers, except special education	Bachelor's Degree	57,670	51,750
25-2022	Middle school teachers, except special and vocational education	Bachelor's Degree	59,100	9,190
25-2031	Secondary school teachers, except special and vocational education	Bachelor's Degree	63,300	35,690
25-2041	Special education teachers, preschool, kindergarten, and elementary school	Bachelor's Degree	61,540	6,350
25-2043	Special education teachers, secondary school	Bachelor's Degree	67,420	3,610
25-3099	Teachers and instructors, all other	Bachelor's Degree	46,000	17,570
25-9041	Teacher assistants	Short-Term On-the-Job Training	29,530	50,340
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-6011	Executive secretaries and administrative assistants	Moderate-Term On-the-Job Training	\$ 45,160	61,740
43-6014	Secretaries, except legal, medical, and executive	Moderate-Term On-the-Job Training	34,010	31,060
43-9061	Office clerks, general	Short-Term On-the-Job Training	27,060	107,170

Repair and Maintenance

NAICS 811

Employment



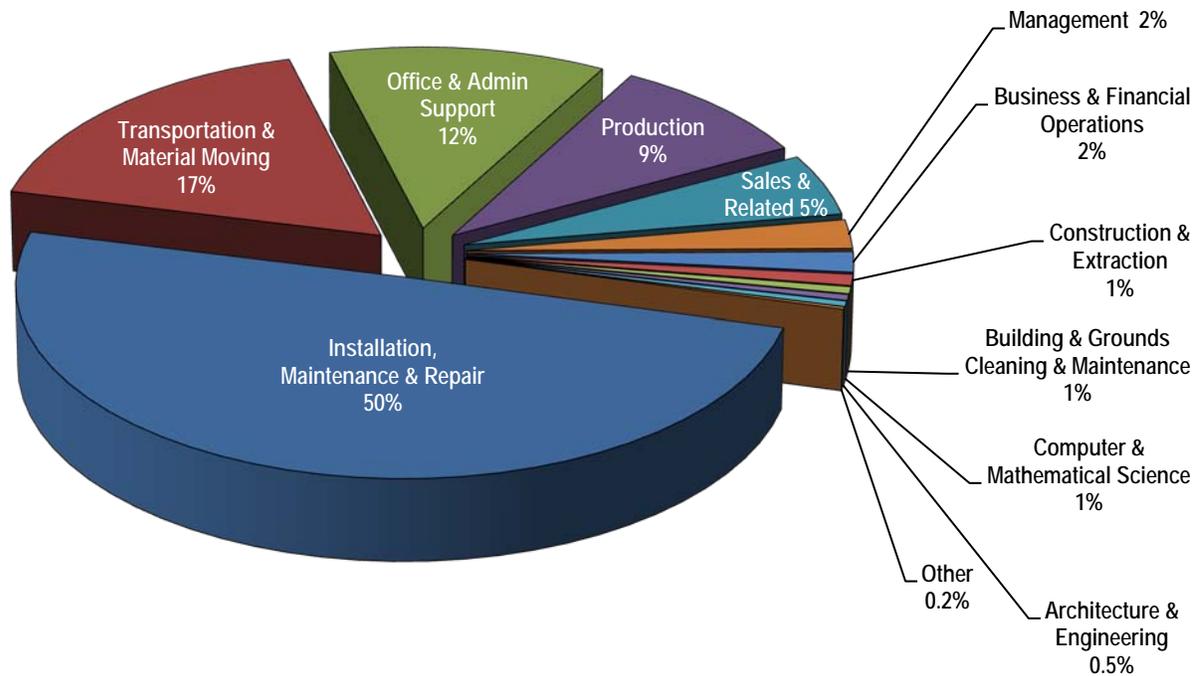
LA County 40,948 Jobs
LA City WIB 16,479 Jobs

Average Annual Earnings



LA County \$33,010

Major Group Occupations



Sources: CA EDD; BLS; LAEDC

Detailed Occupations

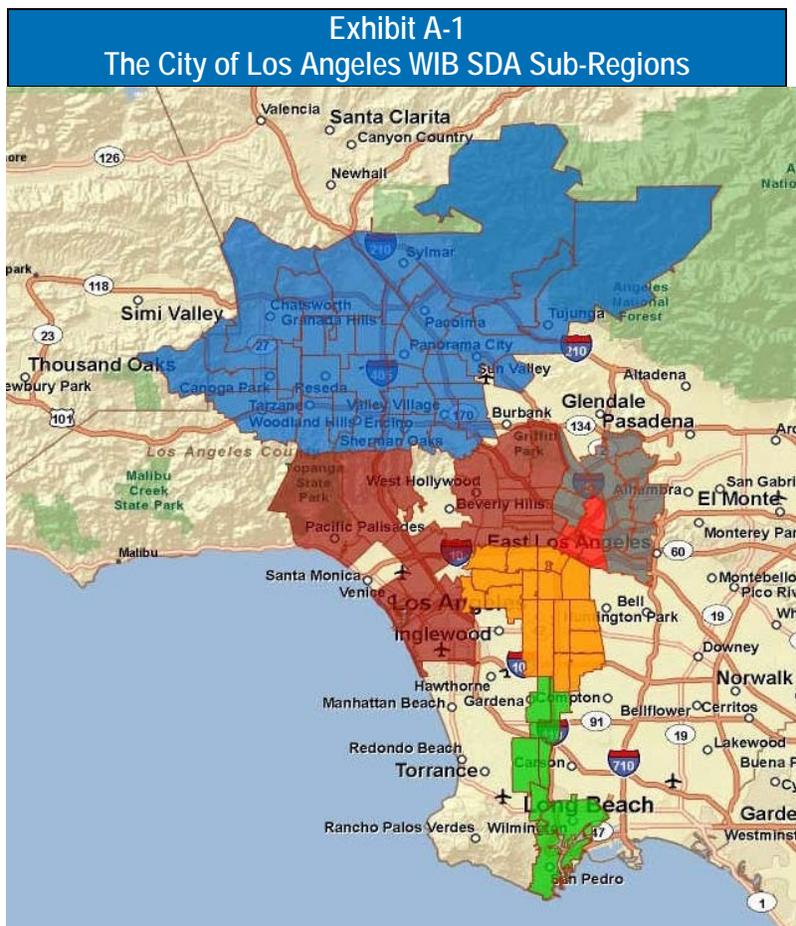
Installation, maintenance and repair occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
49-1011	First-line supervisors/managers of mechanics, installers, and repairers	Work Experience	\$63,680	10,700
49-2011	Computer, automated teller, and office machine repairers	Post-Secondary Vocational Education	35,280	3,300
49-3021	Automotive body and related repairers	Long-Term On-the-Job Training	34,220	3,270
49-3022	Automotive glass installers and repairers	Long-Term On-the-Job Training	30,570	430
49-3023	Automotive service technicians and mechanics	Post-Secondary Vocational Education	35,300	15,280
49-3031	Bus and truck mechanics and diesel engine specialists	Post-Secondary Vocational Education	46,290	5,590
49-9031	Home appliance repairers	Long-Term On-the-Job Training	36,140	580
49-9041	Industrial machinery mechanics	Long-Term On-the-Job Training	48,120	3,870
49-9042	Maintenance and repair workers, general	Long-Term On-the-Job Training	36,690	32,020
49-9098	Helpers--installation, maintenance, and repair workers	Short-Term On-the-Job Training	24,410	4,770
Transportation and material moving occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
53-1021	First-line supervisors/managers of helpers, laborers, and material movers, hand	Work Experience	\$42,290	8,170
53-6031	Service station attendants	Short-Term On-the-Job Training	19,400	-
53-7061	Cleaners of vehicles and equipment	Short-Term On-the-Job Training	19,170	16,720
Office and administrative support occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
43-3031	Bookkeeping, accounting, and auditing clerks	Moderate-Term On-the-Job Training	\$36,410	57,780
43-6014	Secretaries, except legal, medical, and executive	Moderate-Term On-the-Job Training	33,130	30,920
43-9061	Office clerks, general	Short-Term On-the-Job Training	26,440	118,720
Production occupations		Education/Training	Median Annual Earnings	Total Employment in LAC
51-4121	Welders, cutters, solderers, & brazers	Work Experience	\$29,880	7,740
51-6093	Upholsterers	Short-Term On-the-Job Training	24,610	2,460
51-9122	Painters, transportation equipment	Short-Term On-the-Job Training	37,950	1,520

This appendix presents demographic and socio-economic data for each sub-region, regional planning district and council district as follows:

Sub-Regions of the City of Los Angeles WIB SDA	A-3
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The source of all data in this section is ESRI Business Analyst Online.

Sub-Regions of the City of Los Angeles WIB SDA



Source: City of LA WIB; ESRI

Exhibit A-2 Population and Income (2010) Los Angeles County and City of Los Angeles WIB SDA Sub-Regions					
	Population	Households	Average Household Size	Median Household Income	Per Capita Income
The Valley	1,583,400	520,750	3.00	\$ 59,405	\$ 27,082
Hollywood/West LA City	1,150,997	484,954	2.32	50,413	34,359
Downtown	107,641	36,239	2.40	18,142	16,250
East Los Angeles City	502,828	142,234	3.48	41,498	15,890
South Los Angeles City	814,082	223,932	3.59	33,527	13,241
Harbor Gateway	267,973	85,558	3.08	49,585	19,849
City of LA WIB SDA	4,426,921	1,493,667	2.90	\$ 49,009	\$ 24,456
Los Angeles County	10,240,505	3,292,577	3.06	54,755	24,448

Source: ESRI BAO

The Valley Sub-Region

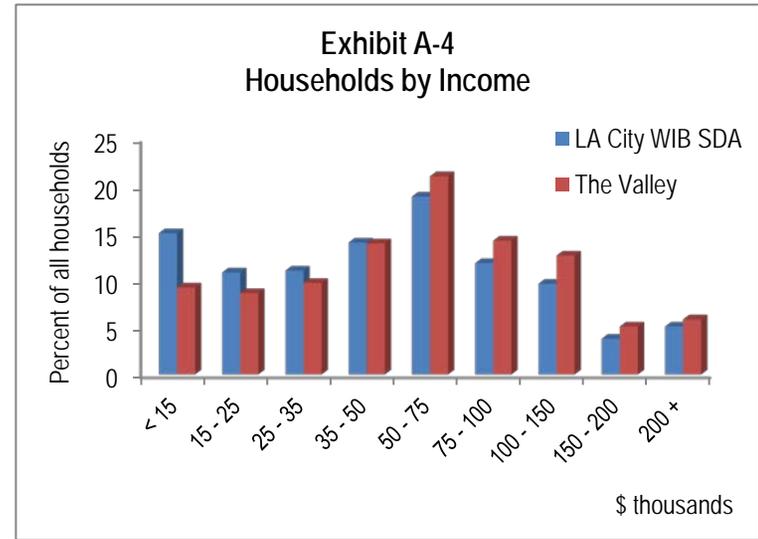
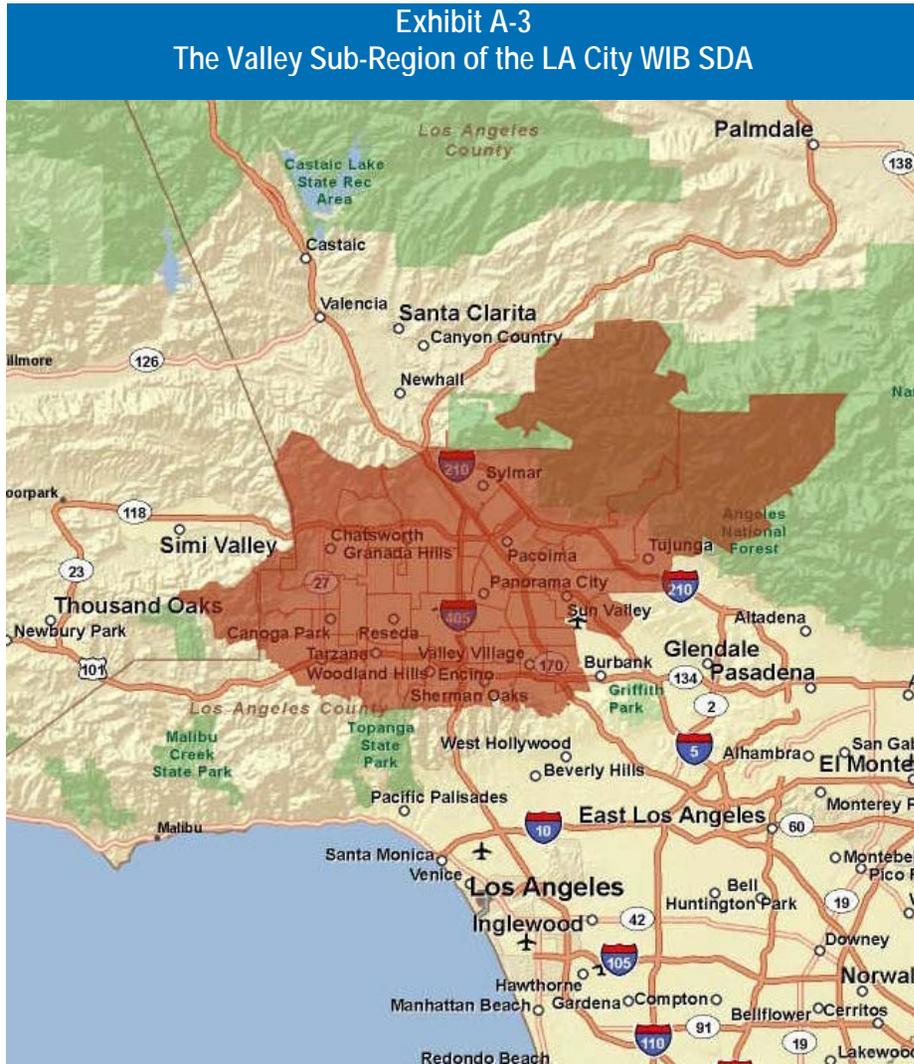
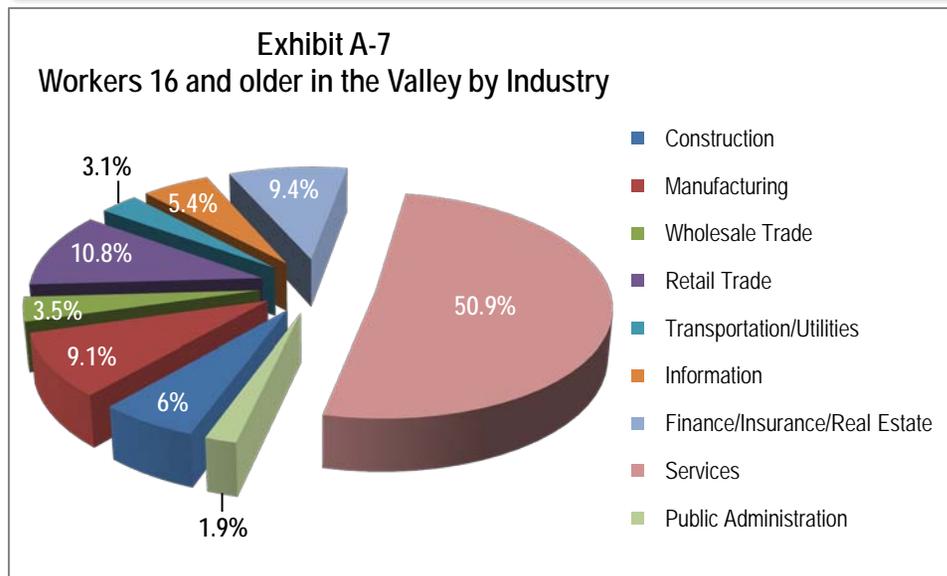
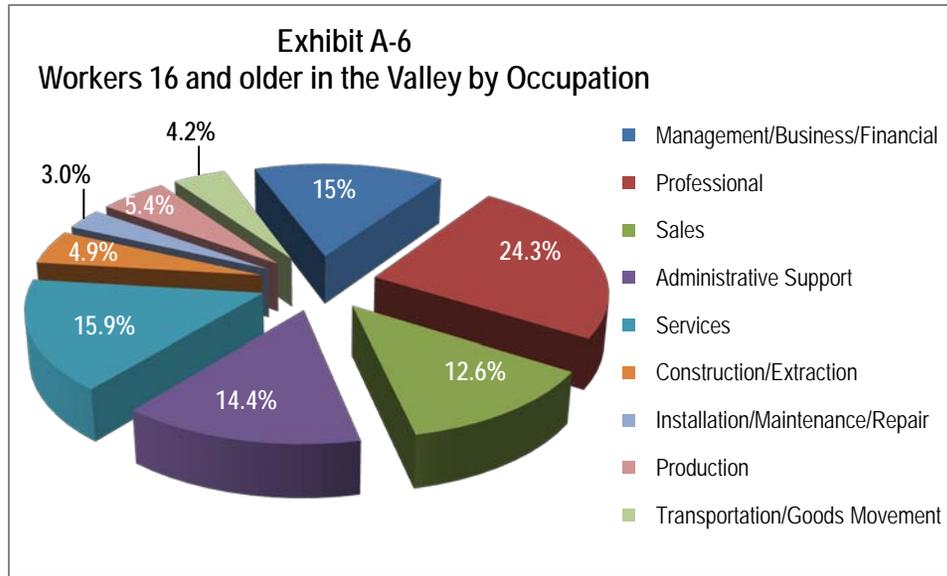


Exhibit A-5
Educational Attainment of Population 25 Years and Older (2010) The Valley Sub-Region

	Number	% of total
No High School Diploma	220,298	21.9
High School Graduate	218,286	21.7
Some College, No Degree	185,090	18.4
Associate Degree	66,391	6.6
Bachelor's Degree	210,238	20.9
Graduate / Professional Degree	105,622	10.5
Total	1,005,925	100.0



Hollywood/West LA City Sub-Region

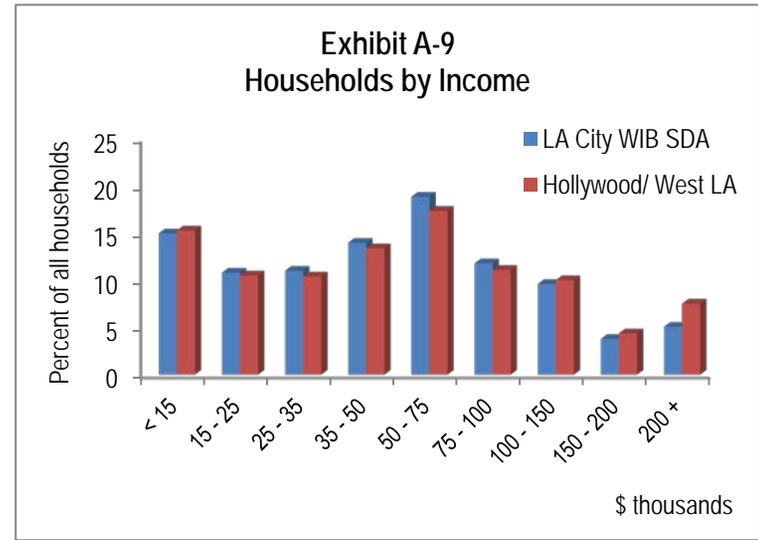
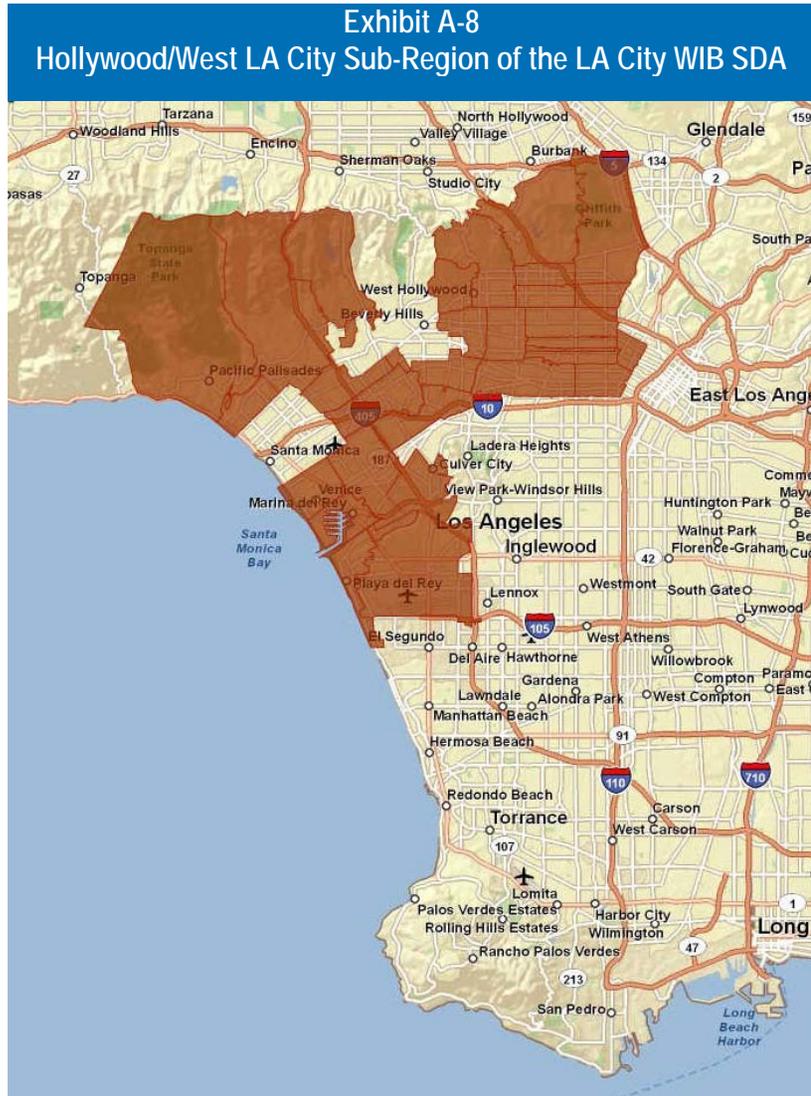
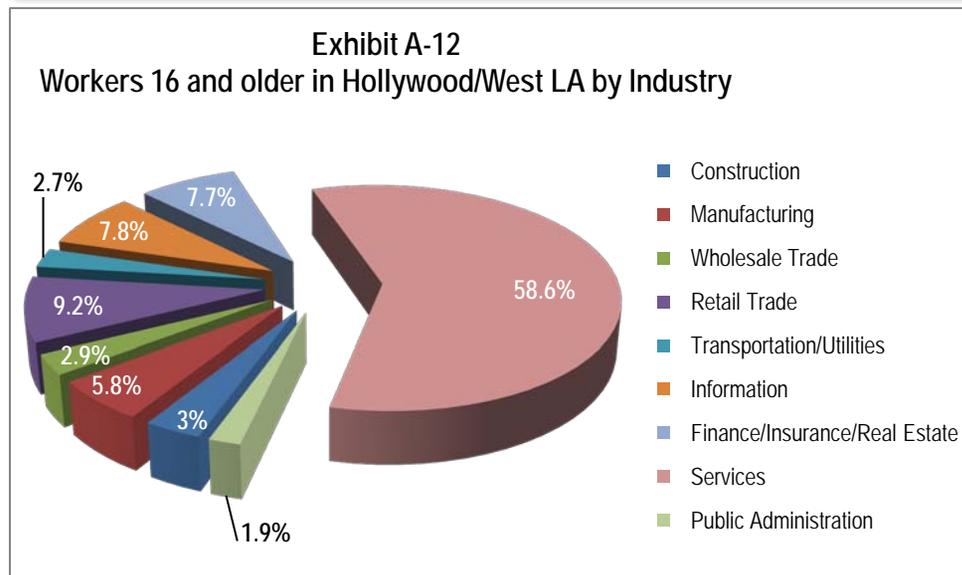
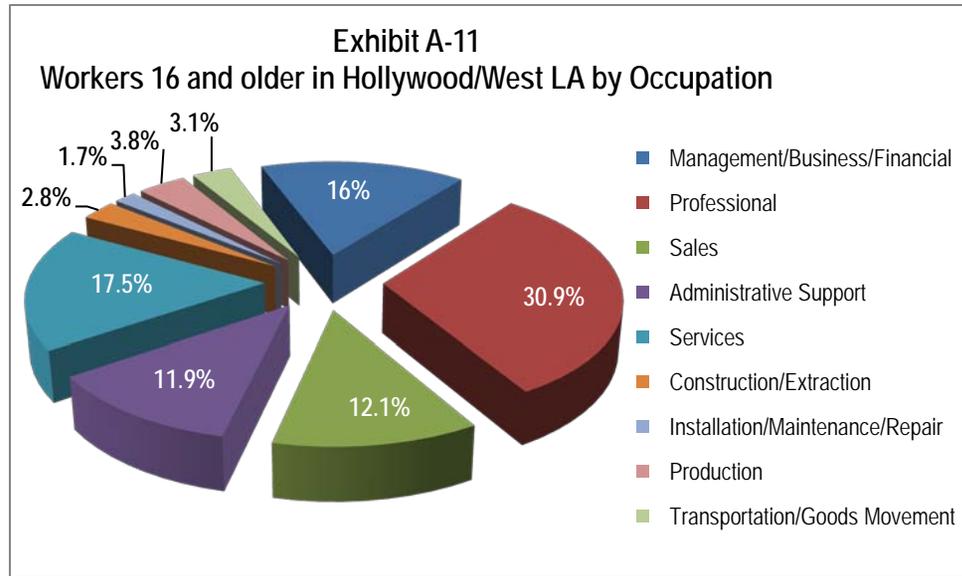


