

Southeast Los Angeles County Defense Adjustment Strategy: *An Integrated Strategy for Action*

November 1996

Economic Roundtable sections excerpted from the original report:
PART C: Regional Industry Job Trends
PART D: Displaced Aerospace/Defense Worker Strategies (with Appendices)
PART E: Aerospace/Defense Subcontractor Strategies

**ECONOMIC
ROUNDTABLE**

A Nonprofit, Public Policy Research Organization

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About this Report

The SELAC Defense Adjustment Strategy is designed to help address the challenges facing the Southeast Los Angeles County Economic Development Alliance (SELAC EDA), composed of the cities of Commerce, Downey, Lakewood, Montebello, Paramount, Pico Rivera, Santa Fe Springs, Whittier and the County of Los Angeles, in the wake of cutbacks in defense spending. These cutbacks have caused key parts of the SELAC economy, including the aerospace/defense sector, to become displaced or disconnected from markets and other parts of the region's economy.

New opportunities need to be found for displaced aerospace/defense workers who, in many instances, are too specialized to find work in other industries and almost certainly cannot find work at their old salary levels. The numerous subcontractors, once supported by the aerospace/defense sector, need new markets as orders from the defense sector vanish. New and viable uses need to be found for manufacturing sites across the region, abandoned by defense and aerospace companies who no longer have a market for their product.

As these economic forces play out in the region's economy, important questions arise. How will Southeast Los Angeles "earn its living" in the future as defense contract continue to shrink? What kind of new industries will be formed to replace those at risk due to aerospace/defense cutbacks and economic restructuring? Where will the jobs come from for the next generation of job seekers? These are among the questions driving the Defense Adjustment Strategy, an action-oriented program to be designed and implemented by local leaders in response to the economic challenges facing Southeast Los Angeles County.

This study was prepared under contract with the Community Development Commission of the County of Los Angeles with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the County of Los Angeles and does not necessarily reflect the views of the Office of Economic Adjustment.

For More Information

Because this project was designed to be action-oriented, there are several ways that individuals can participate directly in implementing the Defense Adjustment Strategy. For more information please contact:

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Executive Summary

Mission

In January, 1995 the County of Los Angeles and the cities of Commerce, Downey, Lakewood, Montebello, Paramount, Pico Rivera, Santa Fe Springs and Whittier, working cooperatively as the Southeast Los Angeles County Economic Development Alliance (SELAC Alliance), acted to create an economic adjustment strategy to address the problems caused by defense downsizing in Southeast Los Angeles County. This report contains the findings, analysis and action plan for the SELAC Alliance Defense Adjustment Strategy.

Background

In the past twenty years, Southeast Los Angeles (SELAC), an area equal to some of America's largest metropolitan areas, has suffered an industrial decline that is destabilizing the fabric of the region. SELAC has been the manufacturing core of Los Angeles County since the 1920s. It suffered through the collapse of the heavy manufacturing sector in the late 1970s and early 1980s, and is now suffering an on-going decline of employment in aerospace and other defense-dependent durable manufacturing industries.

A snapshot of the region illustrates its problems:

- SELAC is the only region with less jobs today than in 1983 among the 13 Southern California Association of Governments (SCAG) subregions in Southern California.
- Per capita income in the SELAC region is much lower than the rest of Southern California and at the bottom of the Pacific West.
- SELAC population is increasing at more than 1.5 times the national average.
- Over 40 percent of adults lack a high school diploma.
- SELAC has the lowest percentage of college graduates among the major metropolitan areas in the West.

Problem

The key problem in SELAC is the region-wide dislocation of workers, firms and major sites from regional and external markets.

SELAC accounts for nearly 20 percent of all jobs in the County, and is the leader in manufacturing. In 1992, SELAC had 37 percent of the county's manufacturing jobs, representing 29 percent of total employment in the SELAC region. However, these manufacturing jobs have disappeared in unprecedented numbers. From 1988 and 1994, 259,000 manufacturing jobs -- nearly 30 percent of the total -- disappeared in Los Angeles County. These losses were concentrated in the durable manufacturing industries -- including aircraft production -- that had made SELAC their home.

SELAC has been especially hard-hit by aerospace decline because of the concentration of employment in defense-related industries. Aerospace employment collapsed 60 percent from 1988 to 1995. The value of publicly disclosed defense contracts to firms in Los Angeles County declined -- adjusted for inflation and labor productivity -- 59 percent from 1987 to 1994. Twenty-nine percent of Los Angeles County's displaced aerospace workers reside in SELAC, making it the most severely impacted region in the county.

A broad profile of SELAC aerospace workers reveals substantial problems:

- SELAC residents -- because of concentration in manufacturing --are concentrated in machine operator and precision production occupations that face wage deflation as much as 50 percent when moving to non-aerospace/defense jobs.
- Half of displaced workers have only a high school degree; one fifth are not high school graduates.
- Displaced workers are typically mature adults: 40 percent are 45 years of age or older.
- Minorities are nearly two-thirds of aerospace workers.
- In 1994-95, there were roughly three aerospace workers for every job opening with similar skills.
- Average wage for job openings in similar occupations was less than one-third aerospace salaries.

The harsh realities are that displaced aerospace/defense workers stand little chance in getting another job in this field; jobs in similar fields are limited; and pay for alternative jobs is much less.

A profile of the aerospace/defense industry in Los Angeles County is equally as disturbing:

- Almost sixty percent of defense industry revenue for the County is associated with two aircraft productions programs, the B-2 and C17. Once these two remaining aircraft programs end -- and the last B-2 is scheduled for 1997 -- the military aircraft industry may no longer exist in Los Angeles County.
- Firms receiving DOD prime contracts fell from 1557 to 939 from 1987 to 1994.
- The top three firms account for nearly two thirds of DOD revenue.
- There is no longer a missile industry in Los Angeles County.
- A disproportionate amount of defense funds are subcontracted to regions outside the County.
- A profile of existing and potential sites reveals enormous industrial capacity:
- A 200+ acre Northrop Grumman site in Pico Rivera, due to be vacated by 1998, that generates approximately 11 percent of the city's direct revenue, and employs nearly 4,000 workers.
- A 212+ acre NASA/Rockwell site in Downey that employs nearly 3,200, and may be vacated by 2000, based on Rockwell's unsuccessful attempt for the X33 project.
- A 19+ acre Rockwell site in Lakewood, including a 180,000 s/f building, vacant since 1992.
- Twenty-six additional sites in five other cities, with many over 20 acres and with good access to transportation.