Exhibit A-10
Educational Attainment of Population 25 Years and Older (2010) Hollywood/West LA City Sub-Region

	Number	% of total
No High School Diploma	143,051	18.0
High School Graduate	135,898	17.1
Some College, No Degree	121,593	15.3
Associate Degree	44,505	5.6
Bachelor's Degree	220,139	27.7
Graduate / Professional Degree	129,541	16.3
Total	794,727	100.0



Downtown LA Sub-Region

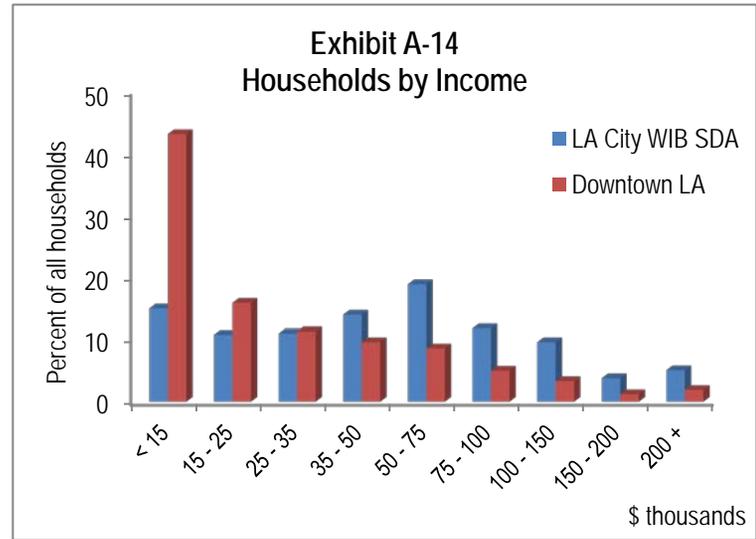
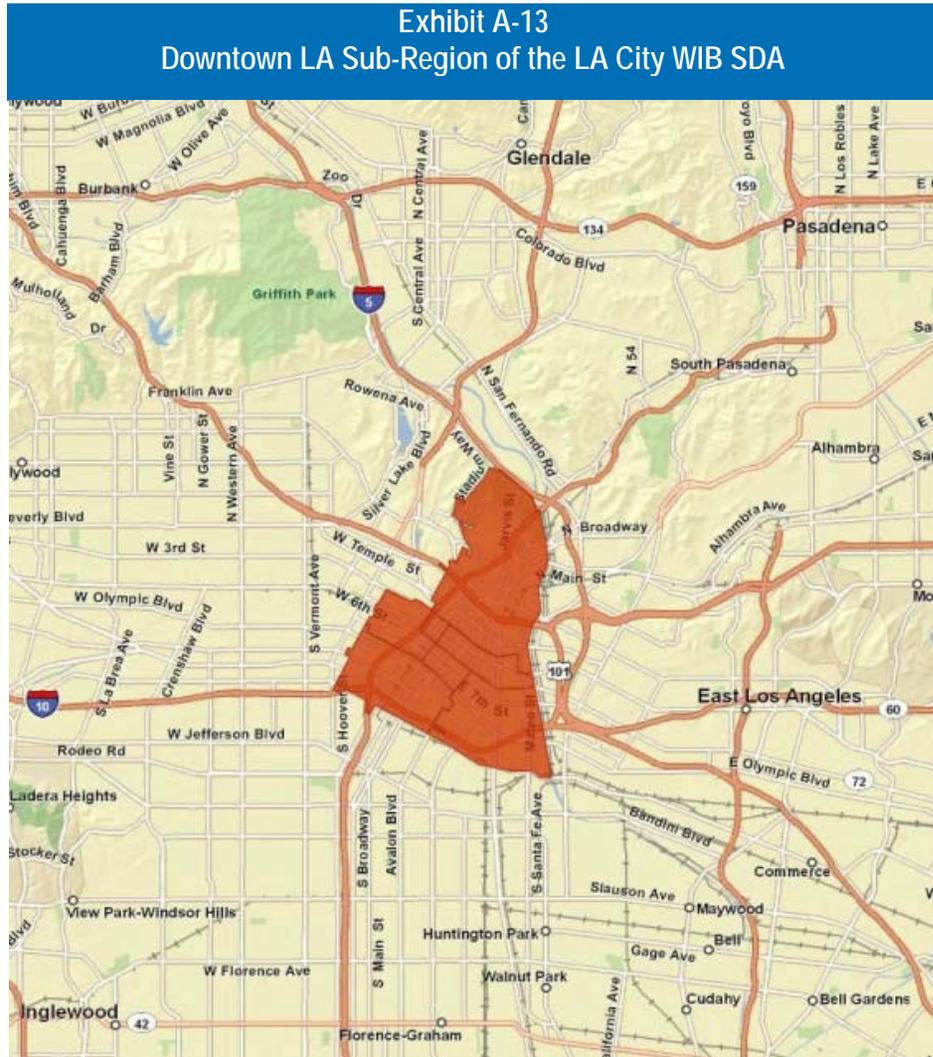
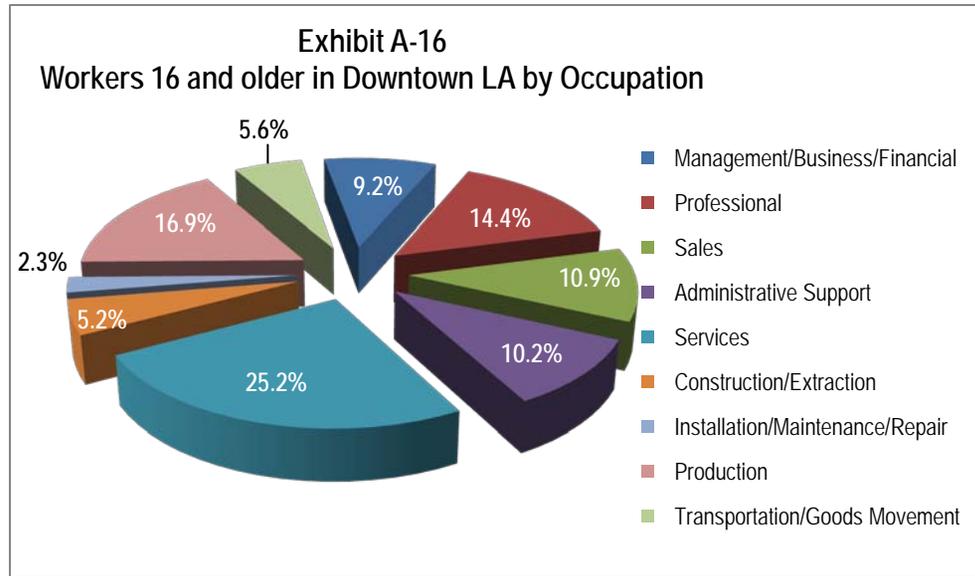


Exhibit A-15
Educational Attainment of Population 25 Years and Older (2010) Downtown LA Sub-Region

	Number	% of total
No High School Diploma	32,209	44.5
High School Graduate	16,068	22.2
Some College, No Degree	9,699	13.4
Associate Degree	3,185	4.4
Bachelor's Degree	7,021	9.7
Graduate / Professional Degree	4,126	5.7
Total	72,379	100.0



East LA City Sub-Region

Exhibit A-18
East LA City Sub-Region of the LA City WIB SDA

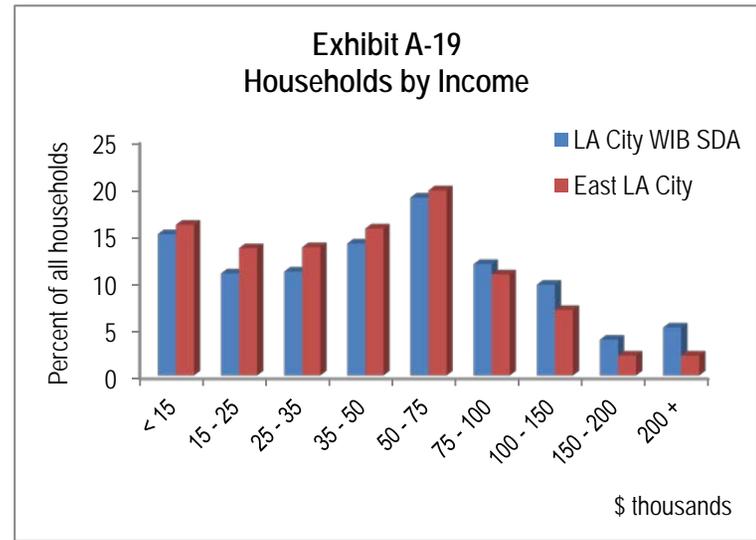
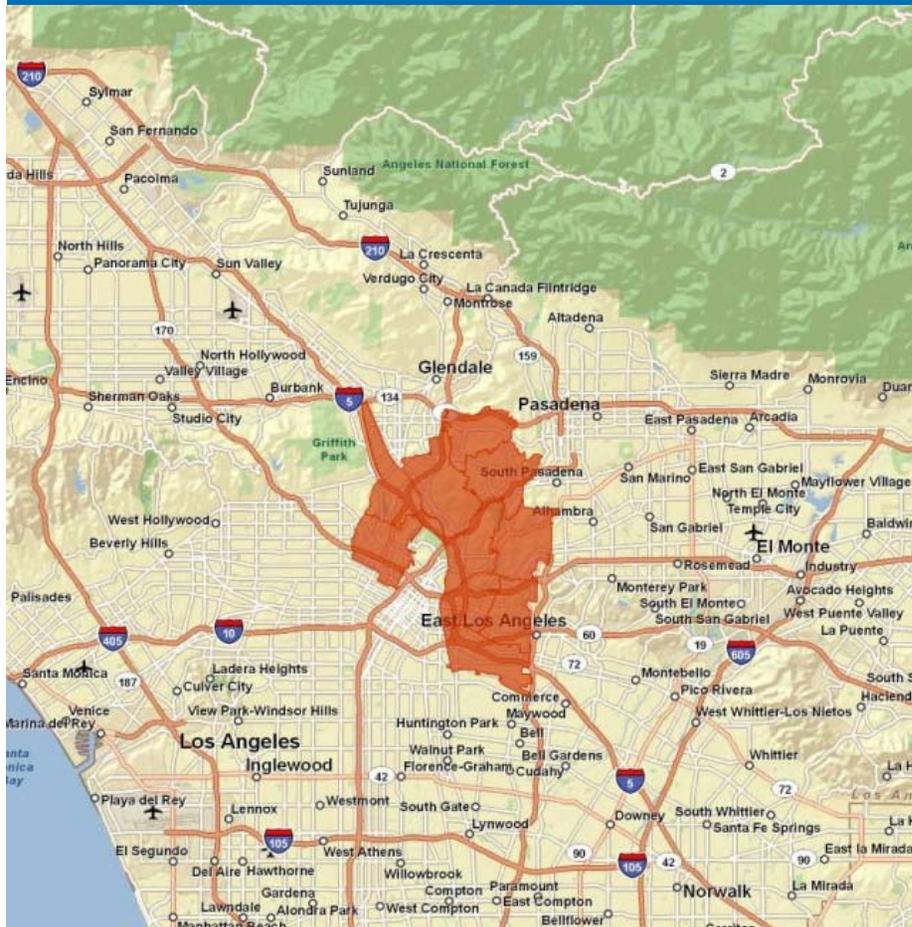
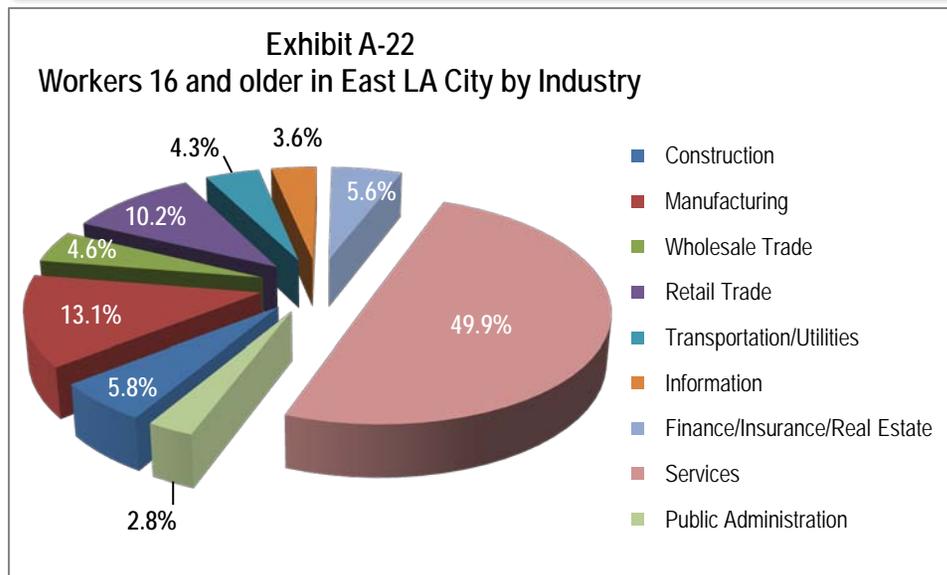
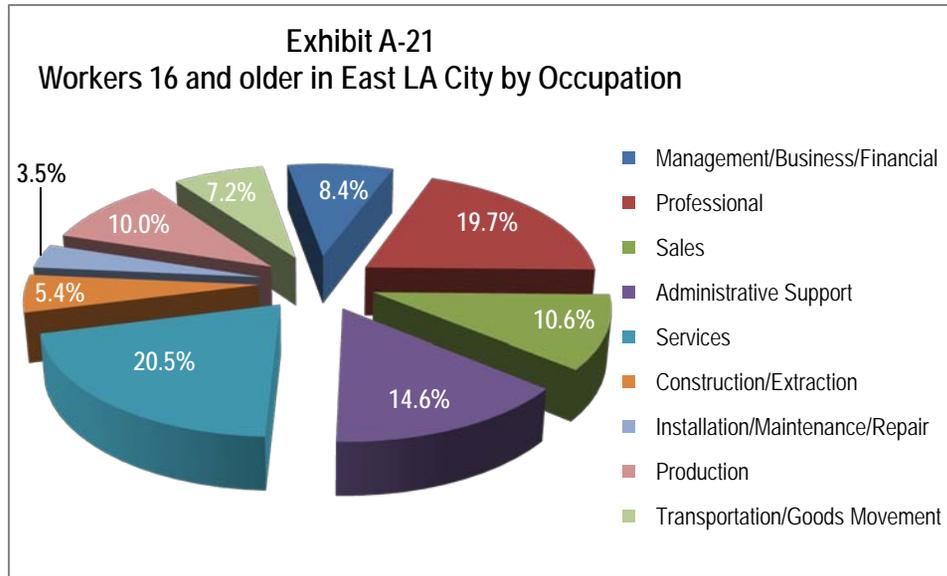


Exhibit A-20
Educational Attainment of Population 25 Years and Older (2010) East LA City Sub-Region

	Number	% of total
No High School Diploma	125,195	42.9
High School Graduate	60,409	20.7
Some College, No Degree	38,521	13.2
Associate Degree	14,008	4.8
Bachelor's Degree	34,354	12.8
Graduate / Professional Degree	16,342	5.6
Total	291,829	100.0



South LA City Sub-Region

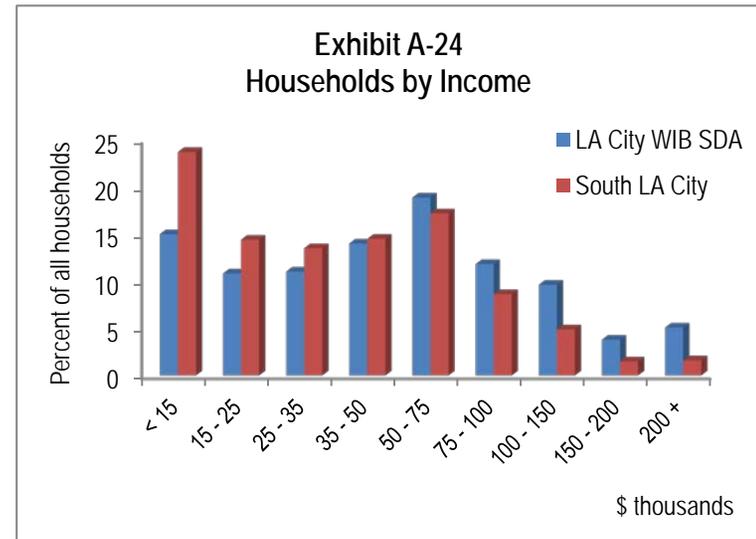
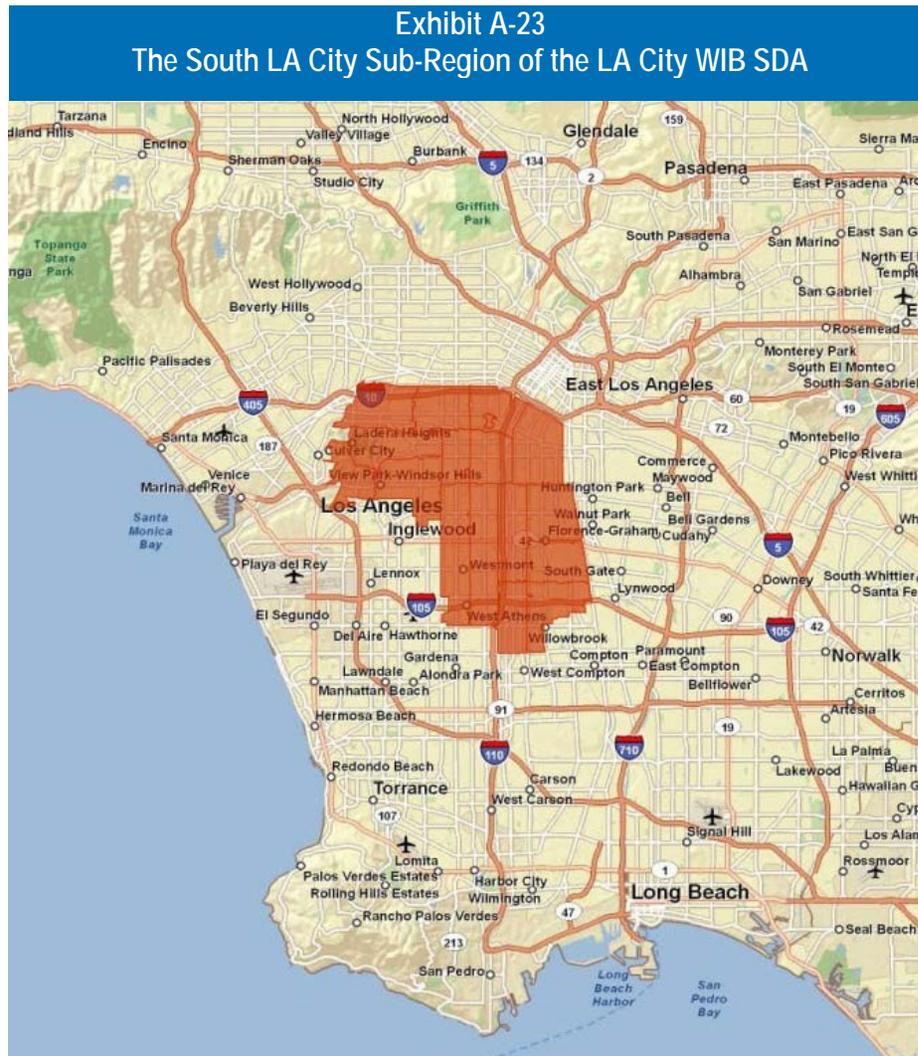
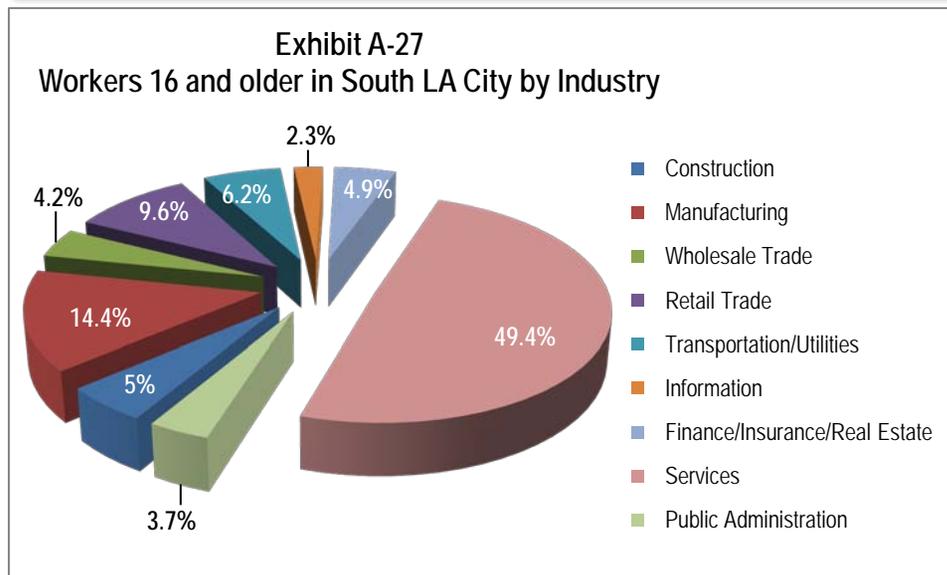
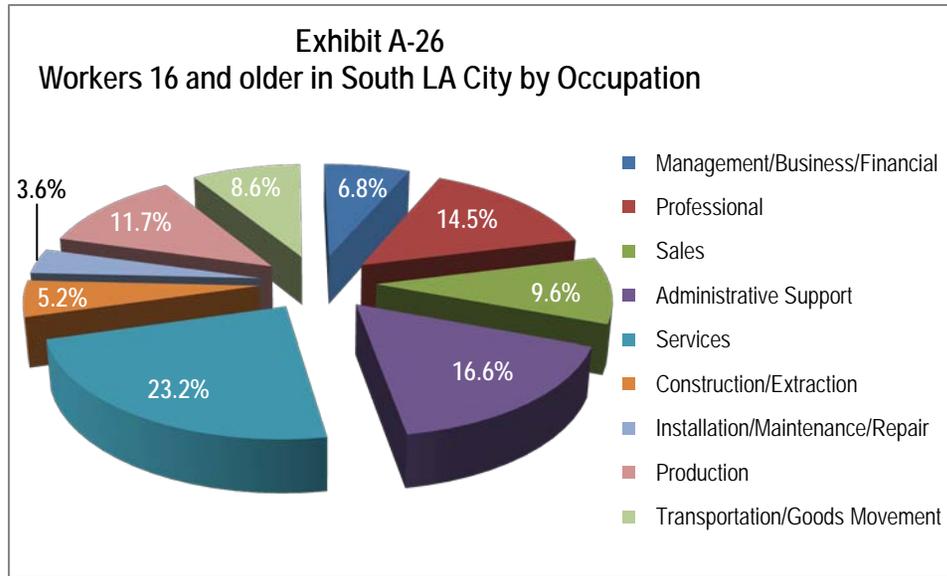


Exhibit A-25
Educational Attainment of Population 25 Years and Older (2010) South LA City Sub-Region

	Number	% of total
No High School Diploma	190,215	43.9
High School Graduate	105,290	24.3
Some College, No Degree	68,027	15.7
Associate Degree	22,098	5.1
Bachelor's Degree	31,630	7.3
Graduate / Professional Degree	16,032	3.7
Total	433,292	100.0



Harbor Gateway Sub-Region

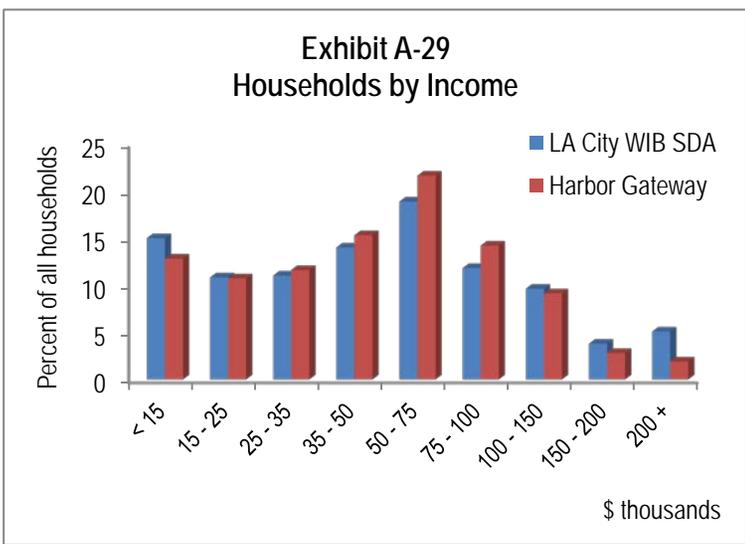
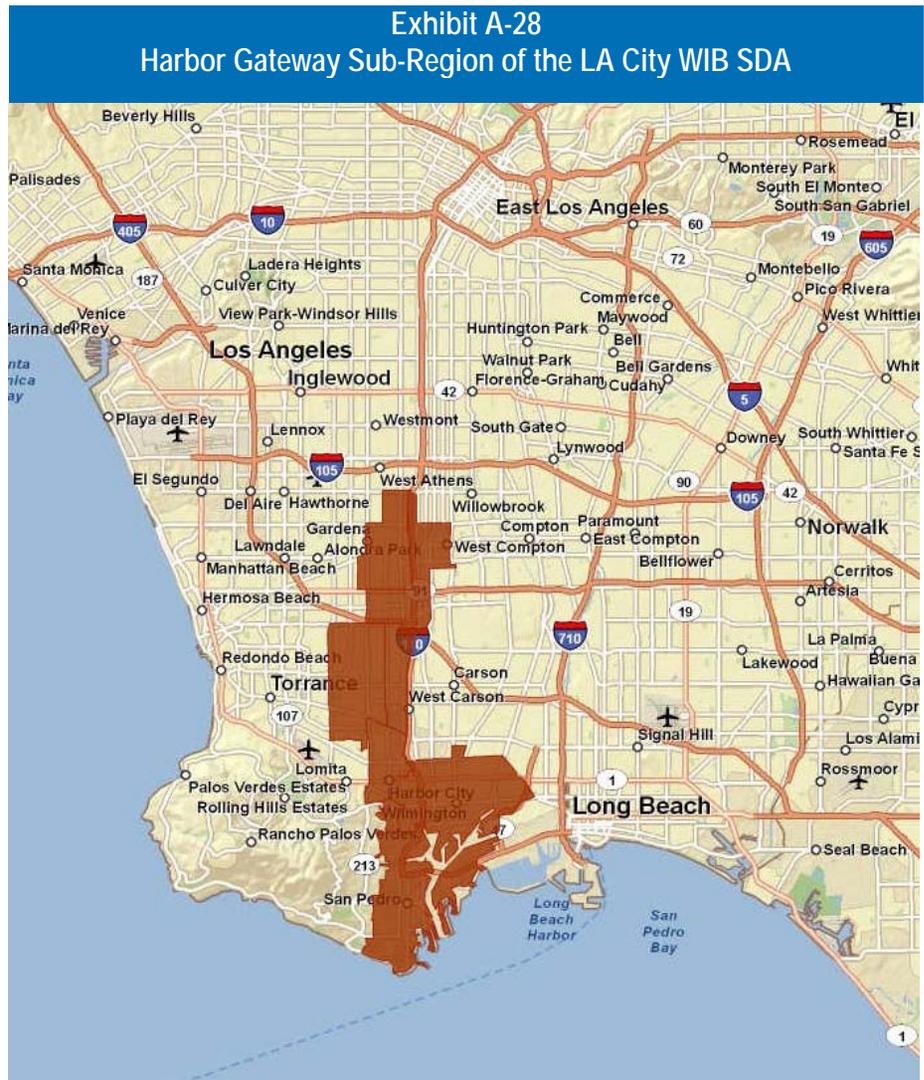
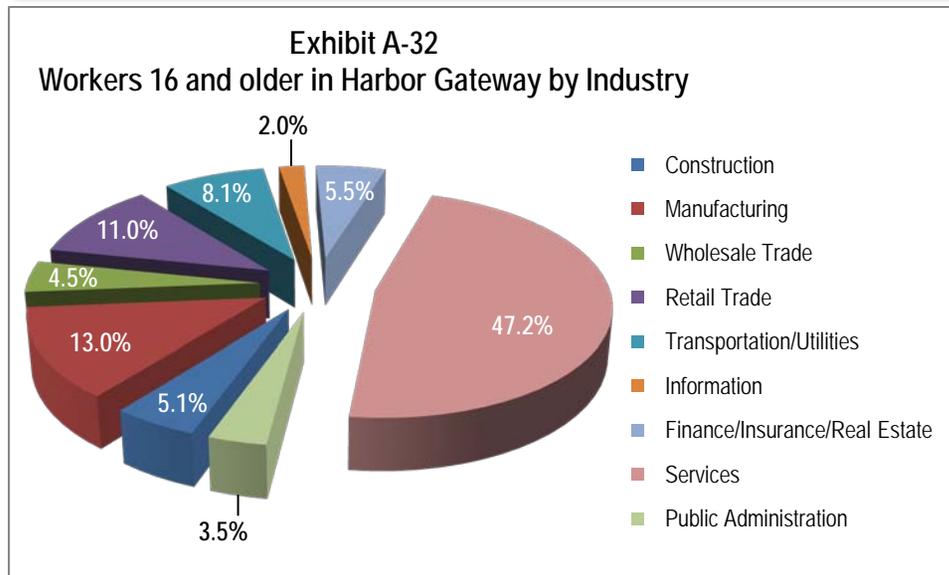
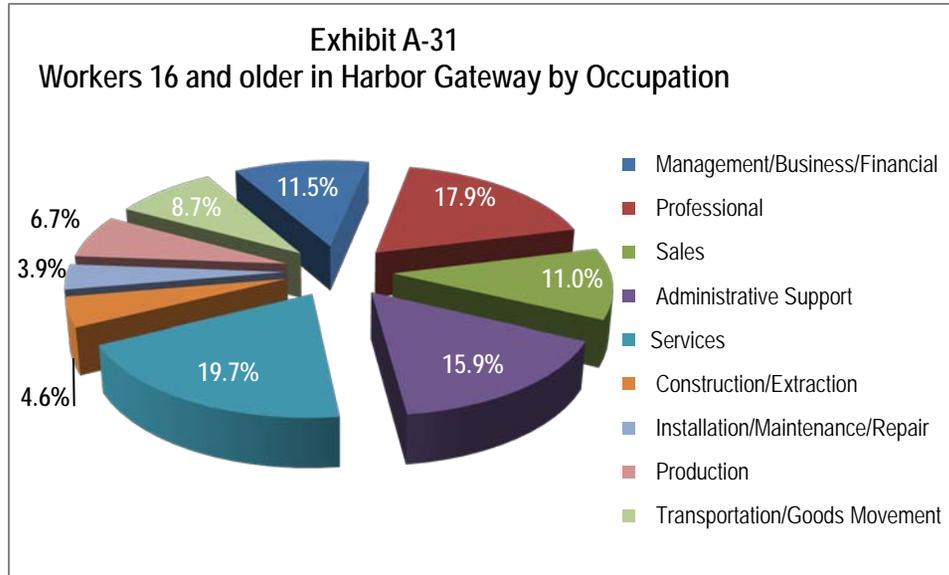


Exhibit A-30
Educational Attainment of Population 25 Years and Older (2010) Harbor Gateway Sub-Region

	Number	% of total
No High School Diploma	45,784	28.1
High School Graduate	43,340	26.6
Some College, No Degree	30,631	18.8
Associate Degree	11,079	6.8
Bachelor's Degree	22,810	14.0
Graduate / Professional Degree	9,287	5.7
Total	162,931	100.0



Regional Planning Districts of the City of Los Angeles

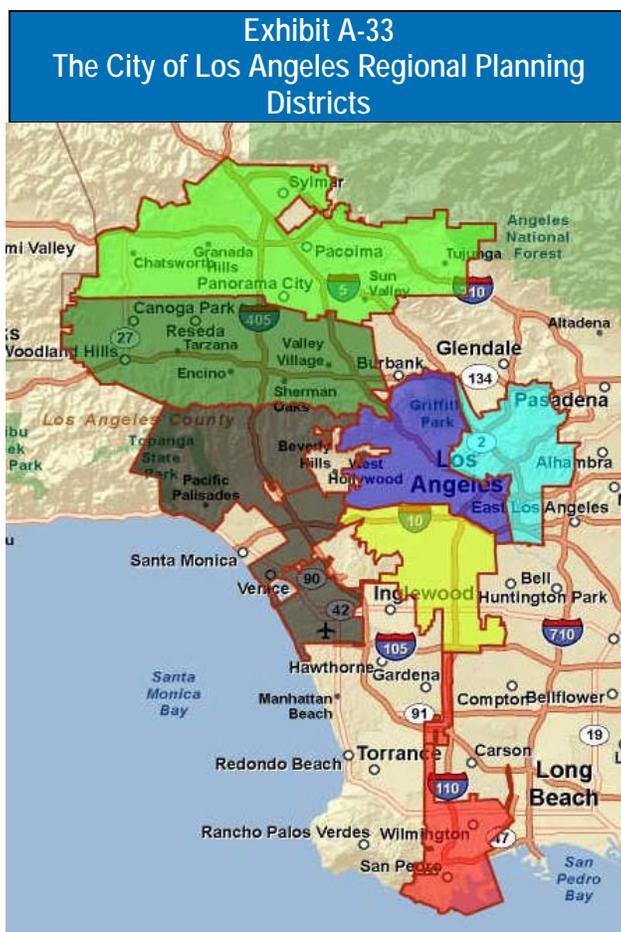


Exhibit A-34
Population and Income (2010)
Los Angeles County and the City of Los Angeles Regional Planning Districts

	Population	Households	Average Household Size	Median Household Income	Per Capita Income
North Valley Planning Area	710,548	200,455	3.49	\$ 59,397	\$ 21,648
South Valley Planning Area	755,177	279,487	2.68	56,595	29,937
West Los Angeles Planning Area	426,450	188,912	2.17	69,871	50,049
Central Planning Area	718,763	280,167	2.46	35,085	23,081
East Los Angeles Planning Area	425,480	124,222	3.37	42,426	16,815
South Los Angeles Planning Area	731,689	203,883	3.54	32,318	12,898
Harbor Planning Area	205,925	64,621	3.14	49,265	19,900
City of Los Angeles	3,975,964	1,342,757	2.90	\$ 48,349	\$ 24,307
Los Angeles County	10,240,505	3,292,577	3.06	54,755	24,448

Source: ESRI BAO

North Valley Planning Area

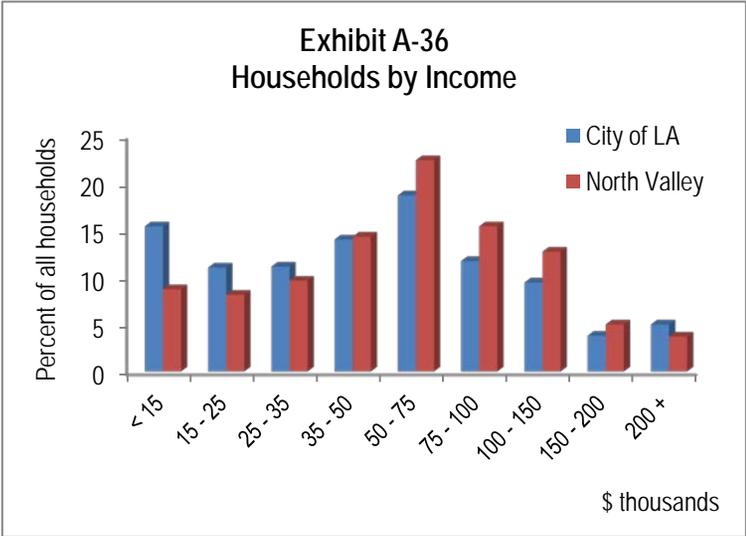
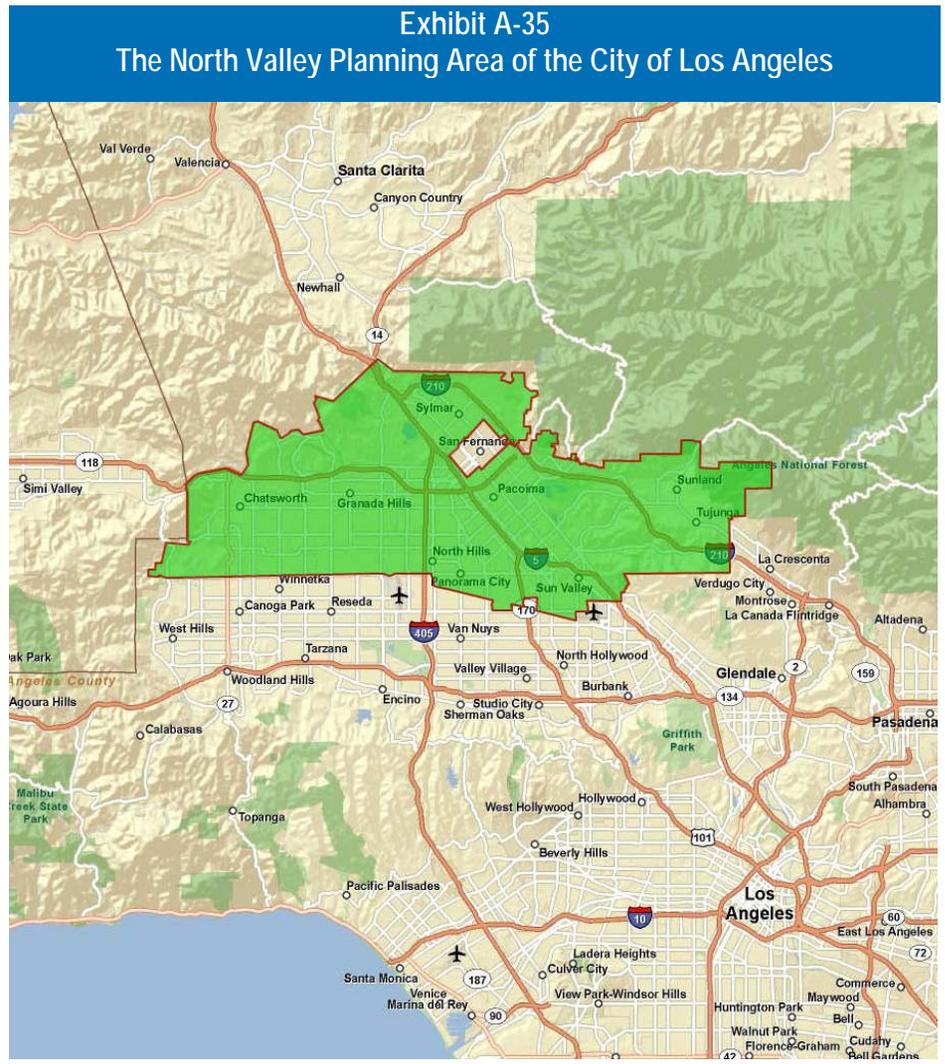
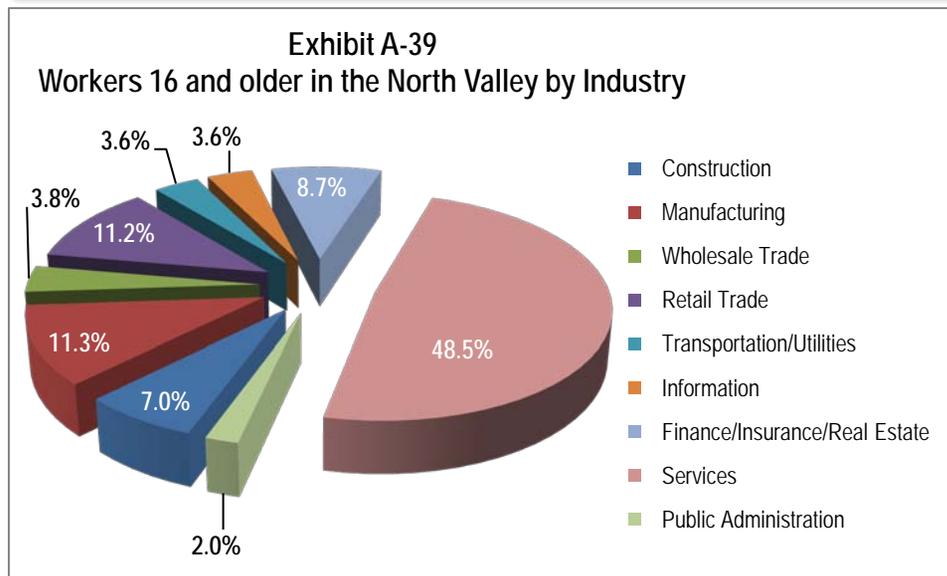
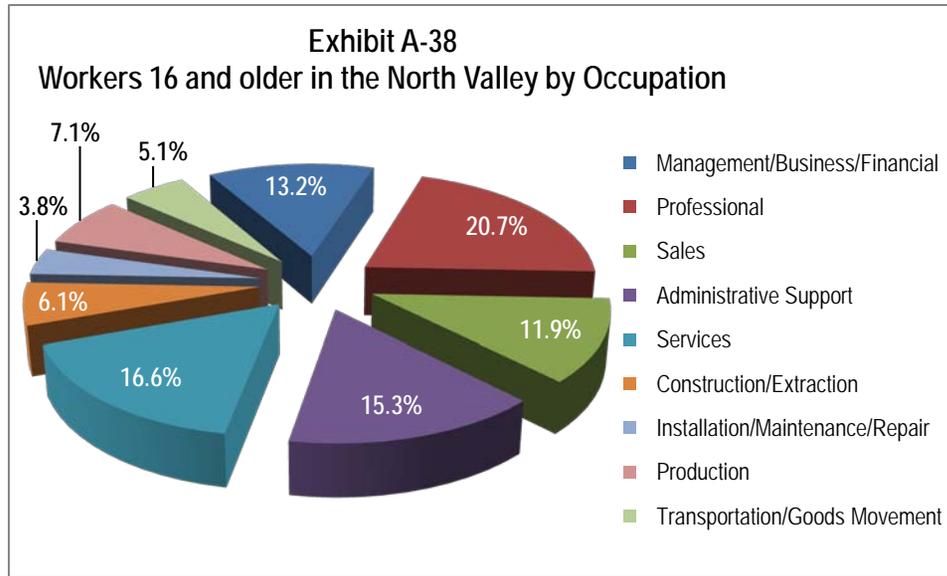


Exhibit A-37
Educational Attainment of Population 25 Years and Older (2010) North Valley Planning Area

	Number	% of total
No High School Diploma	119,557	27.8
High School Graduate	101,924	23.7
Some College, No Degree	76,121	17.7
Associate Degree	27,094	6.3
Bachelor's Degree	73,110	17.0
Graduate / Professional Degree	32,685	7.6
Total	430,061	100.0



South Valley Planning Area

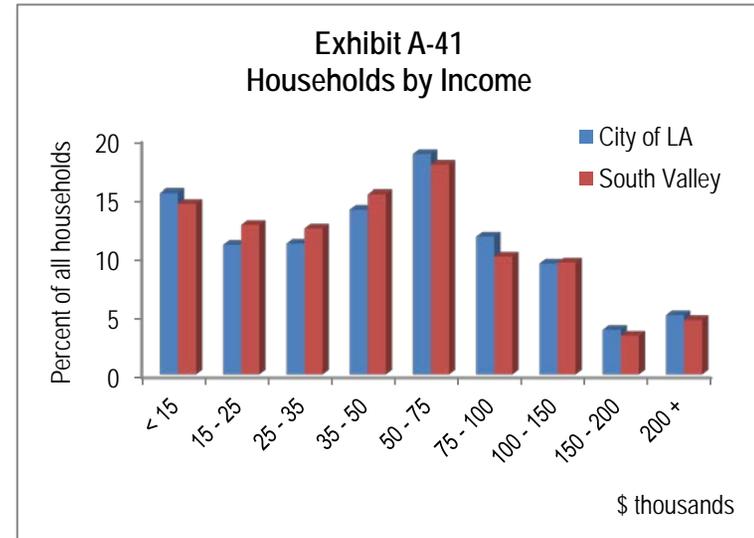
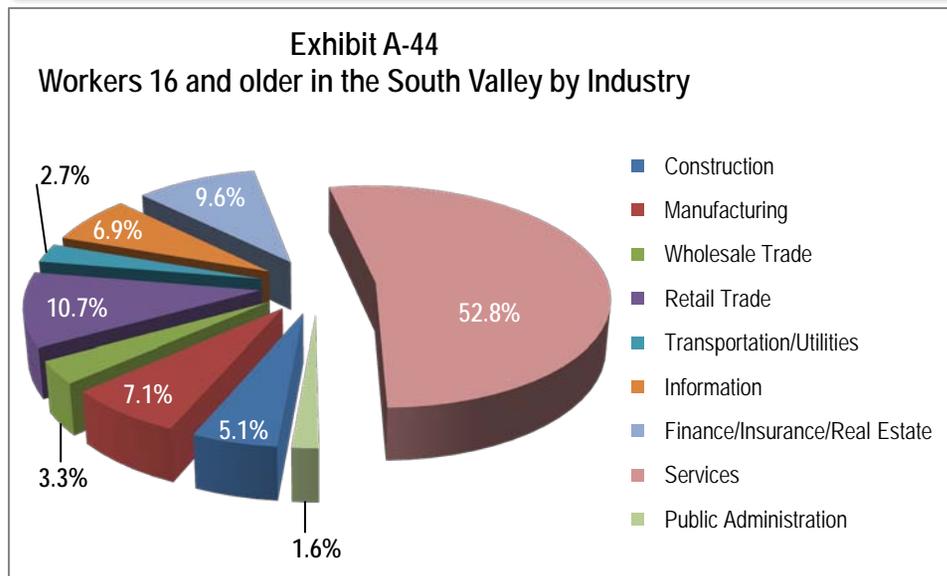
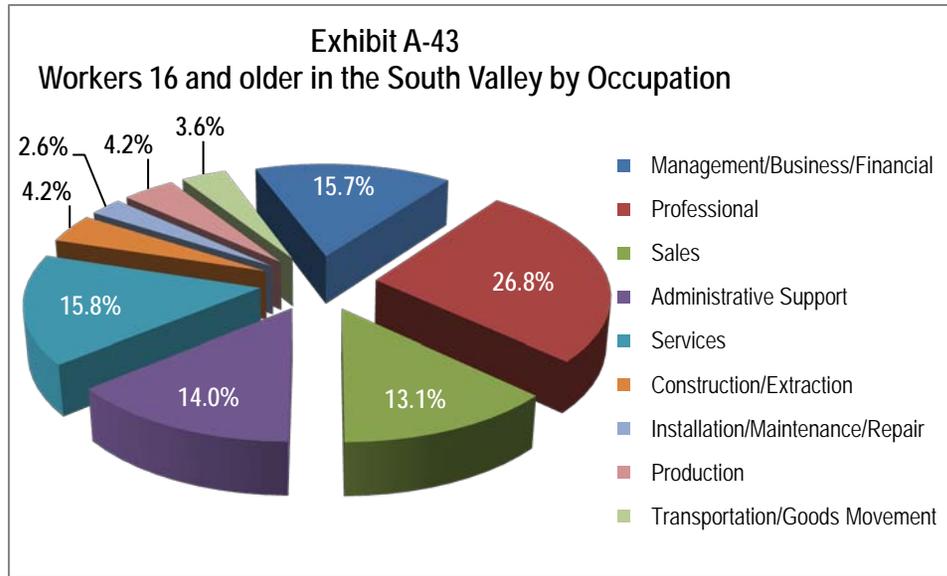


Exhibit A-42
Educational Attainment of Population 25 Years and Older (2010) South Valley Planning Area

	Number	% of total
No High School Diploma	174,397	44.5
High School Graduate	95,232	24.3
Some College, No Degree	61,137	15.6
Associate Degree	19,595	5.0
Bachelor's Degree	28,217	7.2
Graduate / Professional Degree	13,325	3.4
Total	391,903	100.0



West Los Angeles Planning Area

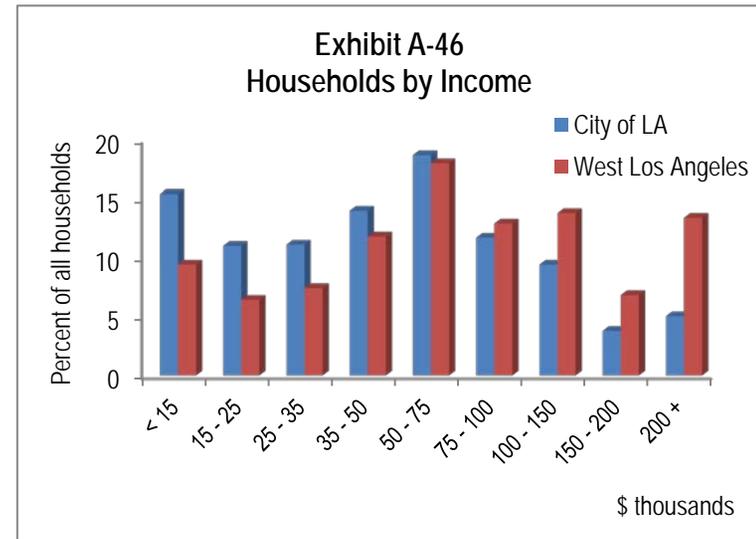


Exhibit A-47
Educational Attainment of Population 25 Years and Older (2010) West Los Angeles Planning Area

	Number	% of total
No High School Diploma	22,676	7.5
High School Graduate	39,305	13
Some College, No Degree	47,770	15.8
Associate Degree	17,234	5.7
Bachelor's Degree	101,285	33.5
Graduate / Professional Degree	74,377	24.6
Total	302,344	100.0