SELAC Assets

SELAC is the big-shoulders region of Los Angeles County. It has enormous but underutilized assets. Those assets include:

- Over 1.7 million residents,
- One of every seven jobs in Southern California.
- The largest industrial base in the Pacific West: over 250 million square feet.

- The Ports of Long Beach and Los Angeles: together, the third largest in the world.
- The Alameda Corridor Project: the largest economic development public works project in the West.

These assets, fully engaged, can make SELAC the economic engine of Los Angeles County and Southern California. However, SELAC's key problem -- the region-wide dislocation of workers, firms and major sites from regional and external markets -- has compromised its principal economic assets.

Challenge

While SELAC is a large and vibrant economy in its own right, its business character and success are linked with the broader Los Angeles County region. The Los Angeles County region has the richest portfolio of industry clusters in the United States. However, the SELAC portfolio of clusters is not as strong.

The core problem for SELAC is that some of its most important clusters are manufacturing-based, which suffered the brunt of the latest recession. These key SELAC clusters are the area's historical strength but are no longer growing. For example, the aerospace/defense cluster, the fourth most important in SELAC, is eight times more concentrated in SELAC than in the rest of the United States, and twice as concentrated in SELAC as in Los Angeles County, but is expected to continue to decline by 2.8 percent in the next decade.

The challenge for SELAC is to revitalize its inherent industrial capacity for future growth. To do so, it must evolve its portfolio of clusters into the next generation economy to create new industries, new jobs, and reuse vacant sites. Assisting clusters means building the region's economic infrastructure to encourage new firms to locate and help existing firms to expand.

Defense Adjustment Strategic Plan

The current economic deterioration in SELAC is region wide, spilling beyond the borders of the SELAC Alliance. To respond to that deterioration, the entire SELAC region must mount a regional and coordinated response that engages both public and private sectors in meaningful and long-term cooperation. The comprehensive analysis of the SELAC industry clusters made by this report can act as the catalyst that identifies and orchestrates effective adjustment strategies. A cluster-connection process that links the defense economy participants -- workers, subcontractors and primes -- to the civilian marketplace will assist SELAC to adapt to current and new economic challenges.

To implement the SELAC Alliance Defense Adjustment Plan, the regional cooperative effort should concentrate on five areas:

- Cluster Support, to build and enhance SELAC clusters, including aerospace/defense, and assist their transition to the next generation economy;
- Workforce Transition, to assist the transition of aerospace/defense workers to employment opportunities in other clusters;
- Market Development, to assist aerospace/defense subcontractors connect to new markets; and
- Site Reuse, to assist in the reuse of underutilized aerospace/defense sites.
- Technology Innovation, to facilitate adaptation of SELAC defense technologies to commercial applications.

As significant first steps, the SELAC region has embarked on creating both public and private sector mechanisms for regional response. The public sector mechanism is a Council of Governments that connects all 28 local governments (27 cities and the County). In September, the Gateway Cities Council of Governments was formally created after adoption of the Joint Powers Agreement by a majority of the SELAC city councils.

The public/private mechanism will be the Gateway Cities Partnership, Inc., a nonprofit economic development nonprofit organization. The overall charge of the Gateway Cities Partnership, Inc., supported by the Council of Governments, will be to mobilize and manage long and short term initiatives for regional economic development. Its responsibilities will include the five regional efforts of concentration: cluster support, workforce transition, market development, site reuse and technology innovation. A detailed description of its proposed organization and duties is provided in Part A: SELAC Alliance Defense Adjustment Strategy.

The Southeast Los Angeles County Defense Adjustment Strategy recommends the adoption of the following specific initiatives, as well as the more general initiatives explained in greater detail in Part A:

Regional Development

- Establish the Gateway Cities Partnership, Inc., the nonprofit economic development arm of COG.
- Establish a Gateway Cities Regional Marketing Program.
- Secure participation in a federally-funded Metropolitan Economic Strategy initiative.

International Trade

- Relocate Bureau of Export Administration offices from Newport Beach to SELAC.
- Establish an Internet-based export assistance program for SELAC businesses, modeled after LATrade

Finance

- Establish an Internet-based searchable databases of finance programs for use by all SELAC cities to facilitate matching of firms with capital.
- Establish a SELAC Capital Access Program to provide a local source of accessible financing for small and medium businesses.

Infrastructure

- Secure funding to establish a \$3 million SELAC Infrastructure Development Fund to provide a source of capital improvement funding for major aerospace/defense sites.
- Secure planning funds and coordinate with JPAs and Corridor cities for a study of Alameda Corridor on/off nodes to service transportation industry.
- Work to establish State-guaranteed \$500 million Infrastructure Development bond program for defense industry facilities and closed military bases in California to assist local jurisdictions raise adequate funds for major capital improvement projects.
- Perform assessment of telecommunication network in SELAC (cable, telephone, fiber) as prelude for a plan to establish coordinated network, including undeserved areas, for superhighway connections.
- Secure funding for engineering/architectural/RFP reuse plans for Northrop-Grumman, NASA-Rockwell and Rockwell sites.
- Secure fair share of Department of Transportation, CALTRANS and MTA transport dollars for region.

Environment

- Develop Pico Rivera/Montebello spreading fields as regional recreation and conservation center.
- Ensure SELAC receives fair share of Santa Monica Conservancy funding.

Training/Retraining

- Secure fair share of \$18 million Department of Labor aerospace grant.
- Secure Department of Labor approval for vouchers for dislocated workers.
- Reformulate Private Industry Councils to work with city and regional economic development efforts.
- Develop/maintain an inventory of job training programs.
- Connect community college training programs with manufacturing clusters.

Industrial Development

- Secure an EPA brownfields grant for prototype industrial redevelopment project.
- Establish a parcel level GIS database of commercial/industrial land.
- Secure funding for regional planning for location of freight/warehousing facilities for greatest economic development impact with least environmental impact.

Business Development

- Assess potential to establish additional economic development incubators (joining Long Beach Enterprise Center and Los Angeles County Incubator Network) for cluster development.
- Establish regional clearinghouse for new business referrals.
- Continue to support ongoing cluster support activities.

- Establish SELAC Task Force to study and implement common permit/license registration system for all 27 cities.
- Develop an Air Quality Management District (AQMD) subregion strategy on pollution mitigation.
- Develop private/public regional Red Teams to help secure major defense contracts for aerospace companies.
- Secure a permanent site and funding mechanism for the SELAC Small Business Development Center.

Conclusion

The SELAC Alliance and the entire SELAC region can propelled itself into the next century with its historical cluster base revived and poised to expand. SELAC can adjust to the debilitating effects of aerospace/defense downsizing. SELAC can forge a public/private sector partnership to create a business climate that nurtures start-ups and spinoffs, encourages business retention, and promotes economic development.