Central Planning Area

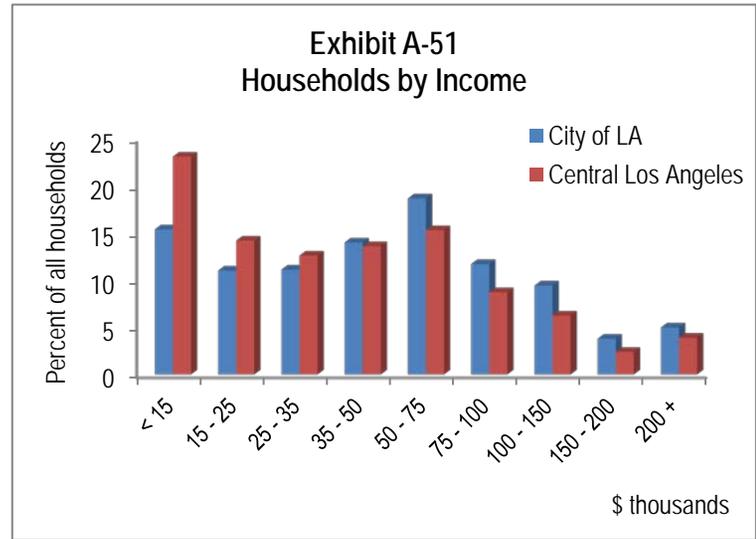
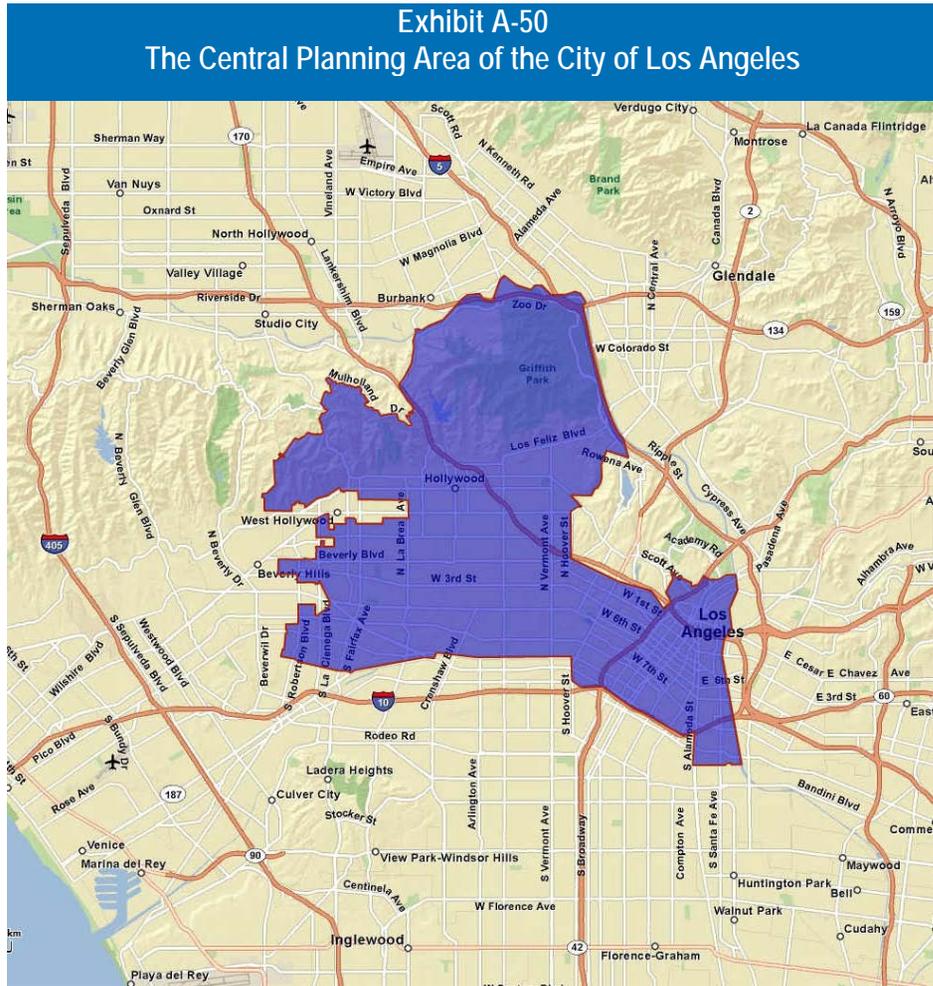
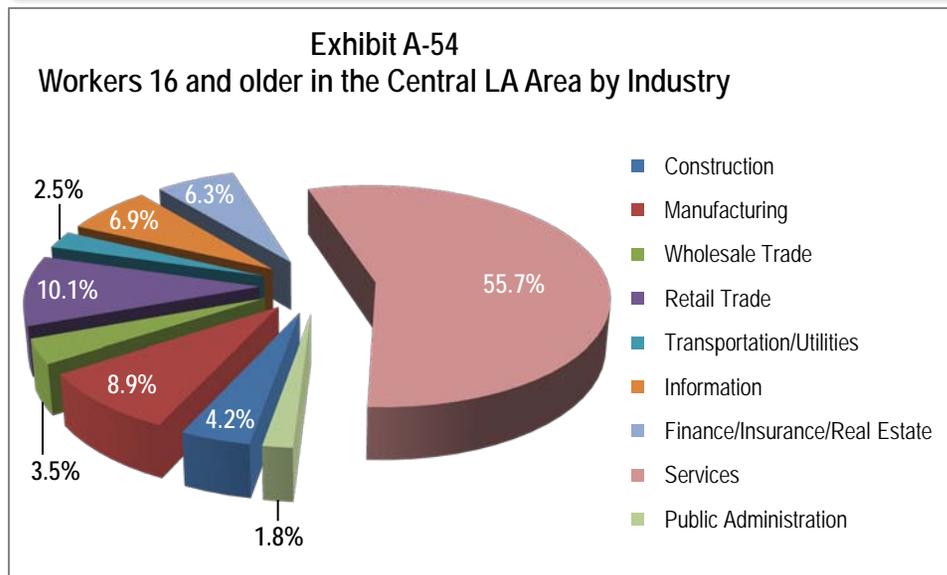
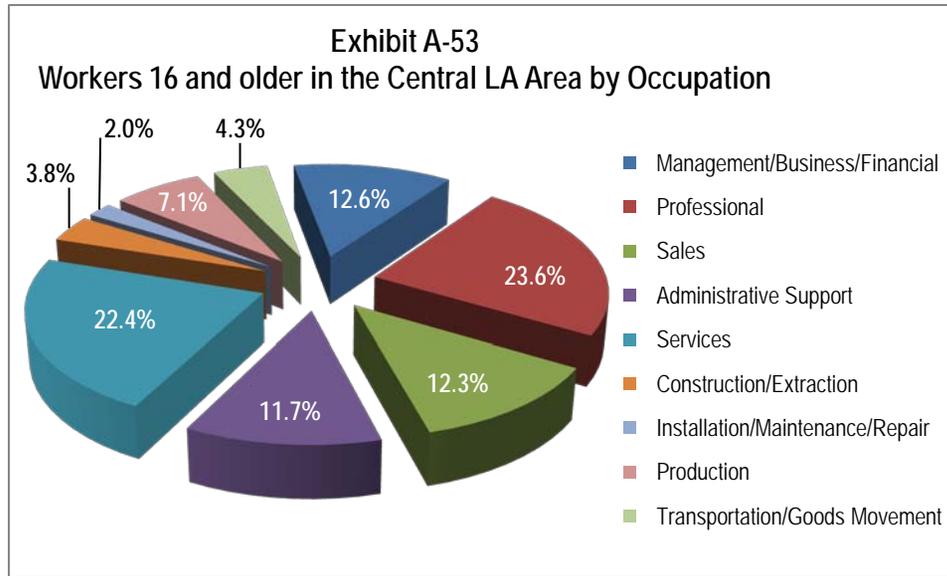


Exhibit A-52
Educational Attainment of Population 25 Years and Older (2010) Central Planning Area

	Number	% of total
No High School Diploma	137,198	28.5
High School Graduate	96,279	20.0
Some College, No Degree	67,877	14.1
Associate Degree	25,514	5.3
Bachelor's Degree	105,426	21.9
Graduate / Professional Degree	48,621	10.1
Total	481,395	100.0



East Los Angeles Planning Area

Exhibit A-55
The East Los Angeles Planning Area of the City of Los Angeles

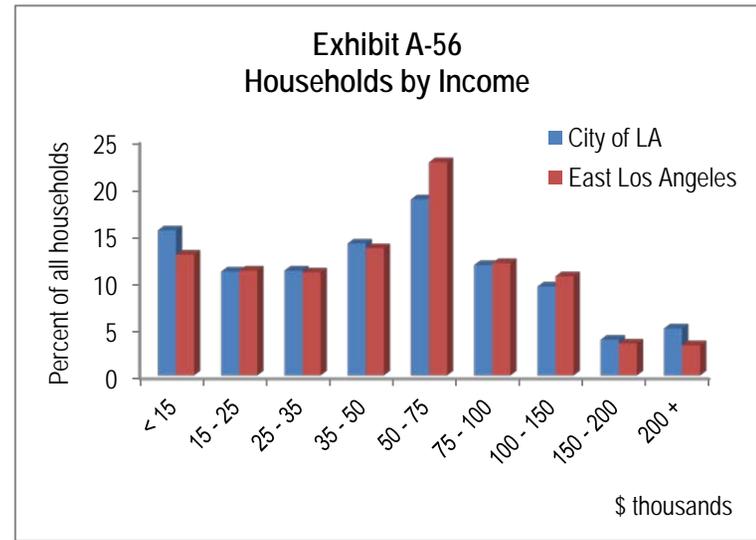
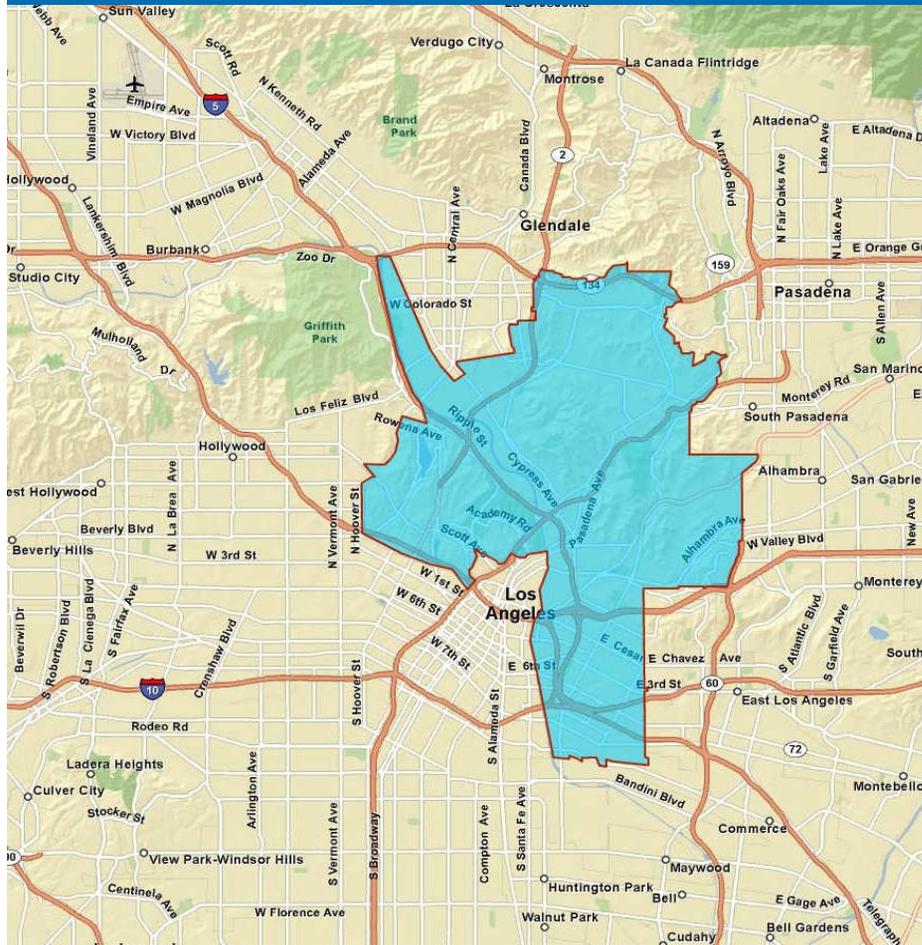
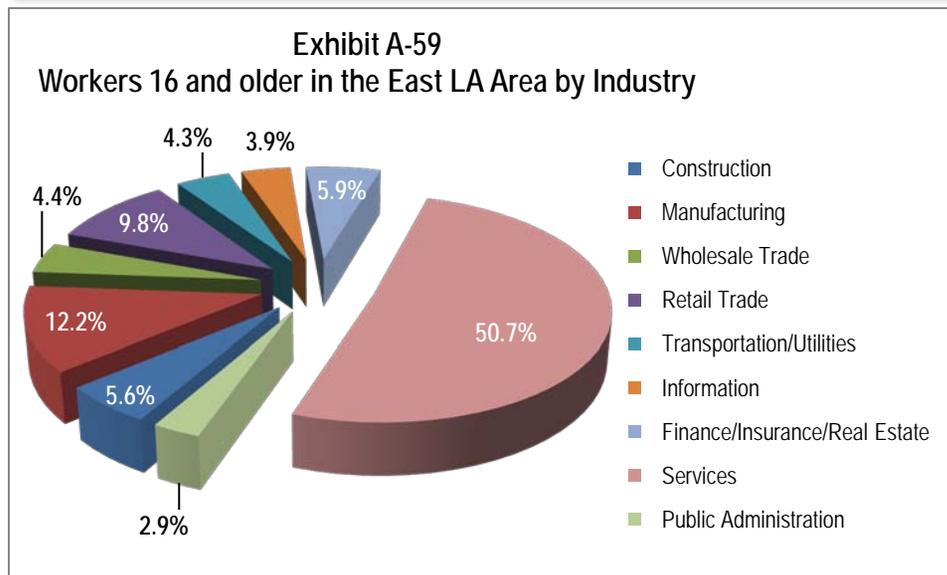
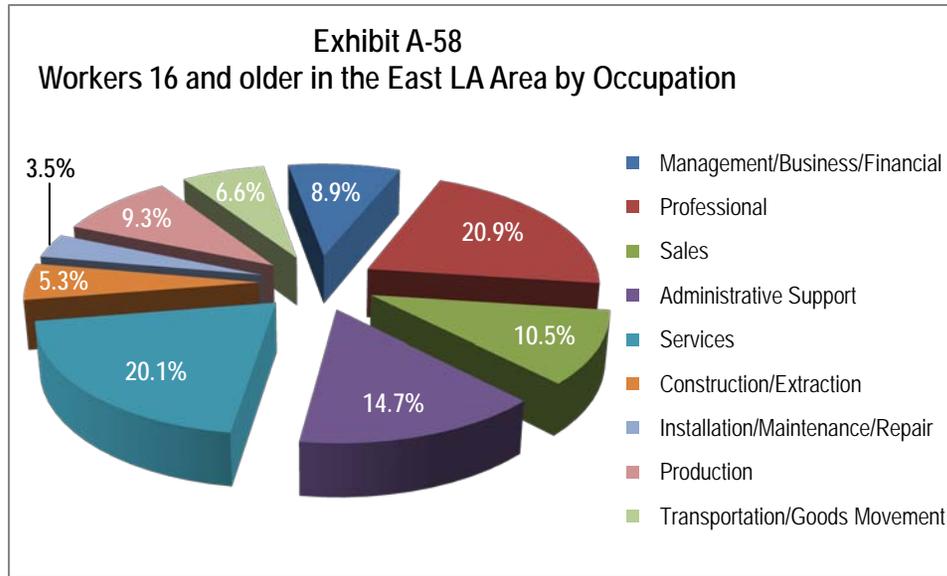


Exhibit A-57
Educational Attainment of Population 25 Years and Older (2010) East Los Angeles Planning Area

	Number	% of total
No High School Diploma	101,115	40.2
High School Graduate	51,815	20.6
Some College, No Degree	34,963	13.9
Associate Degree	12,577	5.0
Bachelor's Degree	35,214	14.0
Graduate / Professional Degree	15,595	6.2
Total	251,530	100.0



South Los Angeles Planning Area

Exhibit A-60
The South Los Angeles Planning Area of the City of Los Angeles

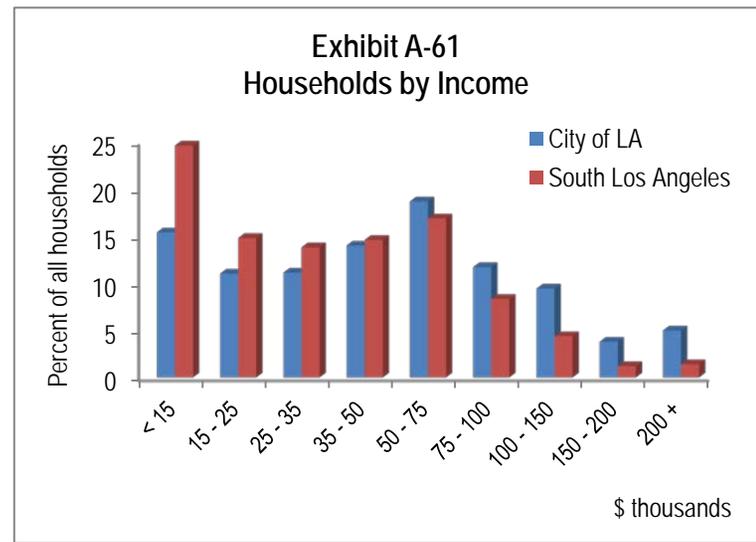
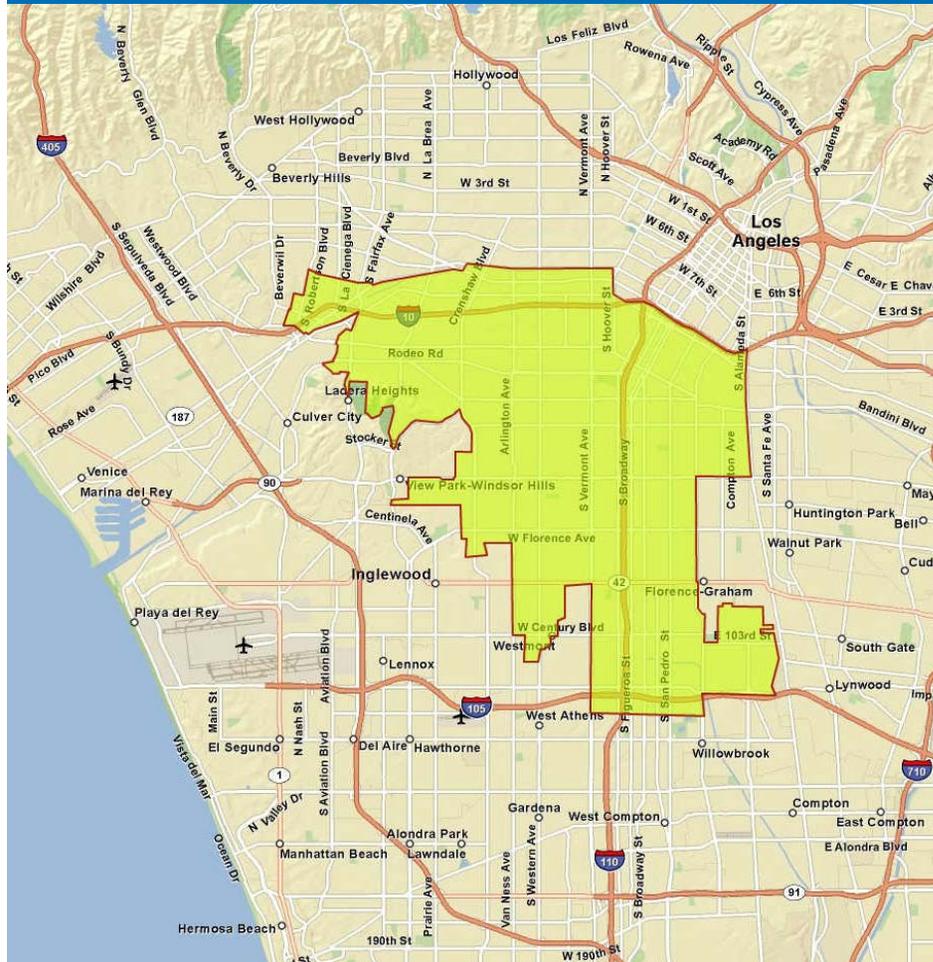
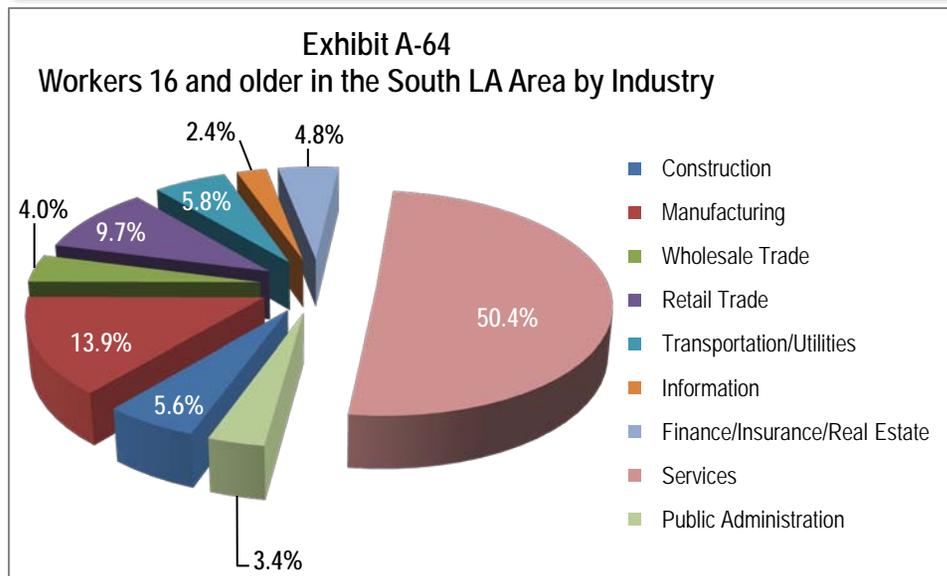
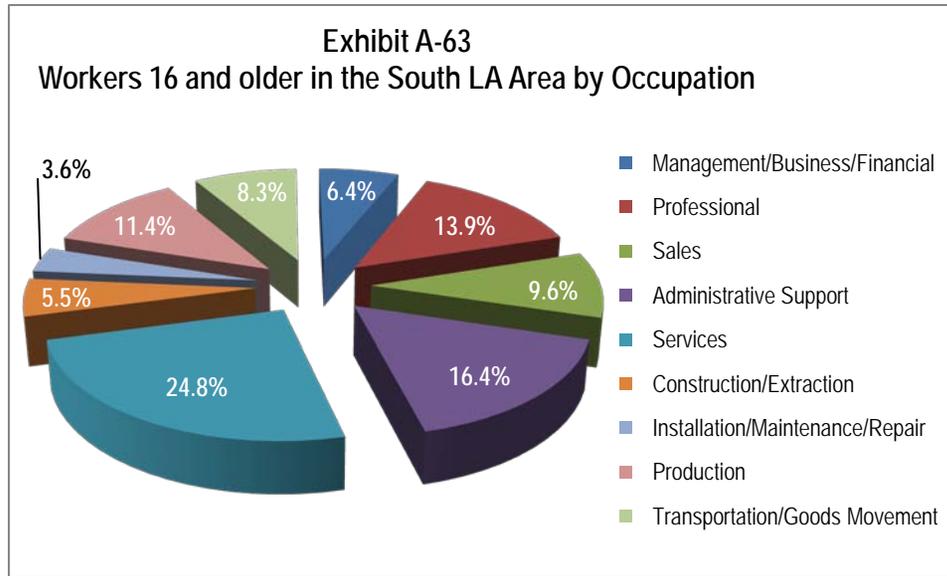


Exhibit A-62
Educational Attainment of Population 25 Years and Older (2010) South Los Angeles Planning Area

	Number	% of total
No High School Diploma	174,397	44.5
High School Graduate	95,232	24.3
Some College, No Degree	61,137	15.6
Associate Degree	19,595	5.0
Bachelor's Degree	28,217	7.2
Graduate / Professional Degree	13,325	3.4
Total	391,903	100.0



Harbor Planning Area

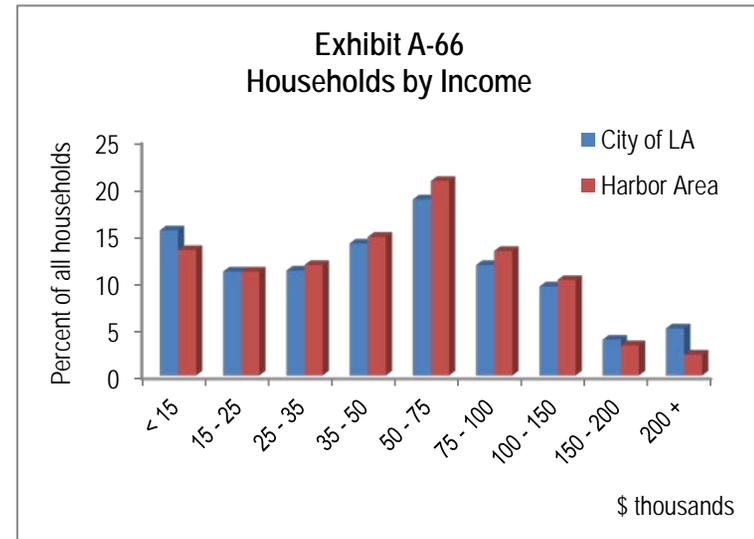
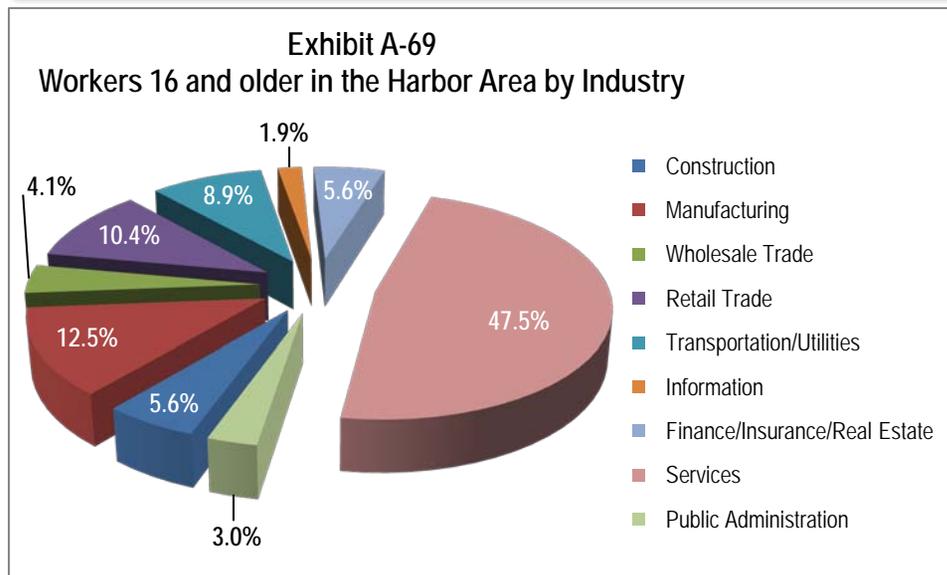
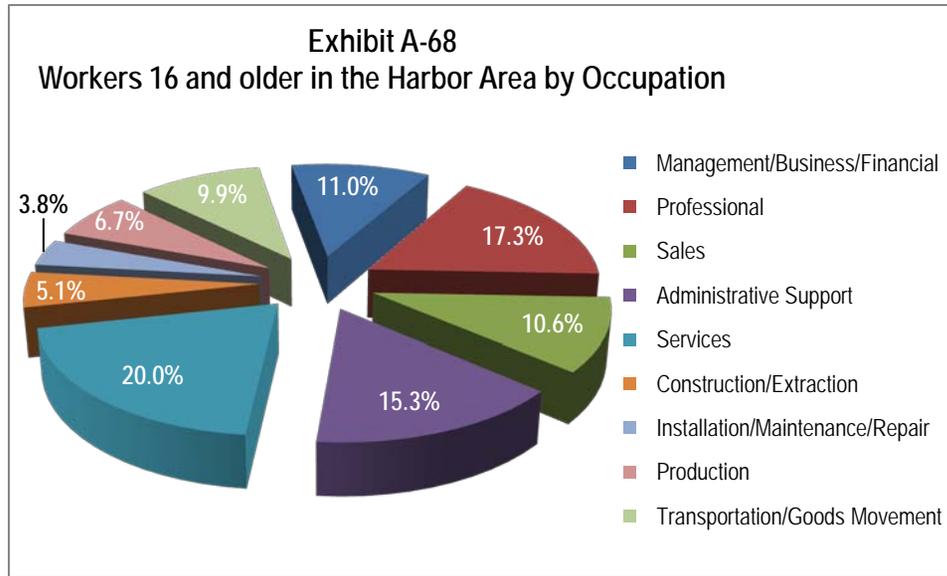


Exhibit A-67
Educational Attainment of Population 25 Years and Older (2010) Harbor Planning Area

	Number	% of total
No High School Diploma	37,022	30.4
High School Graduate	32,029	26.3
Some College, No Degree	21,921	18.0
Associate Degree	7,672	6.3
Bachelor's Degree	15,832	13.0
Graduate / Professional Degree	7,307	6.0
Total	121,784	100.0



Council Districts of the City of Los Angeles



Exhibit A-71
Population and Income (2010)
Los Angeles County and City of Los Angeles Council Districts

	Population	Households	Average Household Size	Median Household Income	Per Capita Income
Council District 1	261,192	75,799	3.39	\$ 26,431	\$ 11,796
Council District 2	274,422	104,525	2.60	54,681	27,865
Council District 3	280,495	96,335	2.88	63,734	30,458
Council District 4	270,486	124,024	2.16	47,736	33,534
Council District 5	273,656	124,511	2.08	70,221	53,495
Council District 6	255,236	68,455	3.70	45,689	15,312
Council District 7	262,324	62,577	4.14	51,364	14,959
Council District 8	256,328	78,270	3.19	35,646	15,134
Council District 9	261,487	66,963	3.79	27,048	11,278
Council District 10	258,696	91,697	2.79	35,915	17,843
Council District 11	280,344	125,227	2.20	69,396	47,803
Council District 12	260,785	88,854	2.88	69,546	31,453
Council District 13	258,415	86,124	2.95	31,880	14,955
Council District 14	246,837	67,683	3.38	42,407	16,734
Council District 15	272,255	80,266	3.35	45,150	17,348
City of Los Angeles	3,975,964	1,342,757	2.90	\$ 48,349	\$ 24,307
Los Angeles County	10,240,505	3,292,577	3.06	54,755	24,448

Source: ESRI BAO

Council District 1

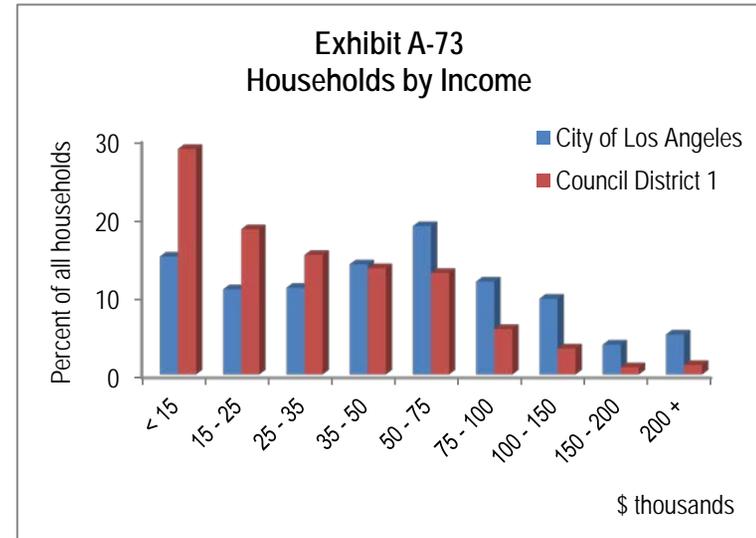
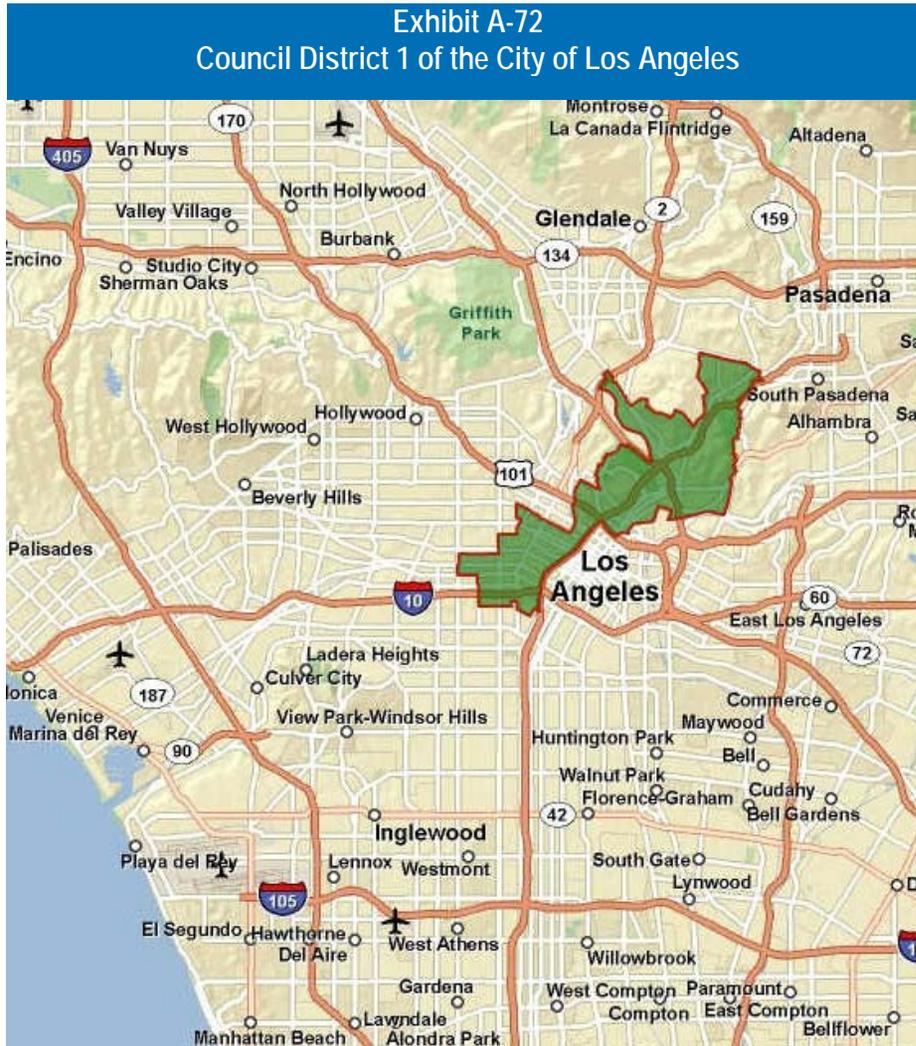
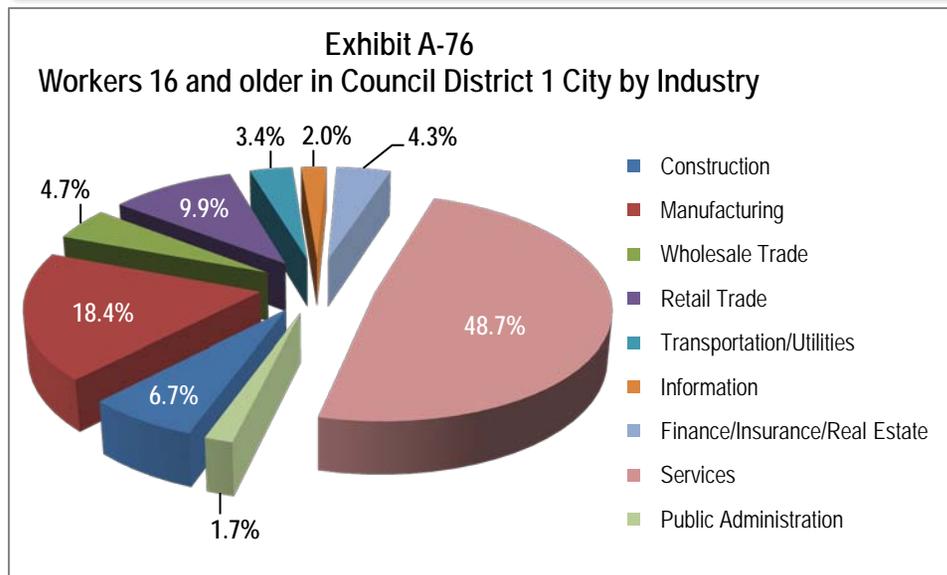
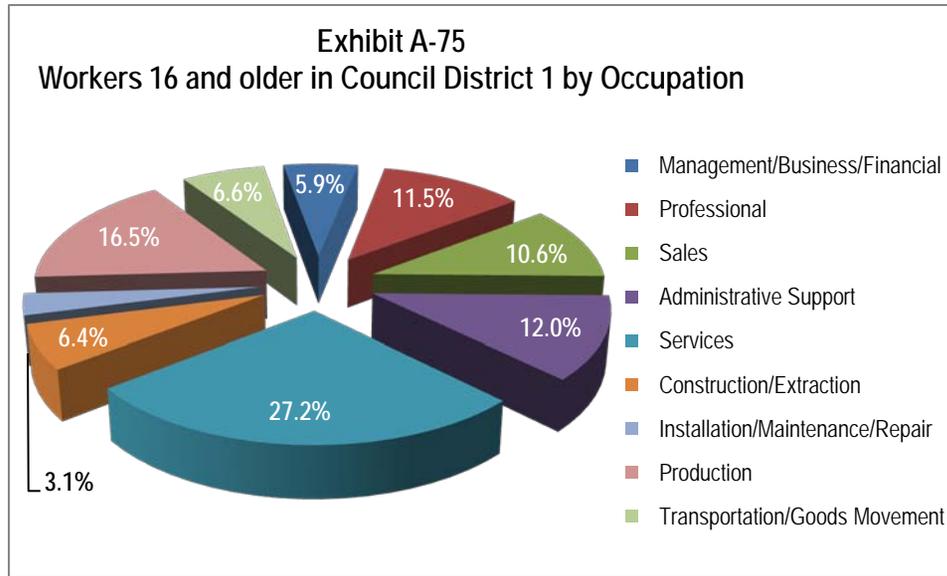


Exhibit A-74
Educational Attainment of Population 25 Years and Older (2010) Council District 1

	Number	% of total
No High School Diploma	81,108	54.8
High School Graduate	29,601	20.0
Some College, No Degree	14,801	10.0
Associate Degree	5,032	3.4
Bachelor's Degree	11,989	8.1
Graduate / Professional Degree	5,180	3.5
Total	148,007	100.0



Council District 2

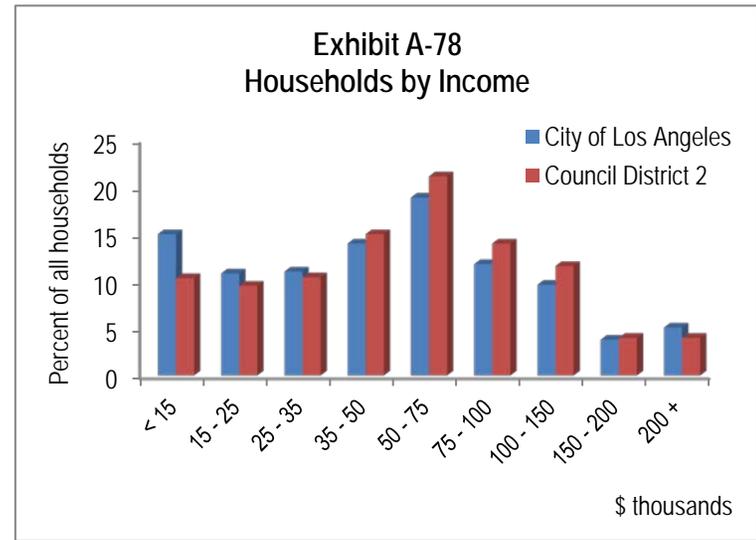
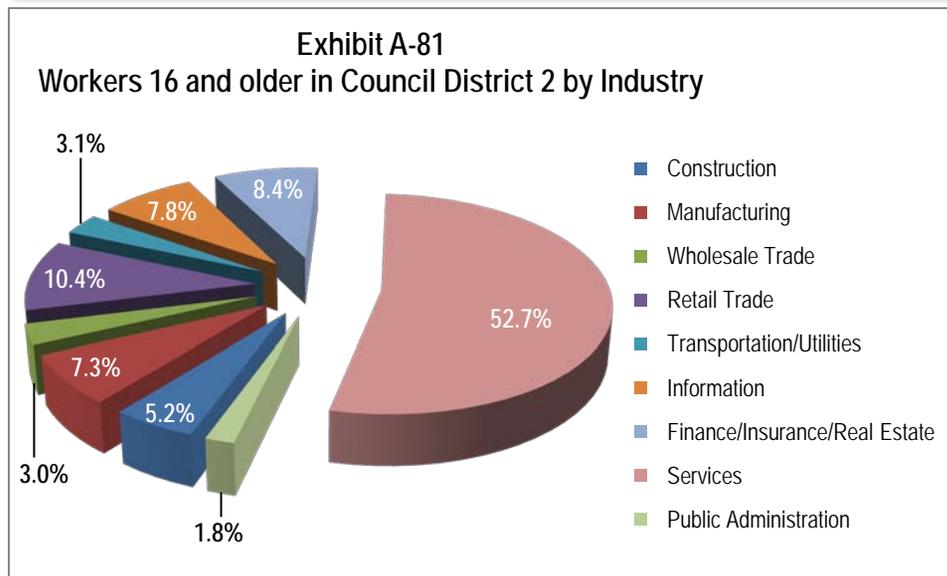
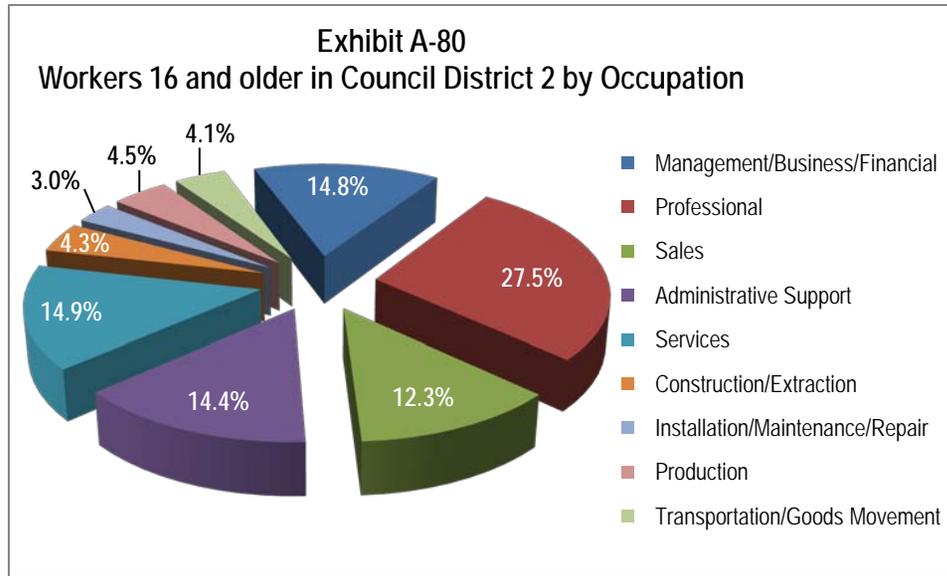


Exhibit A-79
Educational Attainment of Population 25 Years and Older (2010) Council District 2

	Number	% of total
No High School Diploma	32,515	17.8
High School Graduate	40,552	22.2
Some College, No Degree	36,899	20.2
Associate Degree	13,335	7.3
Bachelor's Degree	39,821	21.8
Graduate / Professional Degree	19,728	10.8
Total	182,667	100.0



Council District 3

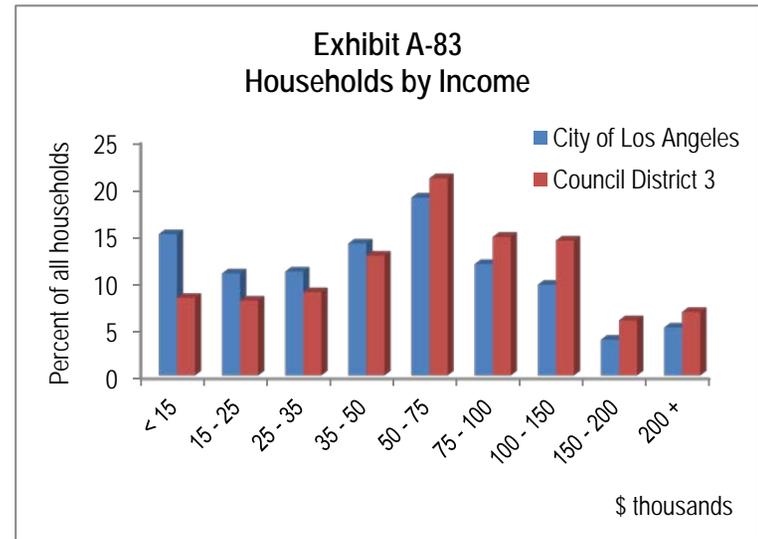
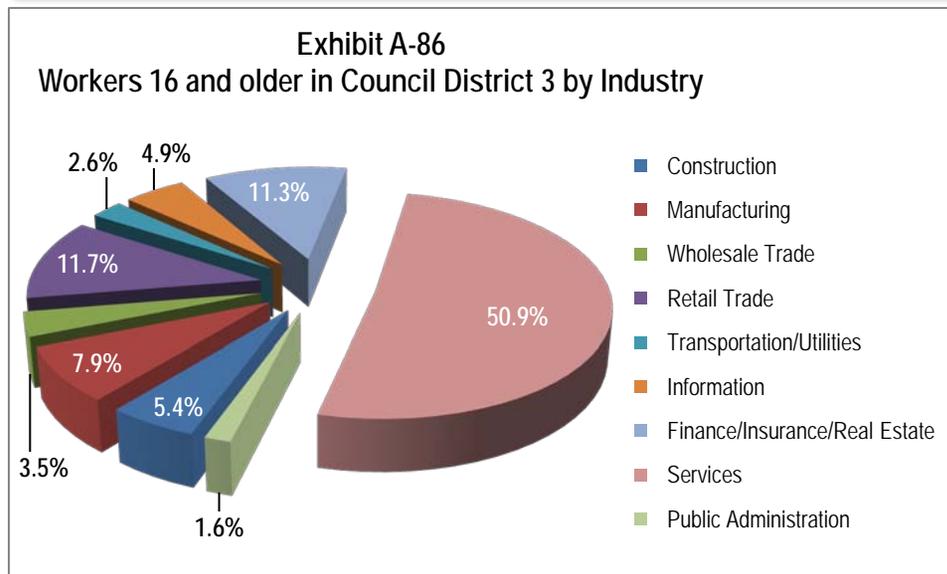
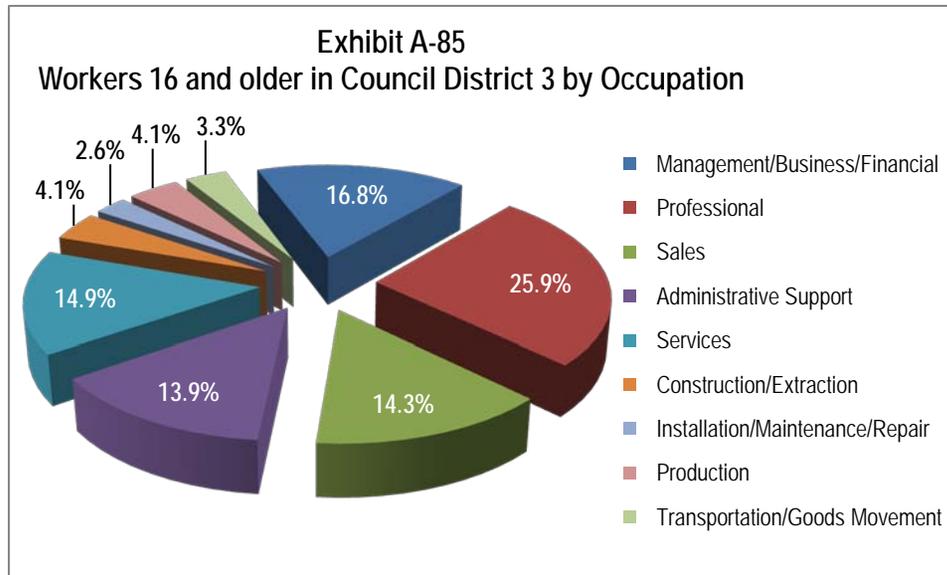


Exhibit A-84
Educational Attainment of Population 25 Years and Older (2010) Council District 3

	Number	% of total
No High School Diploma	29,169	15.7
High School Graduate	40,130	21.6
Some College, No Degree	35,486	19.1
Associate Degree	13,563	7.3
Bachelor's Degree	45,147	24.3
Graduate / Professional Degree	22,109	11.9
Total	185,789	100.0