To do so, SELAC must act regionally, not just locally; it must take an active role in building and enhancing its clusters; it must leverage and adapt its economic infrastructure; and it must collaborate to compete. SELAC has the economic assets -- a talented workforce, a committed public sector, and a willing and forceful private sector -- to create a regional economic renaissance. The keys to success will be the region's commitment to action and change.

Part C: Regional Industry Job Trends

Introduction

This chapter analyzes historical trends in employment and earnings in Southeast Los Angeles County (SELAC) and Los Angeles County as a whole. The chapter is organized in two sections with the first providing a profile of the labor market in Los Angeles County. This profile examines the employment and earnings trends of key industries, including Aerospace and Durable Manufacturing, in Los Angeles County

The second section provides industry employment and payroll profiles for subregions of Los Angeles County (referred to as the county). These subregions include SELAC (and the member cities of the Southeast Los Angeles County Economic Alliance), South Bay, Westside/Hollywood/Mid-City/Downtown, San Gabriel Valley, San Fernando and Santa Clarita Valleys, and Antelope Valley (North County).

Summary of Findings About Industry Job Trends

- Trends in Los Angeles County's manufacturing employment have been determined by trends in aerospace employment. Between 1977 and 1994, employment in the non-durable manufacturing industries was relatively stable, as declines in some industries were offset by gains in other industries (e.g., apparel). In contrast to this stability, employment change in the durable manufacturing industries followed employment change in aerospace. In 1992, the aerospace industry employed 22 percent of the county's manufacturing workers; and 38 percent of the workers in durable manufacturing industries.
- The decline of employment in aerospace and other durable manufacturing industries has contributed to increased polarization of jobs and incomes in Los Angeles County. In the manufacturing sector, this trend is highlighted by the emergence of the low-wage Apparel and Textiles industry. In the non-manufacturing sectors, this trend is seen in the importance of both high-wage industries such as Health Services, Motion Pictures, and Finance and low-wage industries such as Eating and Drinking Places, Business Services, and Wholesale and Retail Trade.
- The most salient fact about SELAC's employment structure is the importance of manufacturing. In 1992, manufacturing industries employed 263,900 workers in the SELAC subregion. This was 37 percent of the county's manufacturing employment, and 29 percent of total employment in Southeast Los Angeles County.
- Aerospace firms in the SELAC subregion employed 54,900 workers in 1992, or 35 percent of total county employment in aerospace.

- Communities in Southeast Los Angeles County have been especially hard-hit by the decline of aerospace and durable manufacturing industries, due to the relatively high concentration of employment in defense-linked industries.

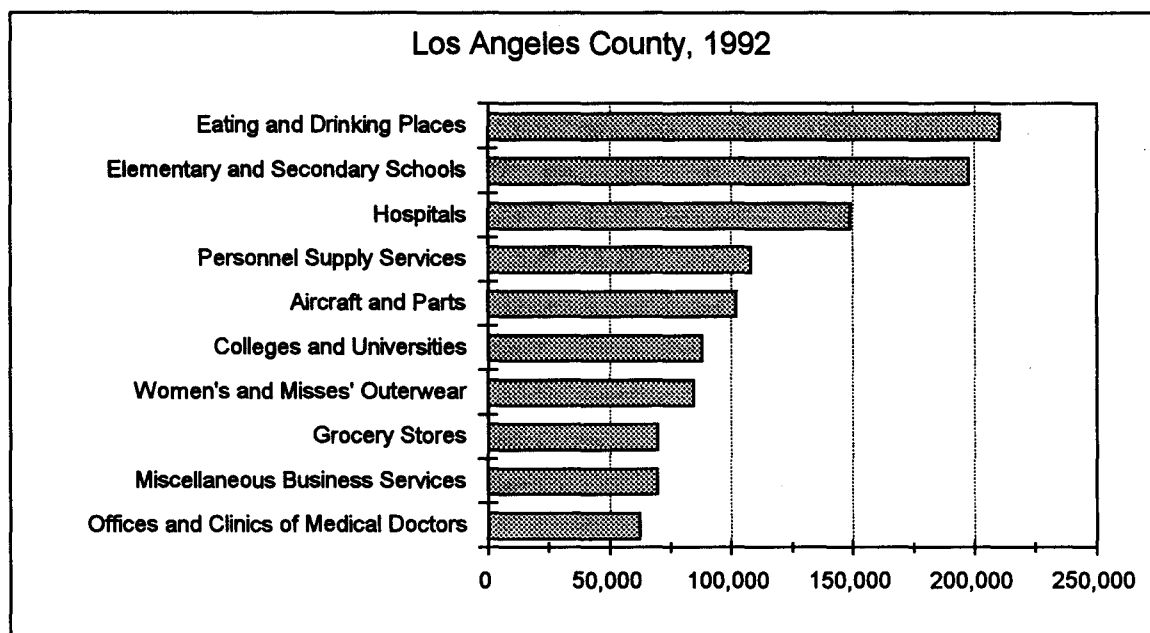
Los Angeles County Labor Market Profile

Employment and Earnings Profile of Los Angeles County

A total of 3,648,400 workers were employed in Los Angeles County in 1992 (Table C-1). Manufacturing industries employed 714,100 workers, 19.6 percent of total employment. This included 158,200 employees in the aerospace industry, and 122,200 employees in the Apparel and Textiles industry. A total of 468,300 workers were employed in the Wholesale and Retail Trade industries (12.8 percent of total county employment), followed by 298,700 workers in Educational Services (8.2 percent of total county employment); 294,300 workers in Health Services (8.1 percent); 254,900 workers in Business Services (7.0 percent), 248,900 workers in Transportation, Communications, and Utilities (6.8 percent); and 241,900 workers in Finance, Insurance, and Real Estate (6.6 percent).

Figure C-1 shows the 3-digit SIC industries with the highest employment. One in five workers in the county are employed in the following five industries: Eating and Drinking Places (209,500 workers); Elementary and Secondary Schools (197,300); Hospitals (148,700); Personnel Supply Services (107,600); and Aircraft and Parts (101,900).

Figure C-1
Industries With Highest Employment



Source: California EDD, Labor Market Information Division

Table C-1
Employment and Payroll by Industry
Los Angeles County, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	158,224	4.3%	\$7,302,942,436	6.7%	\$46,156	155
Computers, Electronics, Instruments	46,482	1.3%	\$1,751,840,372	1.6%	\$37,689	126
High Technology	204,706	5.6%	\$9,054,782,808	8.3%	\$44,233	148
Metals and Metal Products	62,283	1.7%	\$1,736,713,396	1.6%	\$27,884	94
Industrial Machinery	35,089	1.0%	\$1,118,681,000	1.0%	\$31,881	107
Transportation Equipment (Non-Aerospace)	20,014	0.5%	\$608,995,900	0.6%	\$30,428	102
Electrical and Communications Equipment	27,690	0.8%	\$910,832,668	0.8%	\$32,894	110
Durable Manufacturing	414,548	11.4%	\$15,061,966,160	13.8%	\$36,333	122
Food Products	48,065	1.3%	\$1,447,846,452	1.3%	\$30,123	101
Apparel and Textiles	122,183	3.3%	\$1,909,505,804	1.8%	\$15,628	52
Printing and Publishing	54,172	1.5%	\$1,765,995,228	1.6%	\$32,600	109
Chemicals, Petroleum, Rubber, Plastics	56,509	1.5%	\$1,880,406,696	1.7%	\$33,276	112
Non-Durable Manufacturing	299,626	8.2%	\$7,563,130,544	7.0%	\$25,260	85
Manufacturing	714,074	19.6%	\$22,625,096,704	20.8%	\$31,685	106
Transportation, Communications, Utilities	248,855	6.8%	\$9,048,074,980	8.3%	\$36,359	122
Wholesale and Retail Trade	602,519	16.5%	\$15,550,465,288	14.3%	\$23,305	78
Eating and Drinking Places	209,536	5.7%	\$2,253,204,988	2.1%	\$10,753	36
Finance, Insurance, Real Estate	241,893	6.6%	\$8,701,490,780	8.0%	\$35,972	121
Business Services	254,910	7.0%	\$5,592,657,448	5.1%	\$21,940	74
Motion Pictures	66,706	1.8%	\$3,618,225,860	3.3%	\$54,241	182
Health Services	294,259	8.1%	\$9,908,415,004	9.1%	\$33,672	113
Educational Services	298,656	8.2%	\$8,305,599,116	7.6%	\$27,810	93
Engineering and Management Services	97,214	2.7%	\$3,771,110,764	3.5%	\$38,792	130
ALL INDUSTRIES	3,648,436		\$108,761,790,636		\$29,811	100

Source: California EDD, Labor Market Information Division

Contribution of Aerospace and Durable Manufacturing to Total Annual Payroll

Durable manufacturing industries in general, and the aerospace industry in particular, provide relatively well-paying jobs to Los Angeles County workers (the low-wage Furniture and Fixtures industry is a notable exception).

In 1992, the average annual earnings of workers in Durable Manufacturing industries was \$36,333, which was 22 percent higher than the average annual earnings of all county workers (\$29,811). The average annual earnings of aerospace workers were \$46,200, 55 percent higher than the county average. Therefore the contribution of durable manufacturing and aerospace to

total payroll in Los Angeles County and its communities is substantially greater than their contribution to total employment. In Los Angeles County, durable manufacturing industries contributed \$15.1 billion to the total county payroll of \$108.8 billion, or 14 percent of the total county payroll, while accounting for 11 percent of total county employment. The aerospace industry contributed \$7.3 billion, or 7 percent of the total county payroll, and employed 4 percent of the county's workers. As significant as job loss has been in the aerospace industries, it understates the lost payroll in communities such as those in Southeast Los Angeles County that have been centers of aerospace production.

The importance of aerospace and other durable manufacturing industries to the county payroll can be highlighted by comparing their contribution to payroll with that of the low-wage Apparel and Textiles industry. In 1992 the Apparel and Textiles industry employed 122,200 workers, over 3 percent of total county employment. However, with an average annual payroll of only \$15,600 (52 percent of the county average), this industry contributed less than 2 percent of the county's total payroll. The average annual earnings of workers in the aerospace industry were three times the average annual earnings of workers in the Apparel and Textiles industry.

The contribution of aerospace and durable manufacturing industries to total payroll in Southeast Los Angeles County is quite significant. In 1992, durable manufacturing industries accounted for \$4.9 billion of the subregion's total annual payroll of \$25.5 billion, or 19 percent of the total. The aerospace industry was responsible for almost half of the durable manufacturing total, \$2.4 billion, accounting for 9 percent of SELAC's total annual payroll.

Durable manufacturing and aerospace industries were also responsible for a high proportion of total annual payroll in the South Bay and the Antelope Valley. In the South Bay, durable manufacturing industries accounted for 33 percent of total annual payroll, with the aerospace industry contributing almost one-quarter (23 percent). Durable manufacturing industries provided 30 percent of the total annual payroll in the Antelope Valley, led by the aerospace industry, which contributed 24 percent of the subregion's total annual payroll.

The decline in aerospace employment and payroll thus has the greatest impact on the south county communities in Southeast Los Angeles and South Bay, and the Antelope Valley.

Average Annual Earnings

The aerospace industry and other durable manufacturing industries are important to the economic health of Southeast Los Angeles and other parts of Los Angeles County because they provide relatively high-wage jobs. This section will evaluate the employment and payroll contribution of other high-wage, high-employment industries.

To determine high-wage, high-employment industries in Los Angeles County, all 3-digit SIC industries were ranked by average annual earnings and employment. Industries that ranked in the top fifth in both employment and earnings were classified as high-wage, high employment. How significant are these industries in the economies of Los Angeles County? Which of these industries are experiencing employment growth, and which ones are experiencing employment decline?

The top 17 high-wage, high-employment industries in 1992 are listed in Table C-2.

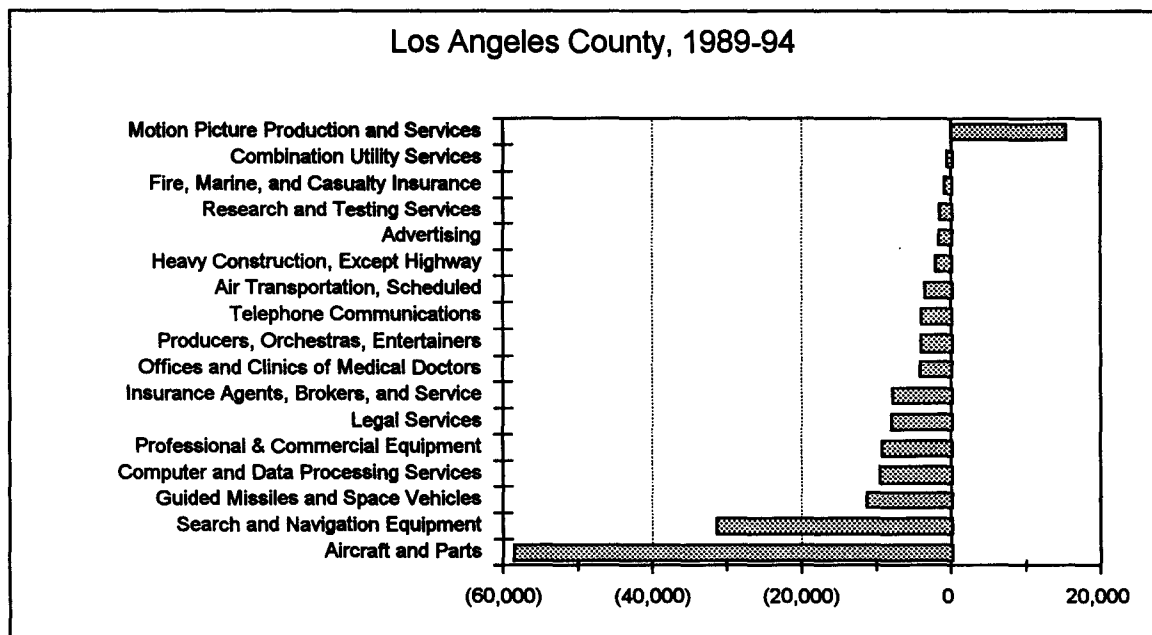
Table C-2
Los Angeles' High Employment Industries