Council District 4

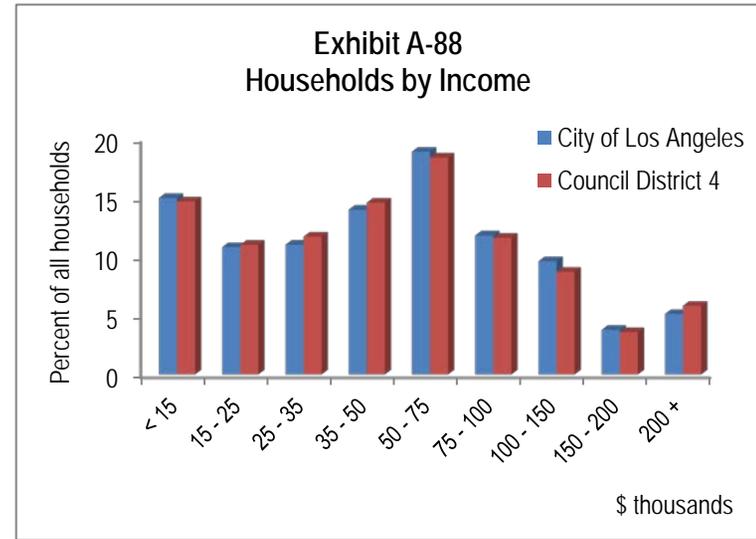
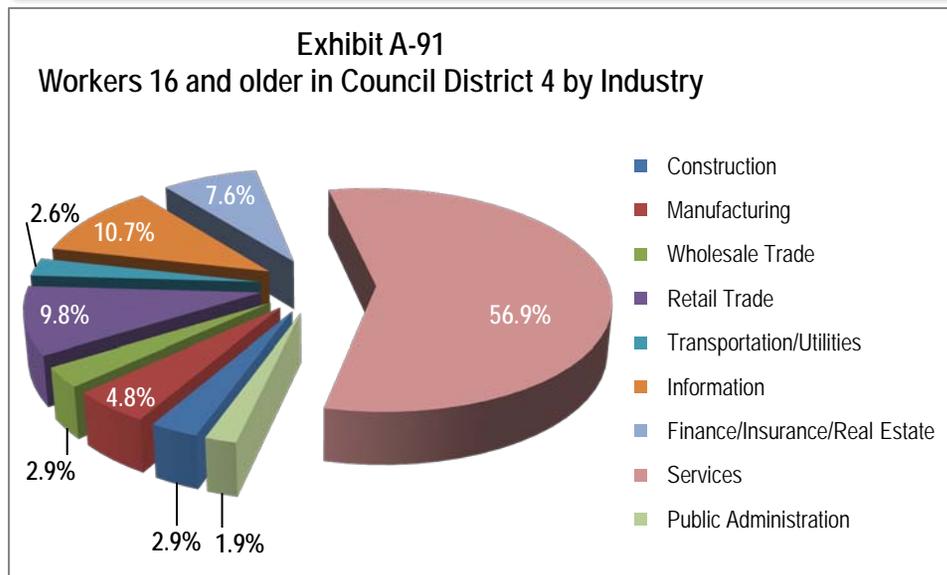
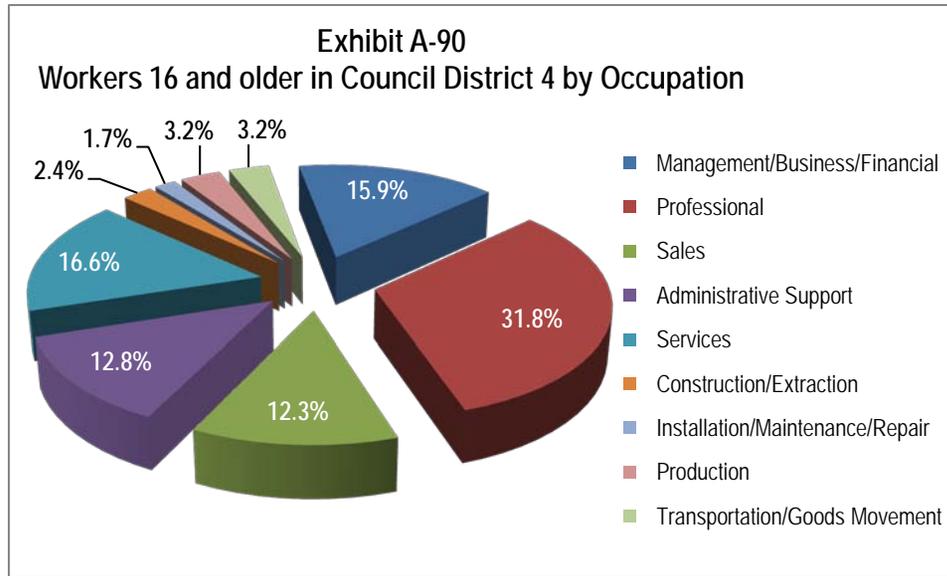


Exhibit A-89
Educational Attainment of Population 25 Years and Older (2010) Council District 4

	Number	% of total
No High School Diploma	26,864	13.8
High School Graduate	35,818	18.4
Some College, No Degree	31,925	16.4
Associate Degree	11,680	6.0
Bachelor's Degree	59,957	30.8
Graduate / Professional Degree	28,226	14.5
Total	194,665	100.0



Council District 5

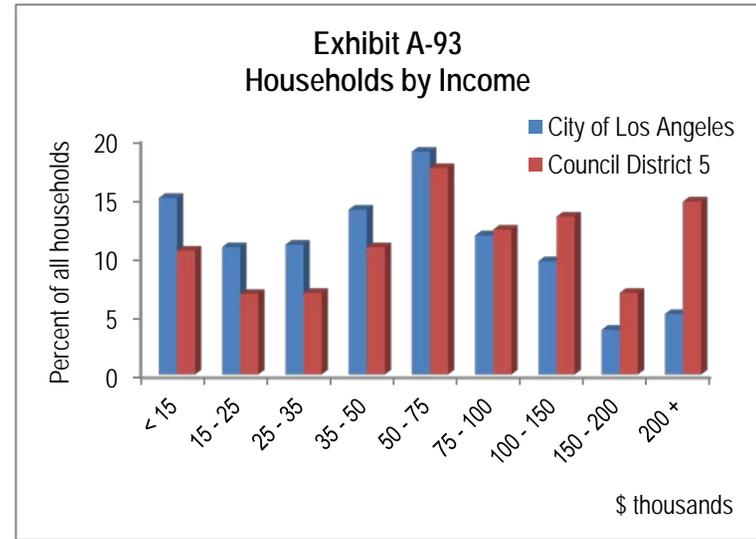
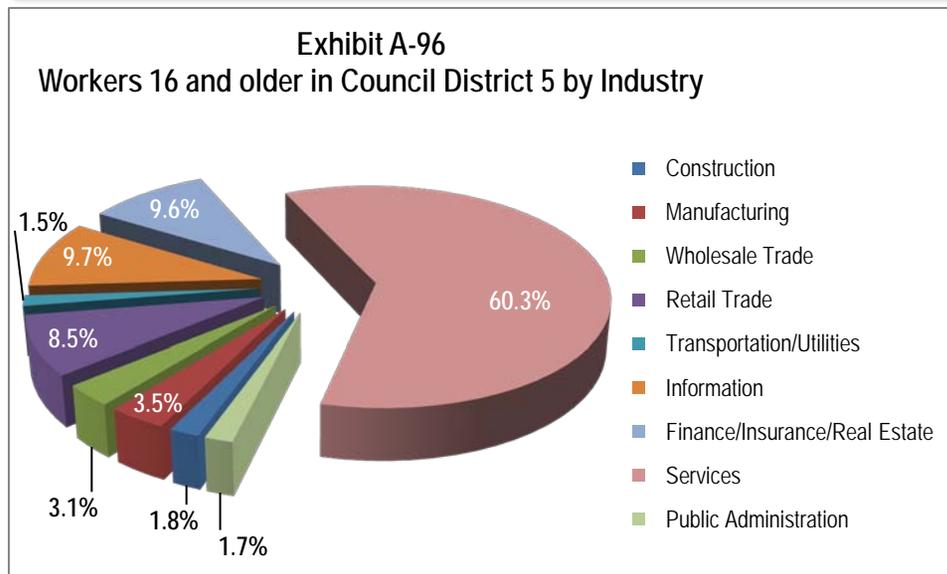
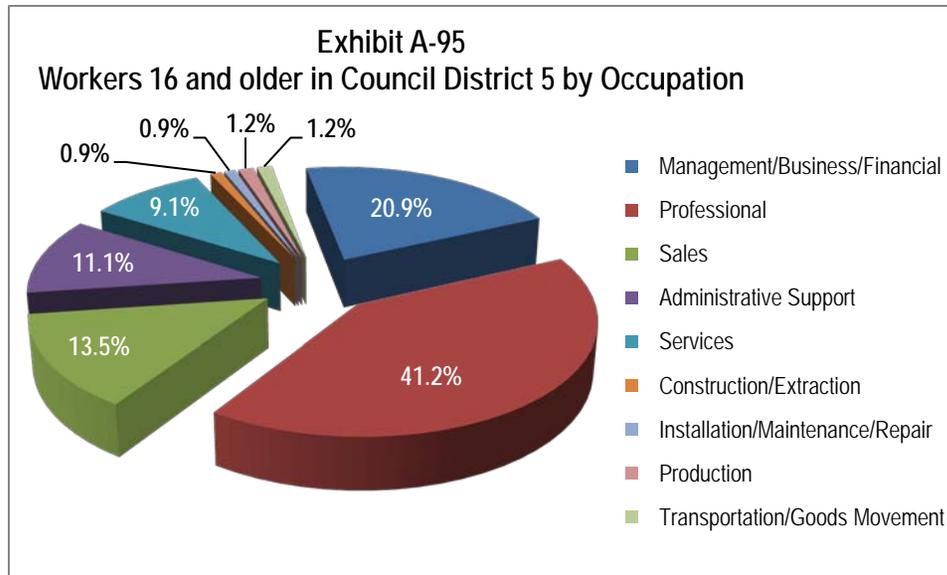


Exhibit A-94
Educational Attainment of Population 25 Years and Older (2010) Council District 5

	Number	% of total
No High School Diploma	10,837	5.5
High School Graduate	25,812	13.1
Some College, No Degree	30,738	15.6
Associate Degree	11,034	5.6
Bachelor's Degree	67,979	34.5
Graduate / Professional Degree	50,837	25.8
Total	197,041	100.0



Council District 6

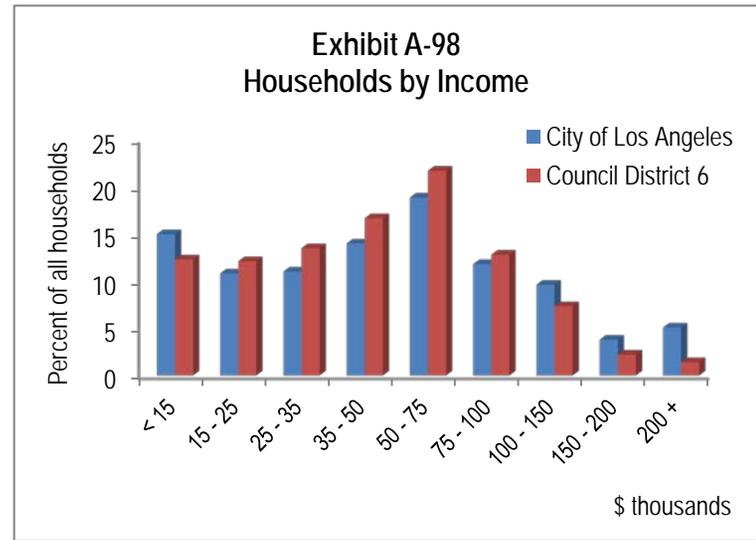
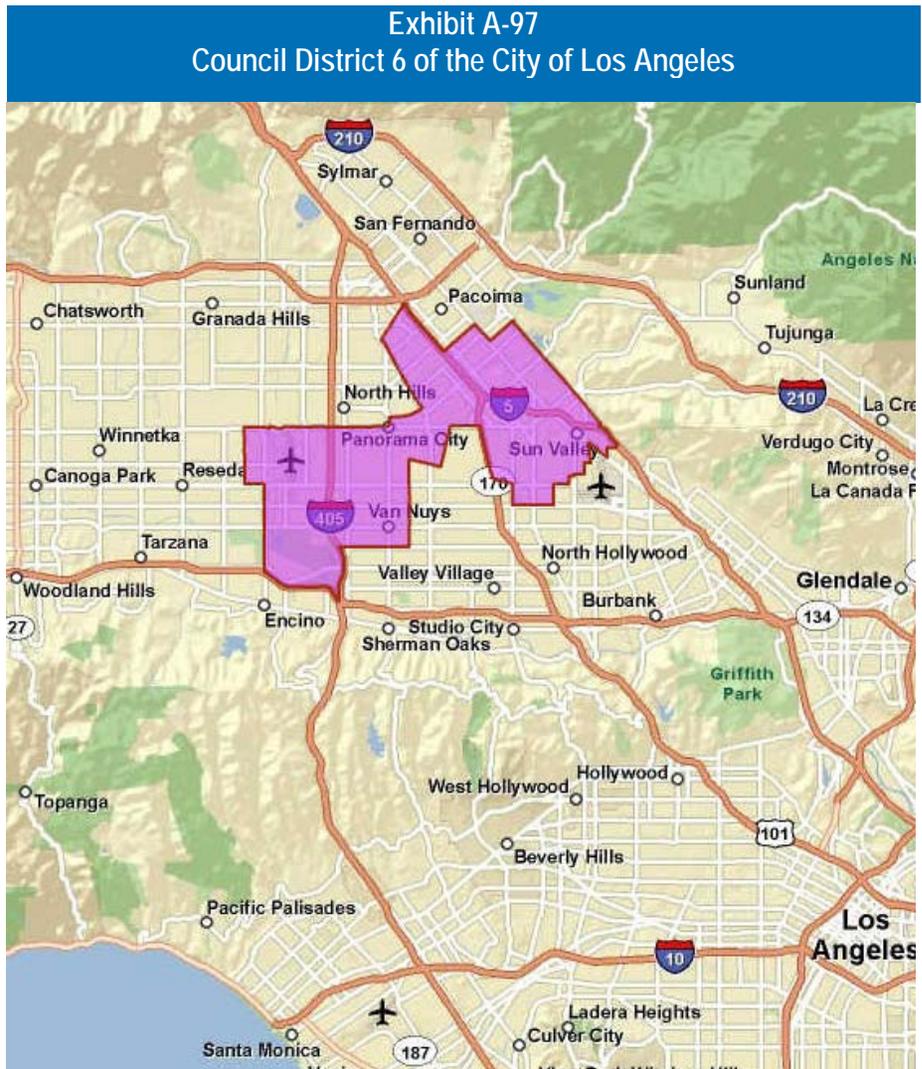
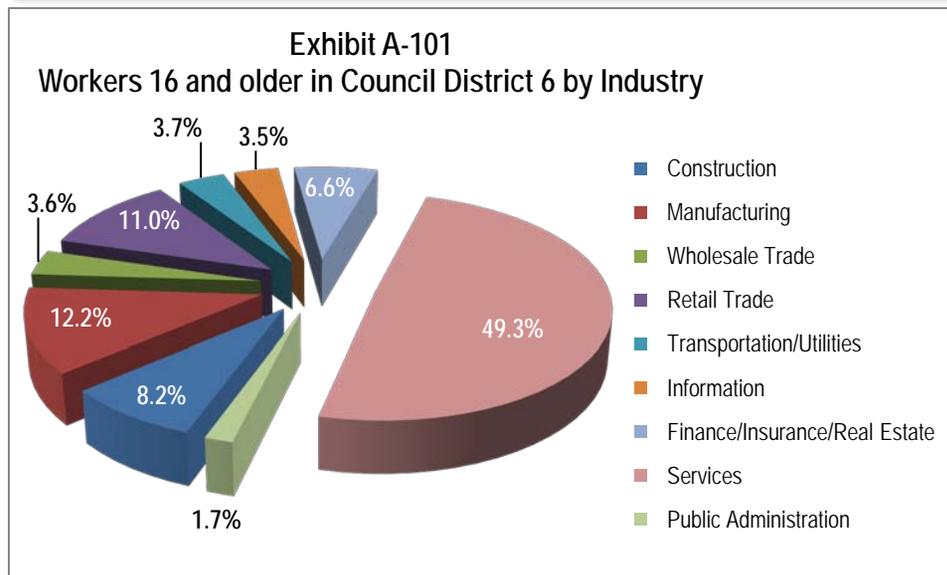
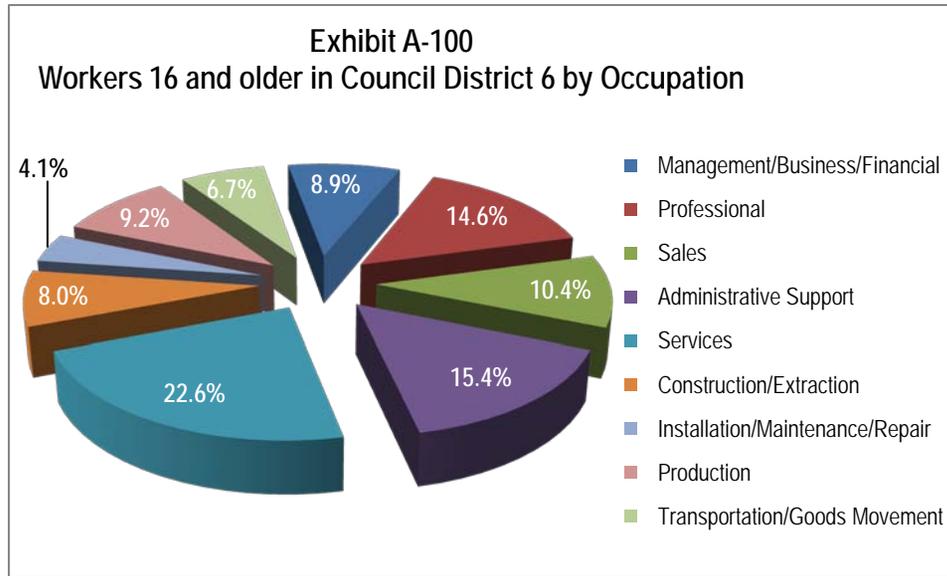


Exhibit A-99
Educational Attainment of Population 25 Years and Older (2010) Council District 6

	Number	% of total
No High School Diploma	57,572	39.8
High School Graduate	34,283	23.7
Some College, No Degree	21,987	15.2
Associate Degree	7,088	4.9
Bachelor's Degree	17,648	12.2
Graduate / Professional Degree	6,075	4.2
Total	144,654	100.0



Council District 7

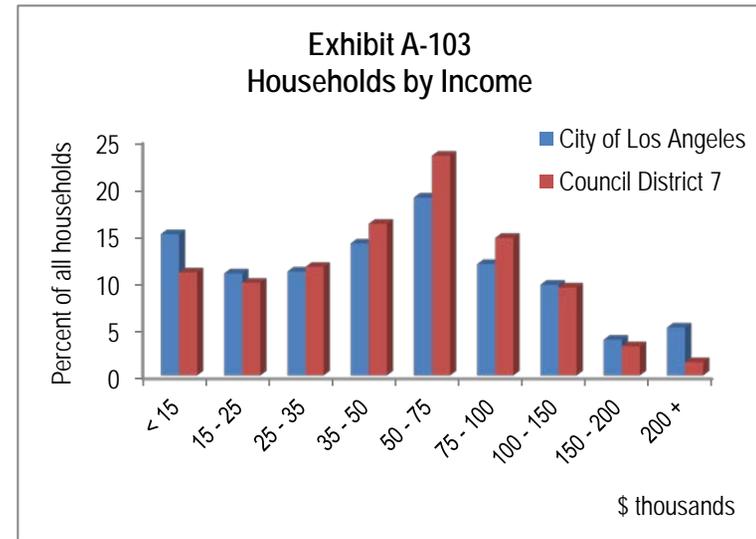
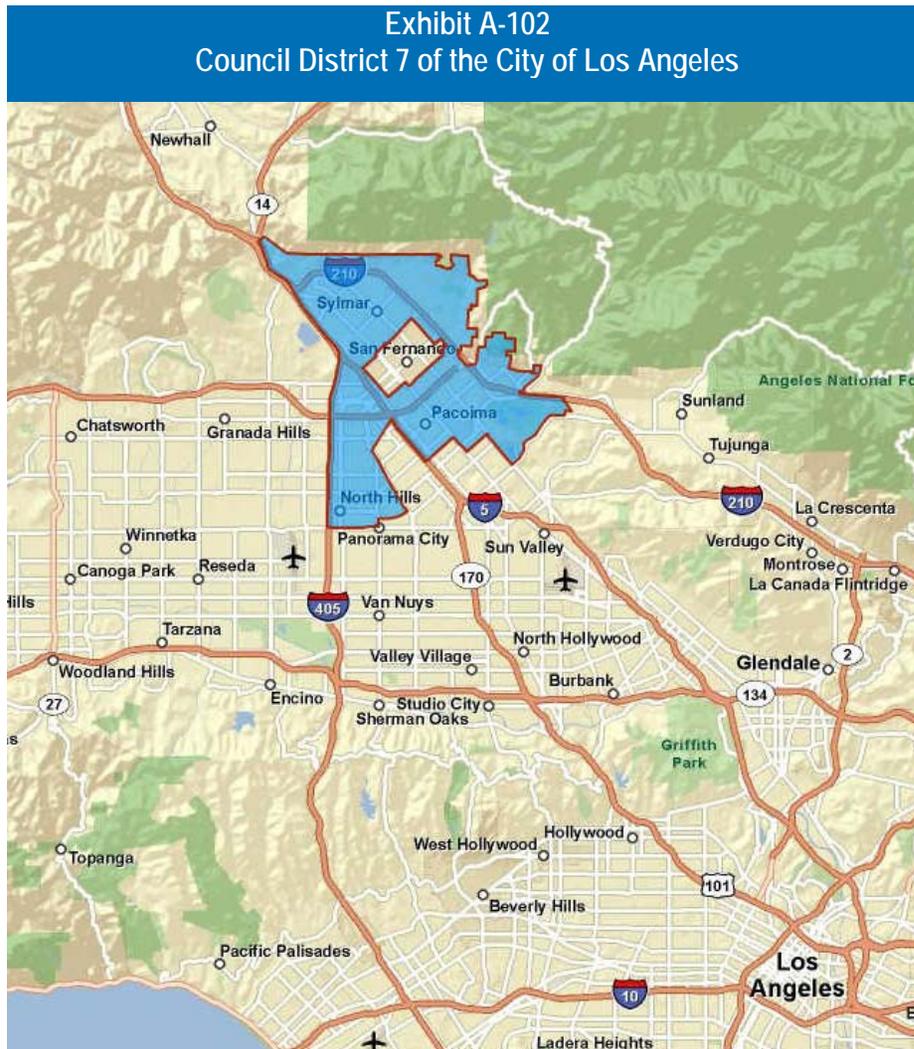
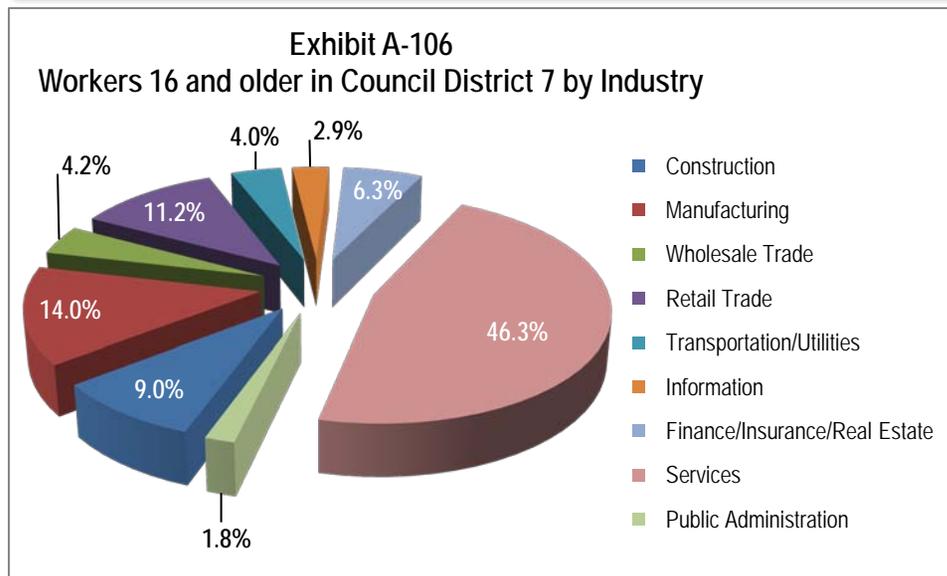
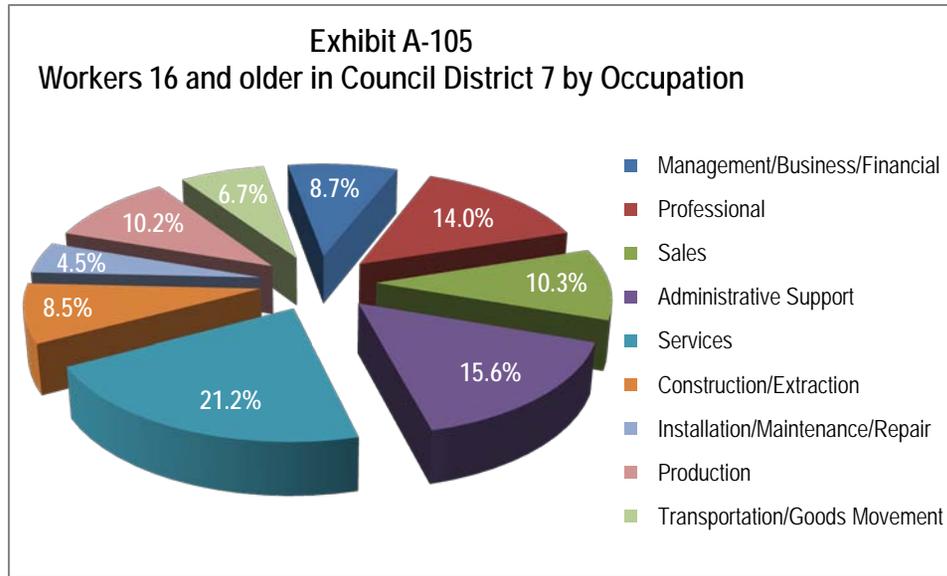


Exhibit A-104
Educational Attainment of Population 25 Years and Older (2010) Council District 7

	Number	% of total
No High School Diploma	60,276	42.3
High School Graduate	34,199	24
Some College, No Degree	21,802	15.3
Associate Degree	7,125	5
Bachelor's Degree	13,537	9.5
Graduate / Professional Degree	5,557	3.9
Total	142,496	100.0