SIC	Industry
162	Heavy Construction, Except Highway
372	<i>Aircraft and Parts</i>
376	<i>Guided Missiles, Space Vehicles, and Parts</i>
381	<i>Search and Navigation Equipment</i>
451	Air Transportation, Scheduled
481	Telephone Communications
493	Combination Utility Services
504	Professional and Commercial Equipment
633	Fire, Marine, and Casualty Insurance
641	Insurance Agents, Brokers, and Service
731	Advertising
737	Computer and Data Processing Services
781	Motion Picture Production and Services
792	Producers, Orchestras, Entertainers
801	Offices and Clinics of Medical Doctors
811	Legal Services
873	Research and Testing Services

In 1992, these industries represented 15 percent of the total employment in Los Angeles County, and 24 percent of the total annual payroll.

Figure C-2 shows job change in the 17 high-wage, high employment industries between 1989 and 1994, with almost all of these industries losing jobs, especially aerospace industries. Only the Motion Picture Production and Services industry experienced job growth during this period, adding 15,100 jobs in Los Angeles County.

Figure C-2
Job Change in Key High-Wage Industries



Source: EDD, Labor Market Information Division

Estimated Payroll Loss in Los Angeles County Due to Employment Decline in Aerospace from 1989-94

In 1992, the average annual earnings of aerospace workers was \$46,156. The average annual earnings of all workers in durable manufacturing industries was \$36,333. Between 1989 and 1994, 101,127 jobs were lost in the aerospace industry, and a total of 215,460 jobs were lost in durable manufacturing industries. Based on these figures, an estimated \$4.7 billion in payroll was lost in 1994 alone due to job loss in the aerospace industry, while \$7.8 billion in payroll was lost in all durable manufacturing industries.

Overview of Job Loss

Table C-3 ranks the major manufacturing industries in Los Angeles County in terms of employment. Of the ten manufacturing industries with the most employees in 1994, four were either aerospace (SIC 372 and SIC 381) or apparel (SIC 233 and SIC 239) industries. The Women's and Misses Outerwear industry (SIC 233) and the Aircraft and Parts industry (SIC 372) employ a nearly identical number of workers, and together accounted for 22 percent of the county's manufacturing employment in 1994. This highlights two distinct sectors of the county's manufacturing economy. The Aircraft and Parts and Search and Navigation Equipment industries are high-wage, capital-intensive aerospace industries, while the two apparel industries are low-wage, labor-intensive industries. The aerospace industries employ a large percentage of scientific, professional, and skilled production workers, while the apparel industries are based on sewing machine operators.

Also among the ten major manufacturing employers in 1994 were the Miscellaneous Plastics Products industry (SIC 308) and the Electronic Components industry (SIC 367). These industries supply molded plastics parts, semiconductors, relays, and other important parts and components to the aerospace industry.

The Newspaper industry (SIC 271) and the Commercial Publishing industry (SIC 272) are also among the major manufacturing employers in the county. Two industries that have experienced significant job loss since 1977, Motor Vehicles industry (SIC 372) and the Household Furniture industry (SIC 251), remain among the major manufacturing employers in the county.

Table C-3
Manufacturing Industries Ranked by Total Employment
Los Angeles County, 1994

SIC	Industry Title	Employment 1994	Percent of Manufacturing Employment
233	Women's and Misses' Outerwear	70,893	10.9%
372	Aircraft and Parts	70,875	10.9%
381	Search and Navigation Equipment	34,757	5.3%
308	Miscellaneous Plastics Products, NEC	23,729	3.7%
275	Commercial Publishing	19,361	3.0%
367	Electronic Components and Accessories	16,809	2.6%
271	Newspapers	14,453	2.2%
251	Household Furniture	13,986	2.2%
371	Motor Vehicles and Equipment	13,567	2.1%
239	Miscellaneous Fabricated Textile Products	13,310	2.0%
359	Industrial Machinery, NEC	12,929	2.0%
344	Fabricated Structural Metal Products	11,221	1.7%
209	Miscellaneous Food and Kindred Products	11,092	1.7%
357	Computer and Office Equipment	10,347	1.6%
347	Metal Services, NEC	9,741	1.5%
382	Measuring and Controlling Devices	8,590	1.3%
291	Petroleum Refining	8,394	1.3%
384	Medical Instruments and Supplies	8,018	1.2%
284	Soaps, Cleaners, and Toilet Goods	7,654	1.2%
205	Bakery Products	7,341	1.1%
267	Miscellaneous Converted Paper Products	7,312	1.1%
265	Paperboard Containers and Boxes	7,029	1.1%
354	Metalworking Machinery	6,746	1.0%
364	Electric Lighting and Wiring Equipment	6,636	1.0%
365	Household Audio and Video Equipment	6,540	1.0%
272	Periodicals	6,285	1.0%

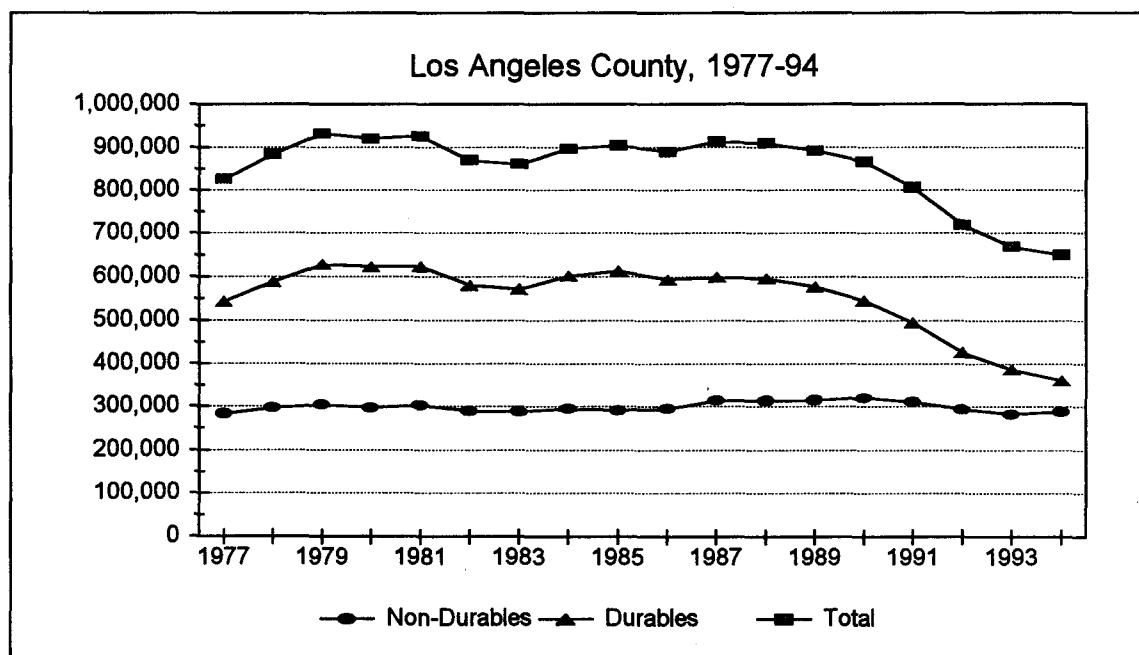
Source: California EDD, Labor Market Information Division

Figure C-3 describes trends in employment between 1977 and 1994 in Los Angeles County's manufacturing sector. Also shown are employment trends in durable manufacturing industries (dominated by High Technology, Metals, and Machinery industries), and non-durable manufacturing industries (dominated by Apparel, Printing and Publishing, Food Products, Chemicals, and Petroleum Products). For manufacturing employment as a whole, there have been four phases of employment change:

- 1) addition of over 100,000 jobs between 1977 and 1979;
- 2) stagnant employment followed by the loss of 70,000 jobs between the recession years of 1979 and 1983;
- 3) gradual increase and leveling off of employment between 1983 and 1988; and
- 4) serious decline in employment between 1988 and 1994, during which time over 250,000 jobs have been lost.

Trends in overall manufacturing employment are driven by employment change in durable manufacturing industries, particularly aerospace and other high technology industries, to which many firms in durable goods industries are linked through production networks. Employment in the diverse non-durable goods industries has hovered around 300,000 workers during the 1977-1994 period, which masks cyclical and structural growth and decline in specific industries.

Figure C-3
Manufacturing Employment

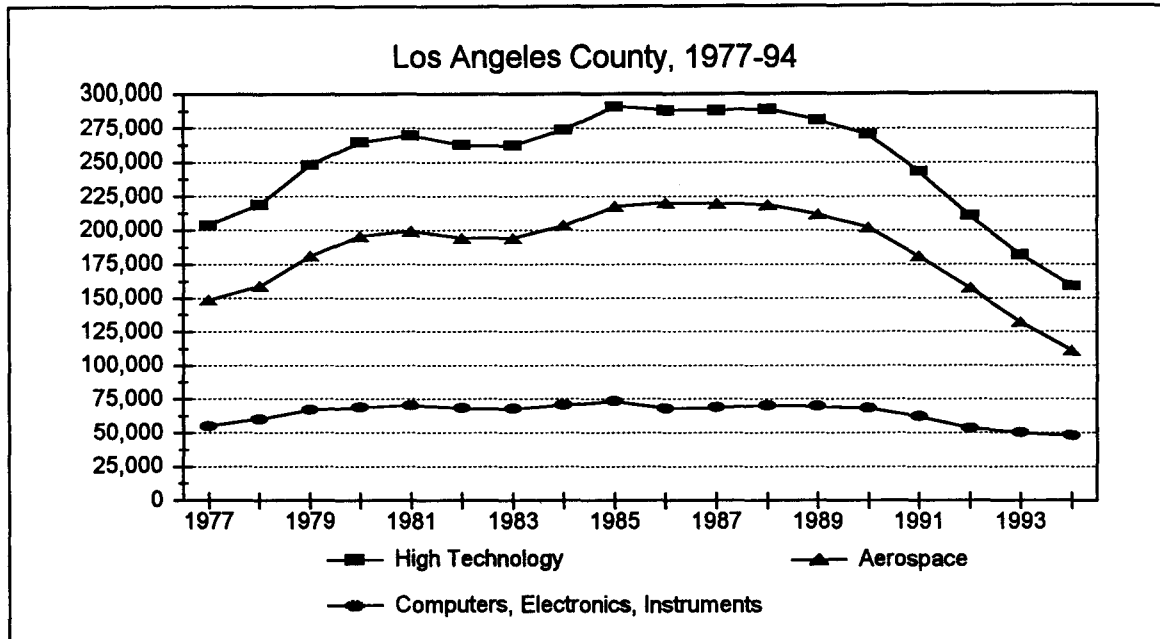


Source: California EDD, Labor Market Information Division

The dominant employment trends within the Los Angeles manufacturing sector are the following:

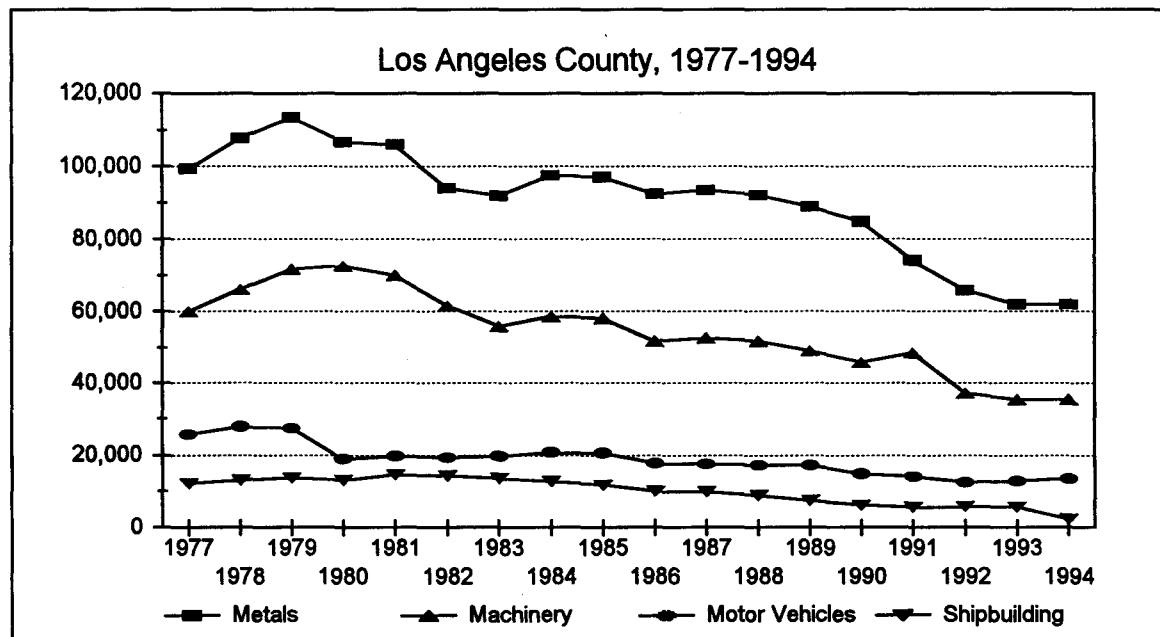
- 1) precipitous decline in employment in aerospace and related high technology industries since 1989, following a steady increase in employment during the boom in defense spending by the Reagan Administration between 1982-1988 (see Figure C-4);
- 2) steady decline in employment in most other durable manufacturing industries, including metals and machinery industries, many of which had been tied to the aerospace industry through subcontracting networks (see Figure C-5);
- 3) rapid decline in employment in traditional heavy manufacturing (e.g. Motor Vehicles and Shipbuilding) corresponding with the 1979-82 recession (see Figure C-5);
- 4) steady growth in employment in the apparel industries between 1977 and 1994 (see Figure C-6).

Figure C-4
High Technology Employment



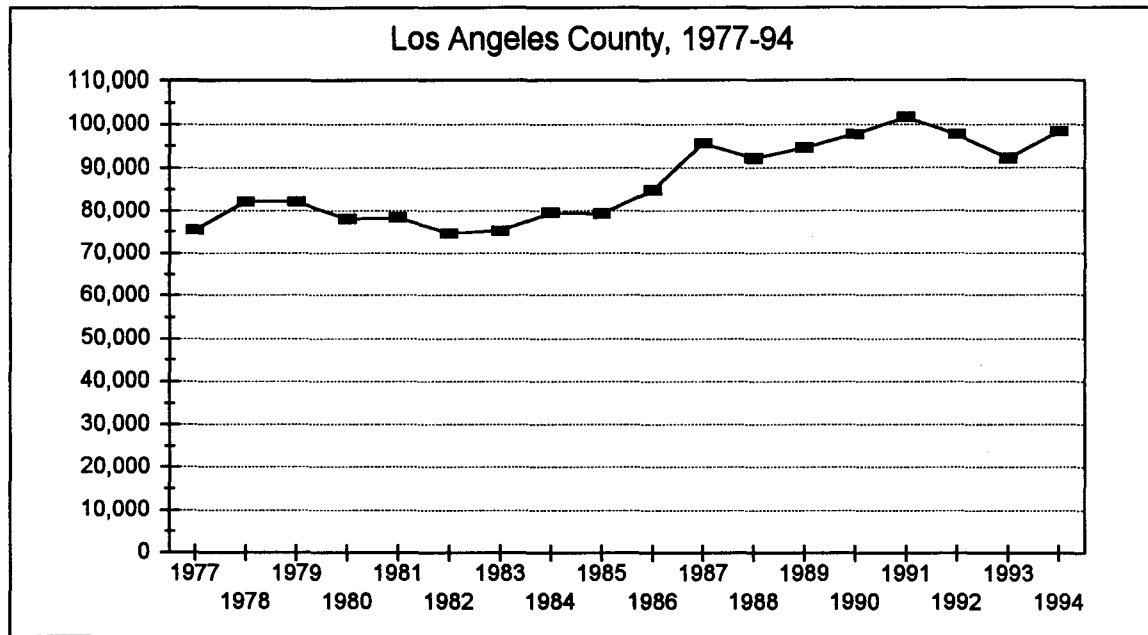
Source: California EDD, Labor Market Information Division

Figure C-5
Employment in Selected Durables



Source: California EDD, Labor Market Information Division

Figure C-6
Apparel Industry Employment



Source: California EDD, Labor Market Information Division

These trends are related to three underlying processes influencing employment change in Los Angeles manufacturing industries since the 1973-74 recession:

- 1) In the aftermath of the recession, faced with growing competition from overseas manufacturers, many US manufacturers in heavy manufacturing and related industries restructured operations by closing plants, reducing employment, and in some cases relocating production overseas. In Los Angeles, this resulted in a collapse in employment in the traditional "Rust Belt" complex of motor vehicle, tire, and steel manufacturers that were concentrated in the industrial districts of Southeast Los Angeles County, as well as the shipbuilding industry in Long Beach and Wilmington. The impact of restructuring can be seen in the decline in employment in the Motor Vehicles and Shipbuilding industries that commenced in the late 1970s and early 1980s. Between 1977 and 1994 the Motor Vehicles industry lost 12,100 workers (a 47 percent decrease in employment); and the Shipbuilding industry lost 9,700 workers (an 80 percent decrease).
- 2) The Reagan-era defense spending boom revitalized the defense-based high technology industries in Los Angeles. Led by aerospace prime contractors, the growth of the defense complex brought with it a great increase in high-wage jobs. The decline in defense spending following the collapse of the Soviet Union has precipitated a restructuring of defense firms and a significant decline in employment. These employment trends can be seen in Figure C-4, with the downward sloping curve representing the dominant trend in Los Angeles manufacturing in the last several years.
- 3) Throughout the 1980s and into the 1990s, the apparel industry has grown to become the largest employer in the Los Angeles manufacturing sector. In large part this is due to the influx of immigrants into the region willing to work for subpar wages, as well as