Council District 8

Exhibit A-107
Council District 8 of the City of Los Angeles

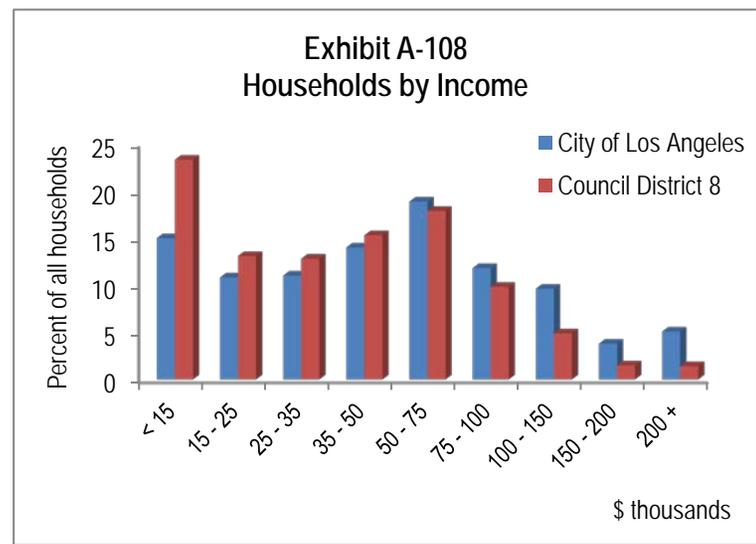
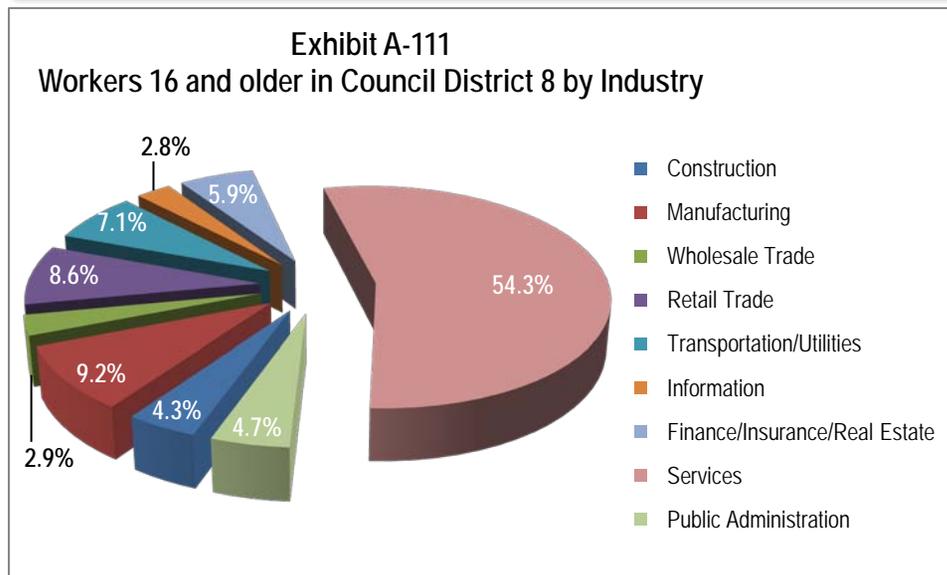
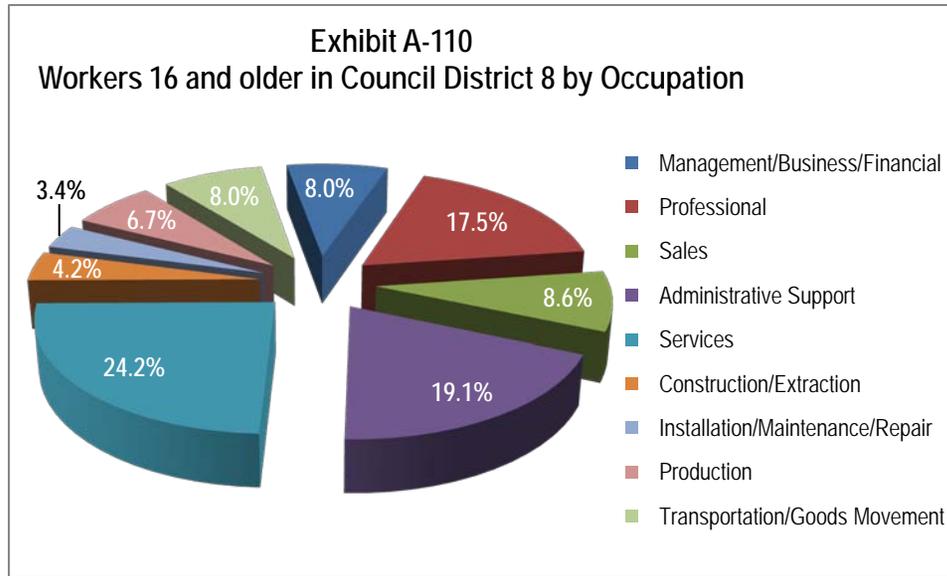


Exhibit A-109
Educational Attainment of Population 25 Years and Older (2010) Council District 8

	Number	% of total
No High School Diploma	49,266	34.6
High School Graduate	36,878	25.9
Some College, No Degree	27,481	19.3
Associate Degree	8,970	6.3
Bachelor's Degree	13,384	9.4
Graduate / Professional Degree	6,550	4.6
Total	142,388	100.0



Council District 9

Exhibit A-112
Council District 9 of the City of Los Angeles

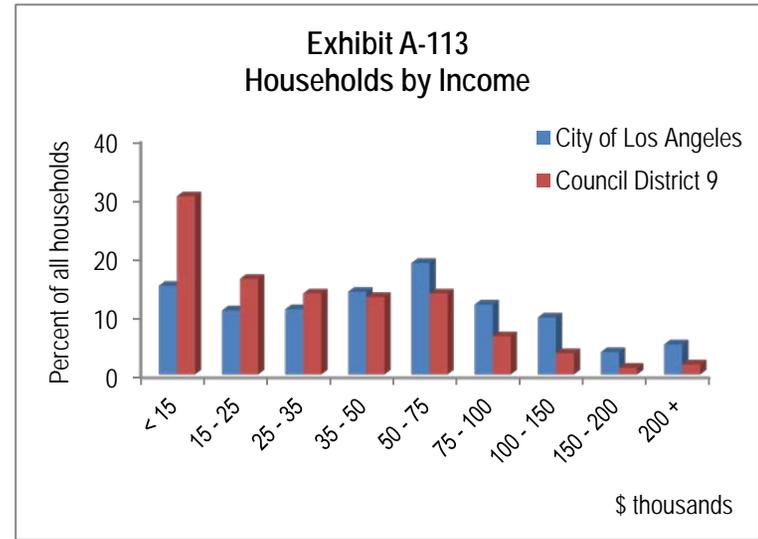
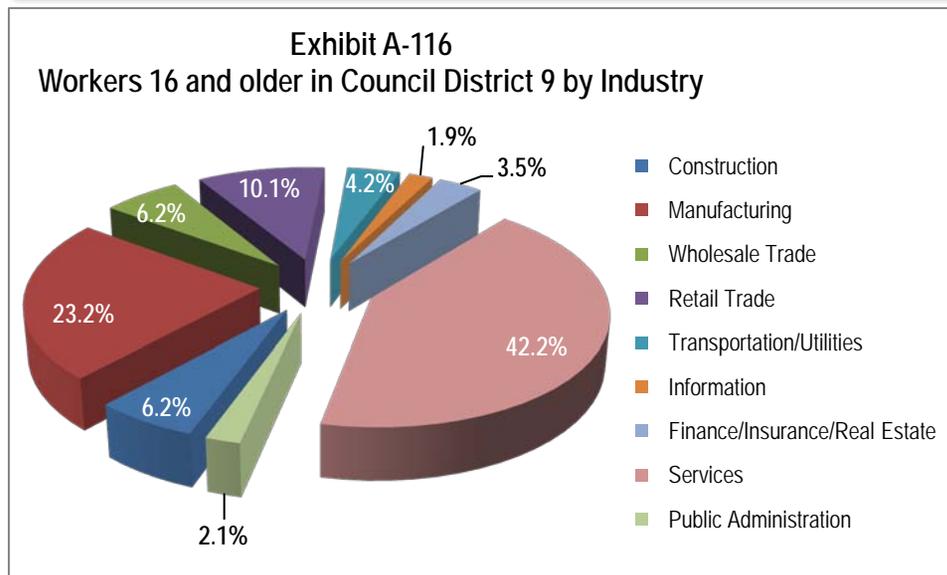
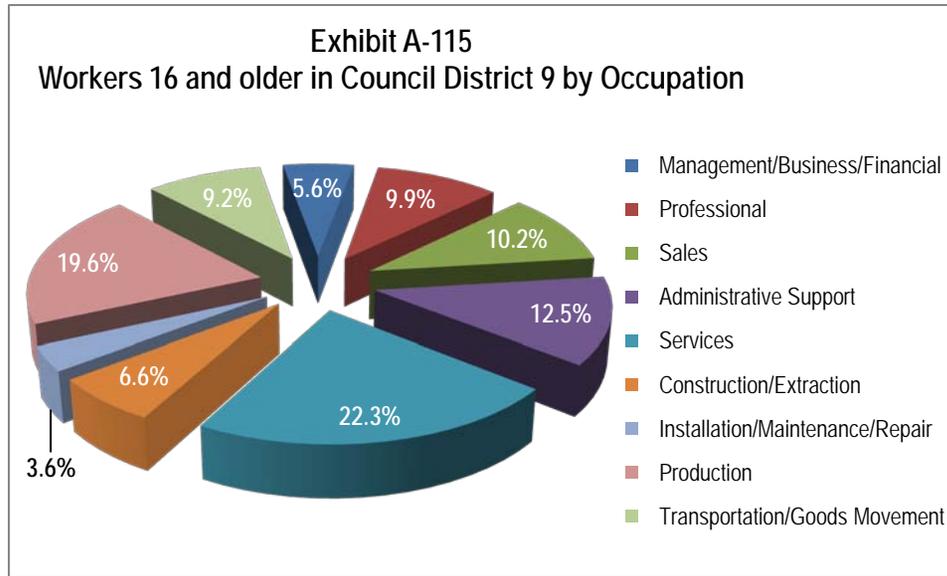


Exhibit A-114
Educational Attainment of Population 25 Years and Older (2010) Council District 9

	Number	% of total
No High School Diploma	76,582	55.8
High School Graduate	30,056	21.9
Some College, No Degree	14,685	10.7
Associate Degree	4,804	3.5
Bachelor's Degree	6,999	5.1
Graduate / Professional Degree	4,117	3.0
Total	137,244	100.0



Council District 10

Exhibit A-117
Council District 10 of the City of Los Angeles

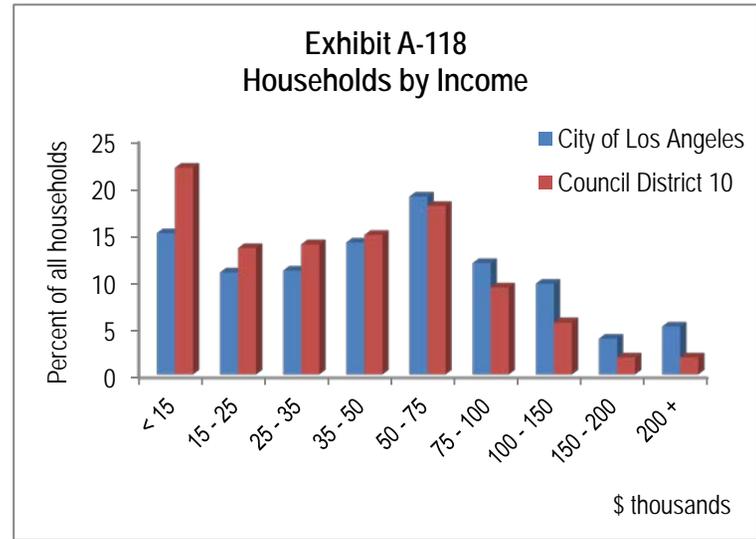
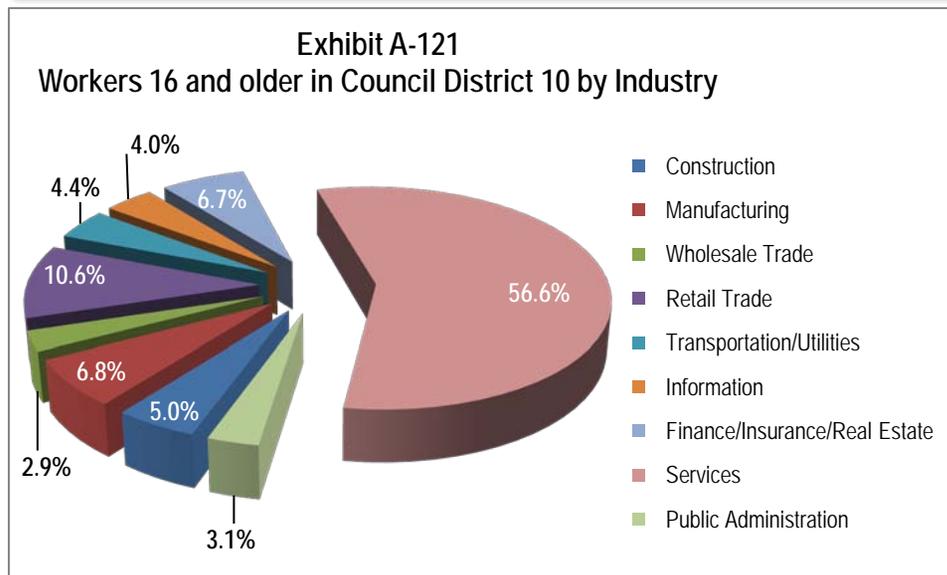
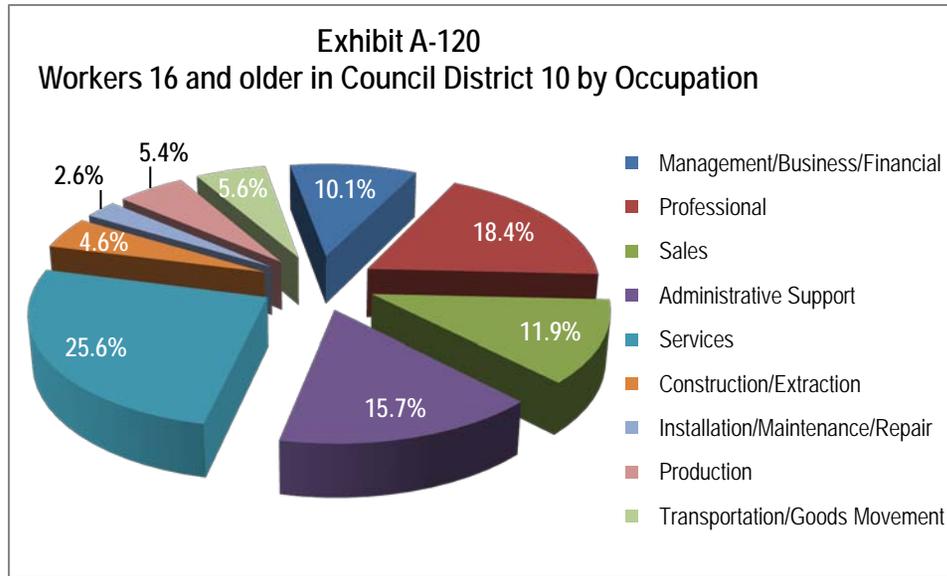


Exhibit A-119
Educational Attainment of Population 25 Years and Older (2010) Council District 10

	Number	% of total
No High School Diploma	48,804	30.4
High School Graduate	37,567	23.4
Some College, No Degree	28,255	17.6
Associate Degree	9,954	6.2
Bachelor's Degree	25,365	15.8
Graduate / Professional Degree	10,596	6.6
Total	160,541	100.0



Council District 11

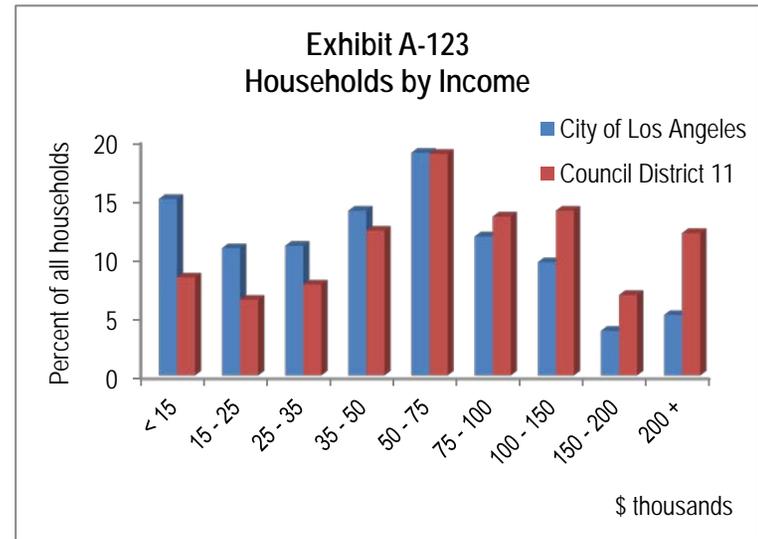
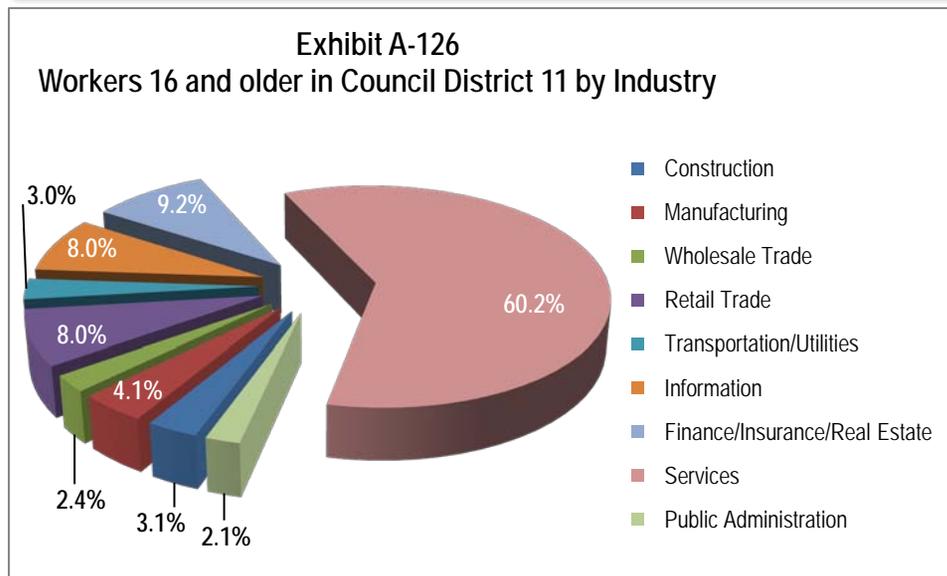
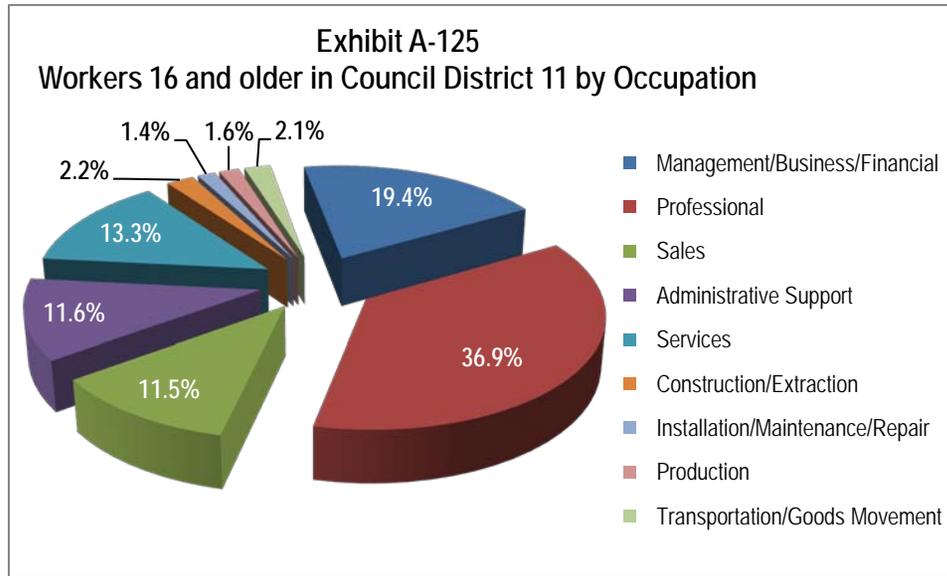


Exhibit A-124
Educational Attainment of Population 25 Years and Older (2010) Council District 11

	Number	% of total
No High School Diploma	18,220	8.9
High School Graduate	28,047	13.7
Some College, No Degree	33,165	16.2
Associate Degree	12,283	6.0
Bachelor's Degree	68,172	33.3
Graduate / Professional Degree	44,834	21.9
Total	204,722	100.0



Council District 12

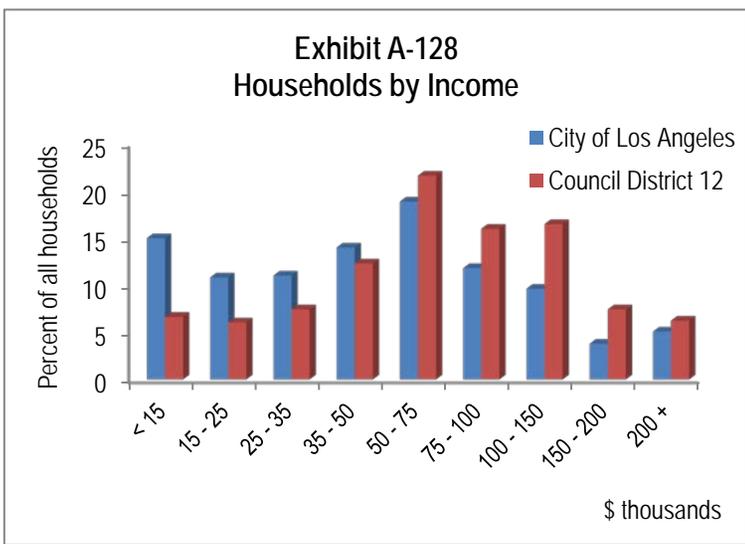
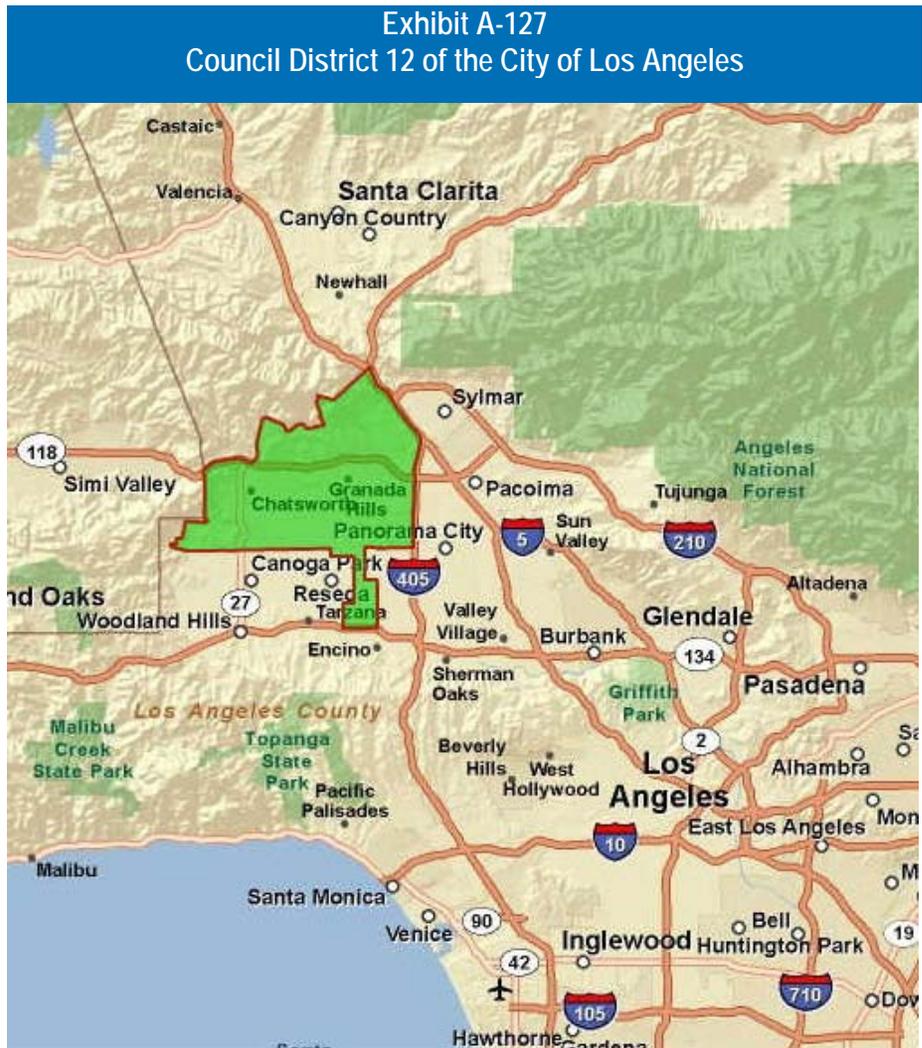
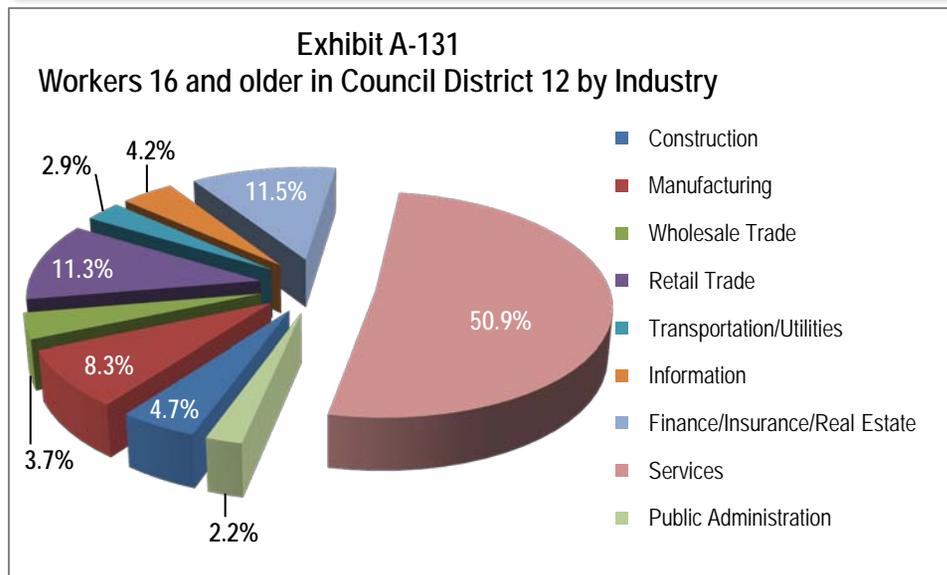
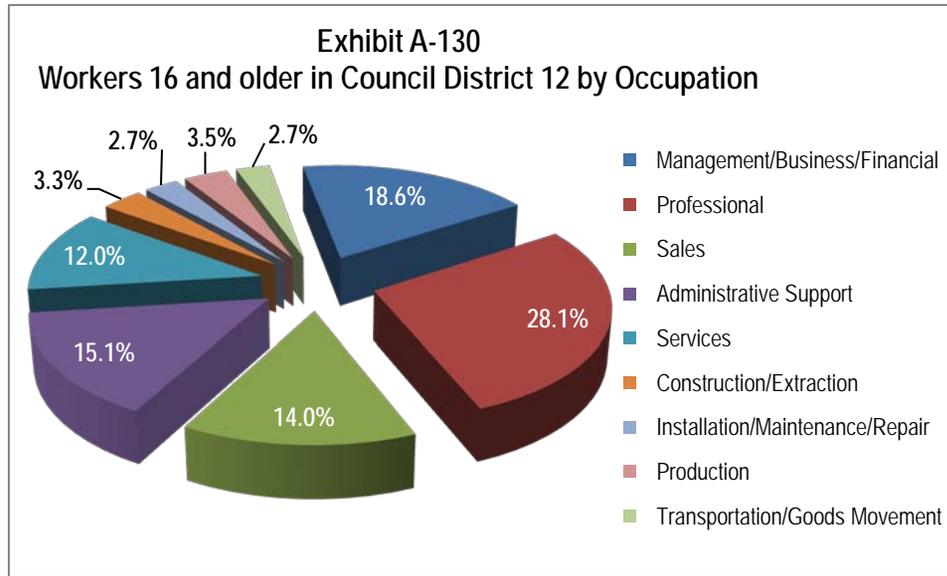


Exhibit A-129
Educational Attainment of Population 25 Years and Older (2010) Council District 12

	Number	% of total
No High School Diploma	19,841	11.2
High School Graduate	39,151	22.1
Some College, No Degree	36,317	20.5
Associate Degree	13,641	7.7
Bachelor's Degree	46,061	26.0
Graduate / Professional Degree	22,145	12.5
Total	177,156	100.0



Council District 13

Exhibit A-132
Council District 13 of the City of Los Angeles

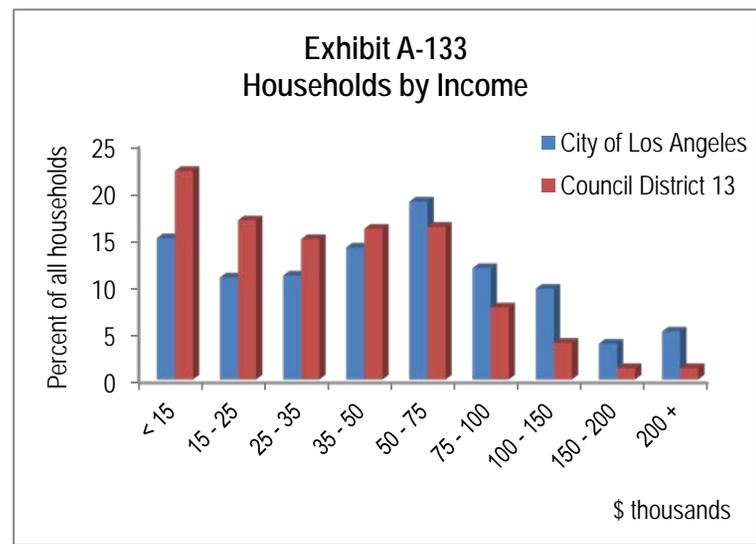
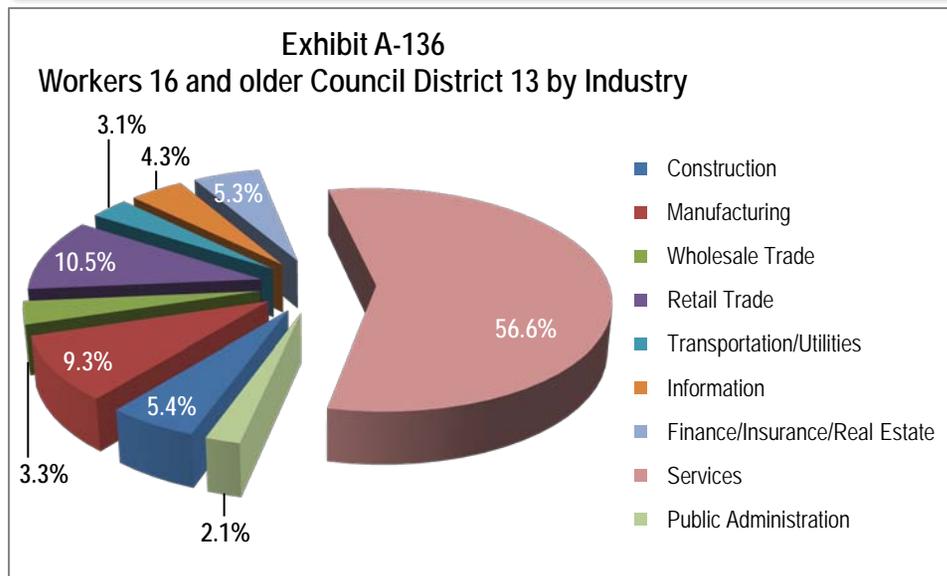
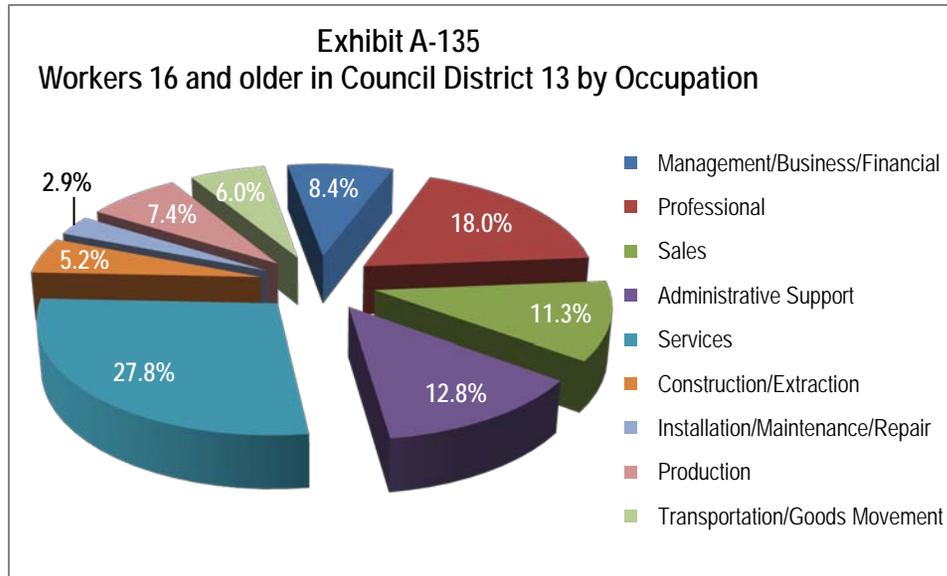


Exhibit A-134
Educational Attainment of Population 25 Years and Older (2010) Council District 13

	Number	% of total
No High School Diploma	59,026	37.2
High School Graduate	34,273	21.6
Some College, No Degree	22,214	14.0
Associate Degree	8,727	5.5
Bachelor's Degree	24,912	15.7
Graduate / Professional Degree	9,362	5.9
Total	158,673	100.0



Council District 14

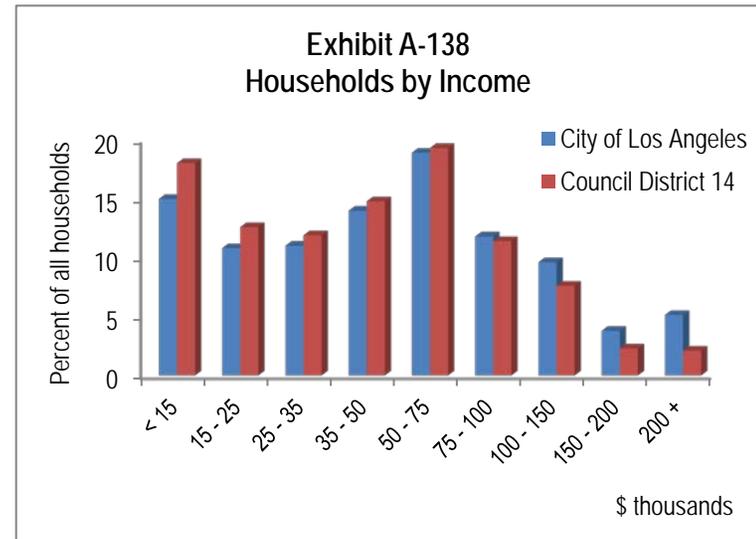
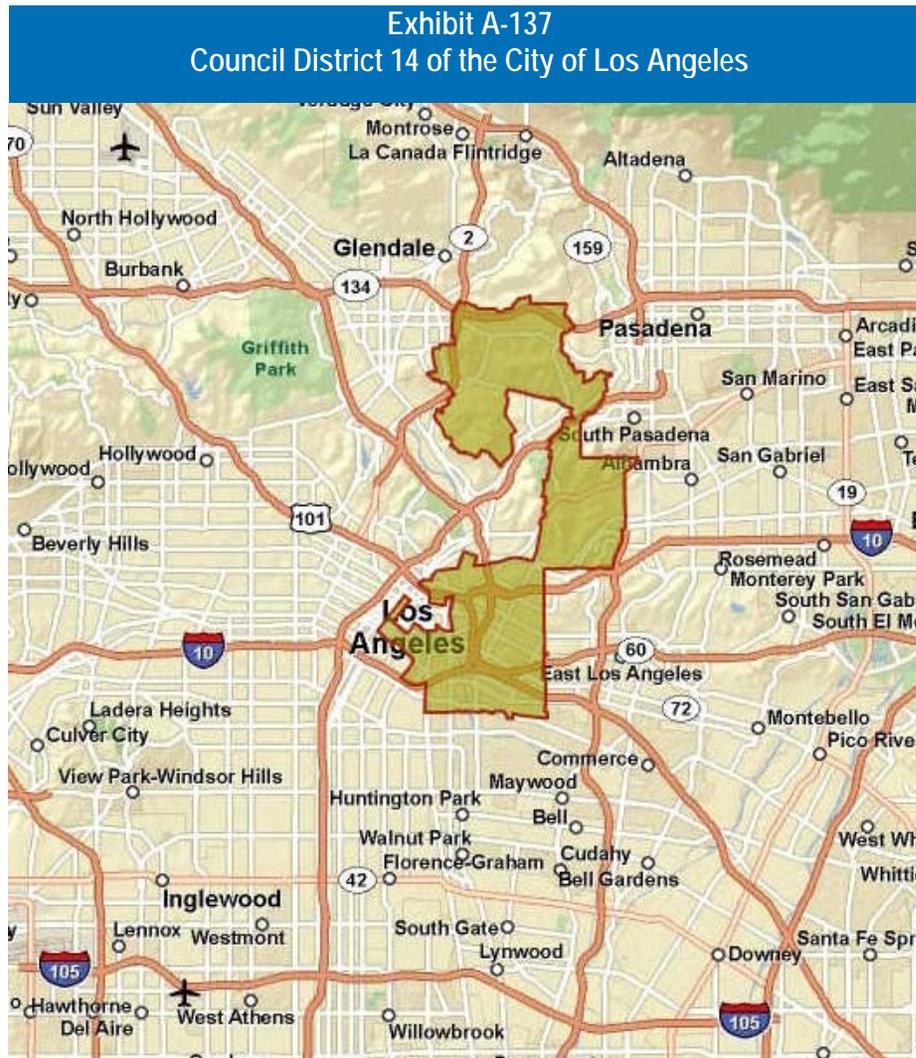
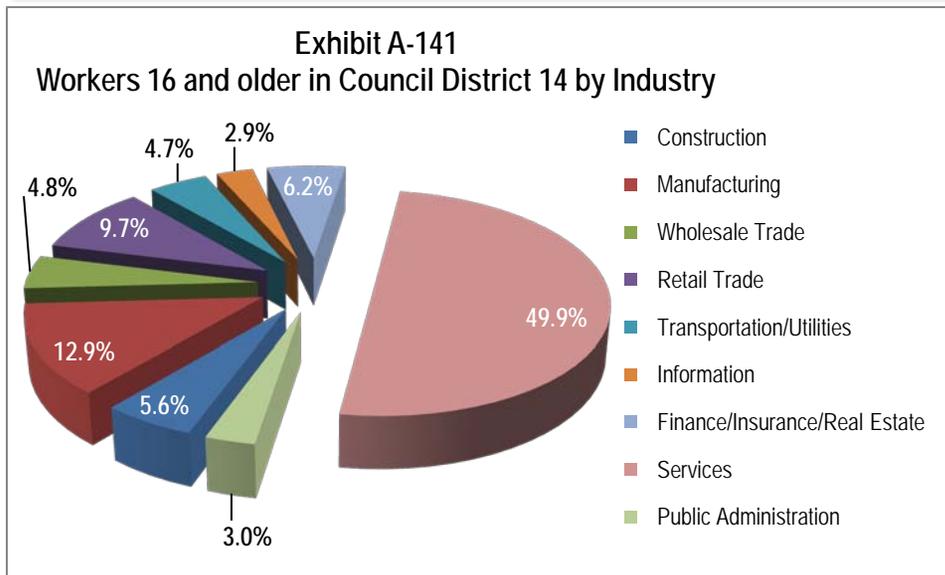
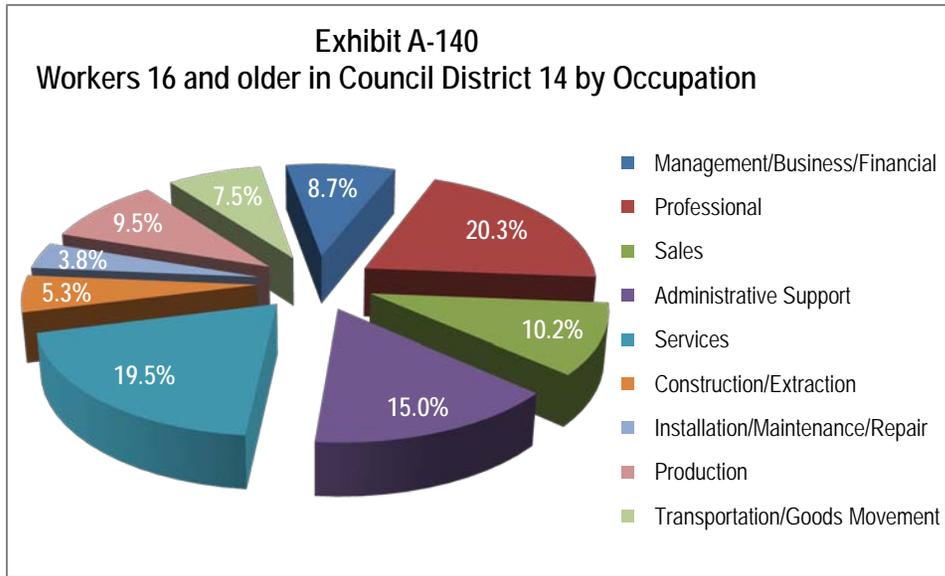


Exhibit A-139
Educational Attainment of Population 25 Years and Older (2010) Council District 14

	Number	% of total
No High School Diploma	59,093	40.1
High School Graduate	32,420	22.0
Some College, No Degree	21,810	14.8
Associate Degree	7,516	5.1
Bachelor's Degree	18,126	12.3
Graduate / Professional Degree	8,252	5.6
Total	147,364	100.0



Council District 15

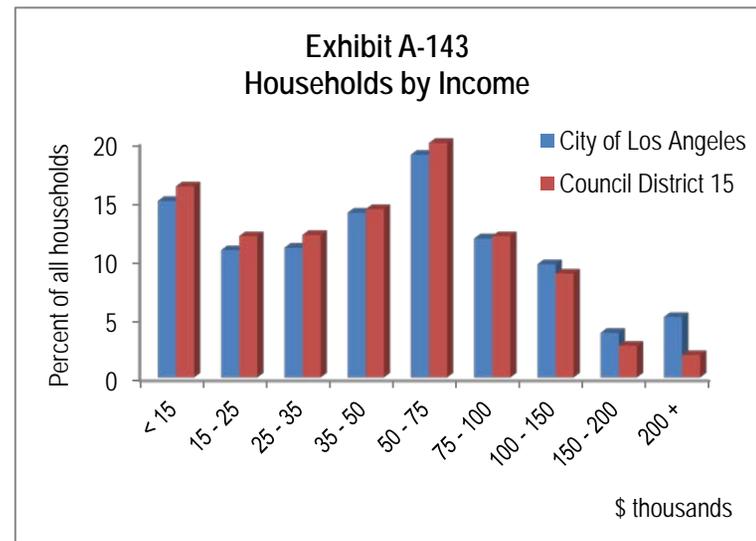
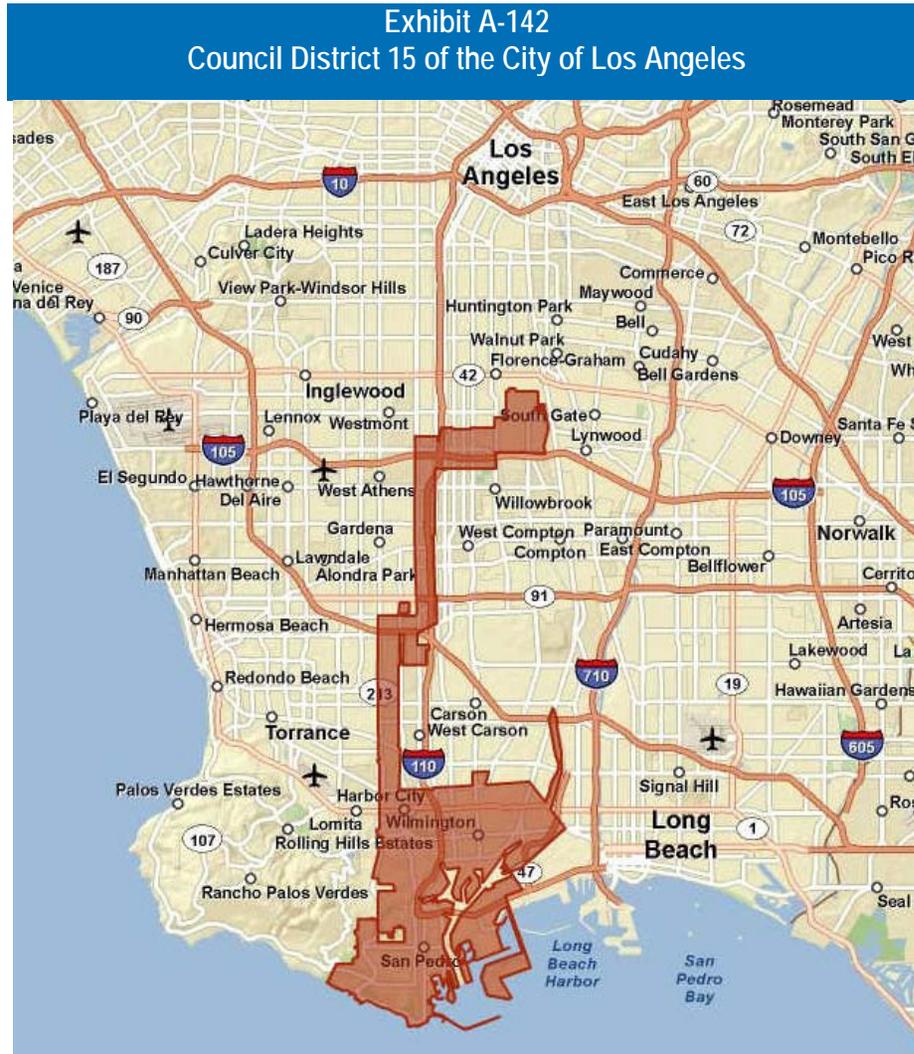
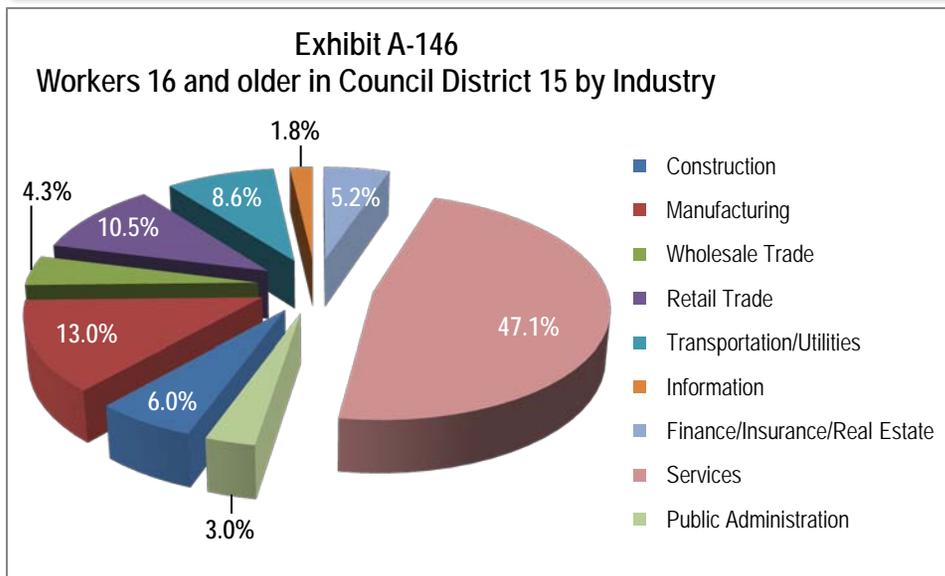
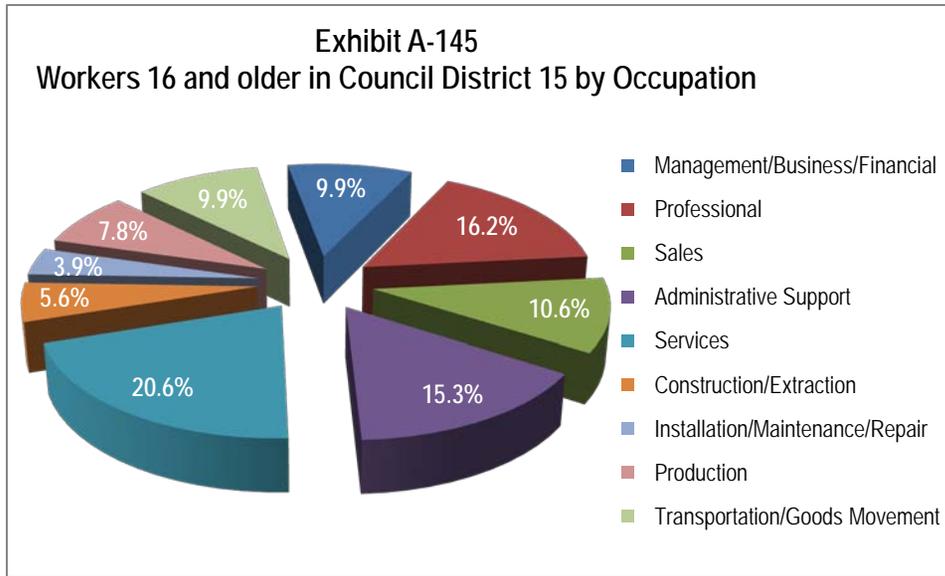


Exhibit A-144
Educational Attainment of Population 25 Years and Older (2010) Council District 15

	Number	% of total
No High School Diploma	52,953	34.6
High School Graduate	40,251	26.3
Some College, No Degree	26,171	17.1
Associate Degree	8,877	5.8
Bachelor's Degree	16,988	11.1
Graduate / Professional Degree	7,958	5.2
Total	153,044	100.0





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