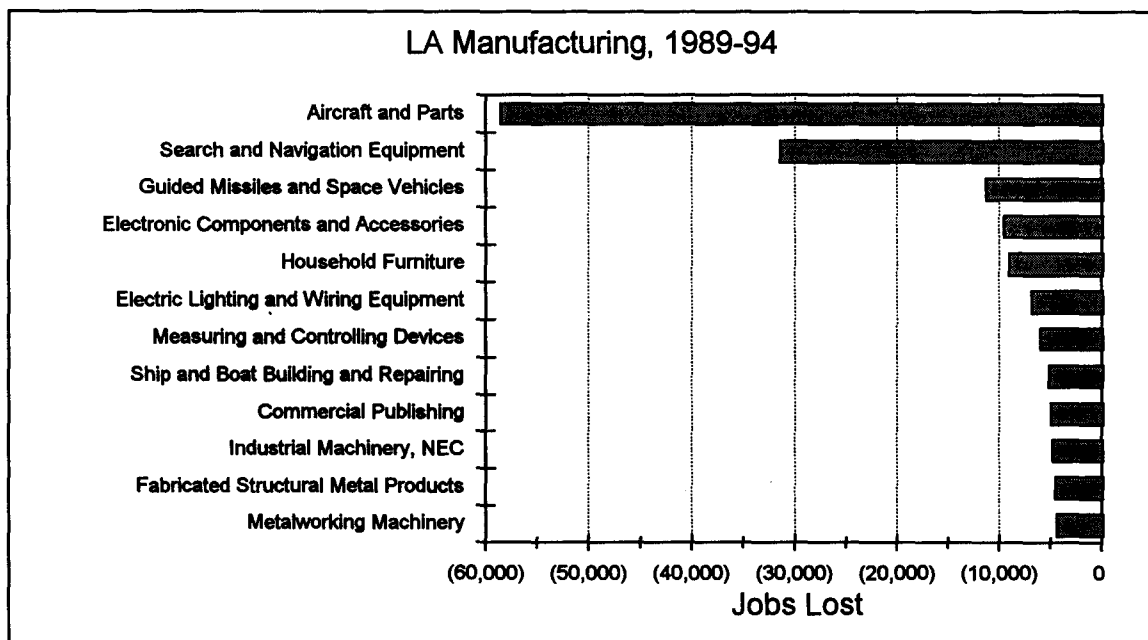
immigrant entrepreneurs who have been attracted to the Apparel industry by its low start-up costs.

The decline of high-wage aerospace industry employment and the rise of low-wage apparel industry employment underscore the deepening polarization of labor markets and incomes in Los Angeles County.

Critical Trends

The most critical employment trend in Los Angeles County has been the loss of tens of thousands of relatively well-paying jobs in aerospace and other durable manufacturing industries. Figure C-7 shows the ten manufacturing industries experiencing the greatest absolute job loss between 1989 and 1994. Except for Commercial Publishing, all of these industries are in the durable manufacturing sector. The greatest job loss occurred in aerospace industries: Aircraft and Parts (58,600 jobs lost), Search and Navigation Equipment (31,400 jobs lost), and Guided Missiles, Space Vehicles, and Parts (11,200 jobs lost). Two other high technology industries also experienced high levels of job loss: Electronic Components (9,500 jobs lost) and Measuring and Controlling Devices (6,000 jobs lost). The Industrial Machinery, NEC industry, which includes numerous job shops that subcontract with aerospace firms, lost 4,800 jobs.

Figure C-7
Industries Losing Most Jobs



Source: EDD, Labor Market Information Division

The overall rate of employment decline, as well as the absolute number of jobs lost, was extremely severe in aerospace between 1989 and 1994. The Guided Missiles, Space Vehicles, and Parts industry experienced the greatest rate of job loss, a 69 percent decline. The Search and Navigation industry lost 47 percent of its jobs, and the Aircraft and Parts industry lost 45 percent of its jobs, between 1989 and 1994. Similar rates of loss occurred in several other durable

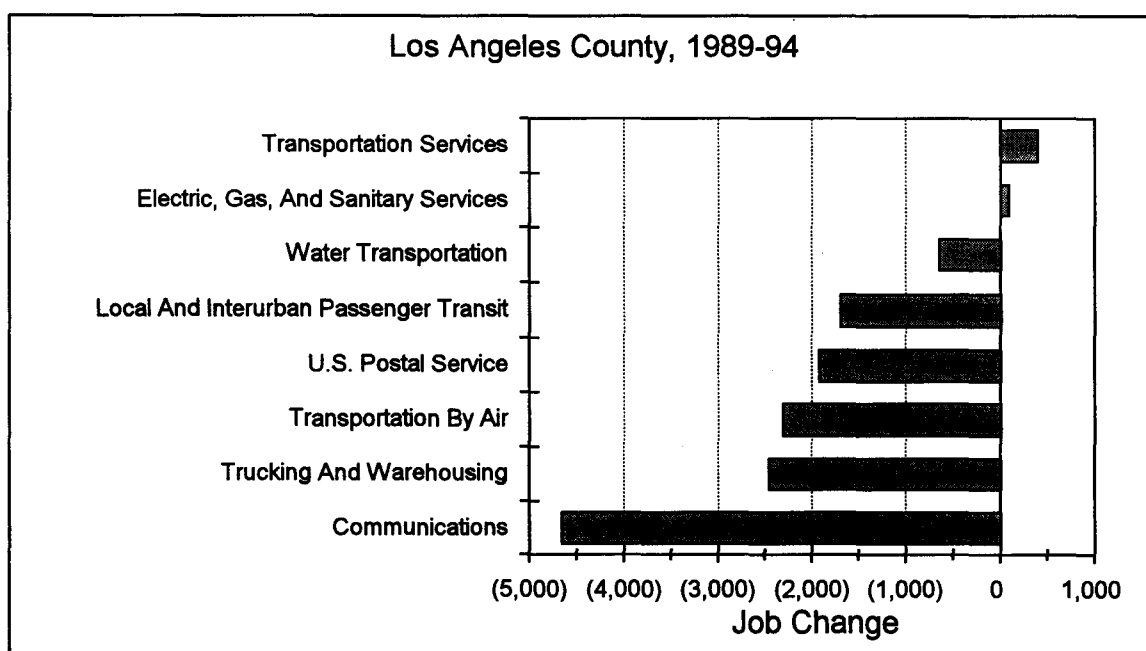
manufacturing industries. The 13 manufacturing industries experiencing the highest rates of job loss were all durable manufacturing industries; each losing at least 45 percent of their workforce between 1989 and 1994.

Outside of the goods producing sector, the services industries have experienced mixed results over the last few years.

The two major industries experiencing significant job growth were Motion Pictures (17,400 jobs added) and Social Services (9,400 jobs added). All other industries experienced employment declines, led by the Finance, Insurance, and Real Estate sectors which experienced significant job loss from 1989 to 1994, with over 18,100 jobs lost in Depository Institutions, and 12,500 people let-go in the Real Estate sector. Similar employment downturns were experienced by Business Services (12,200 jobs lost), Engineering and Management Services (10,500 jobs lost), and Hotels (10,100 jobs lost).

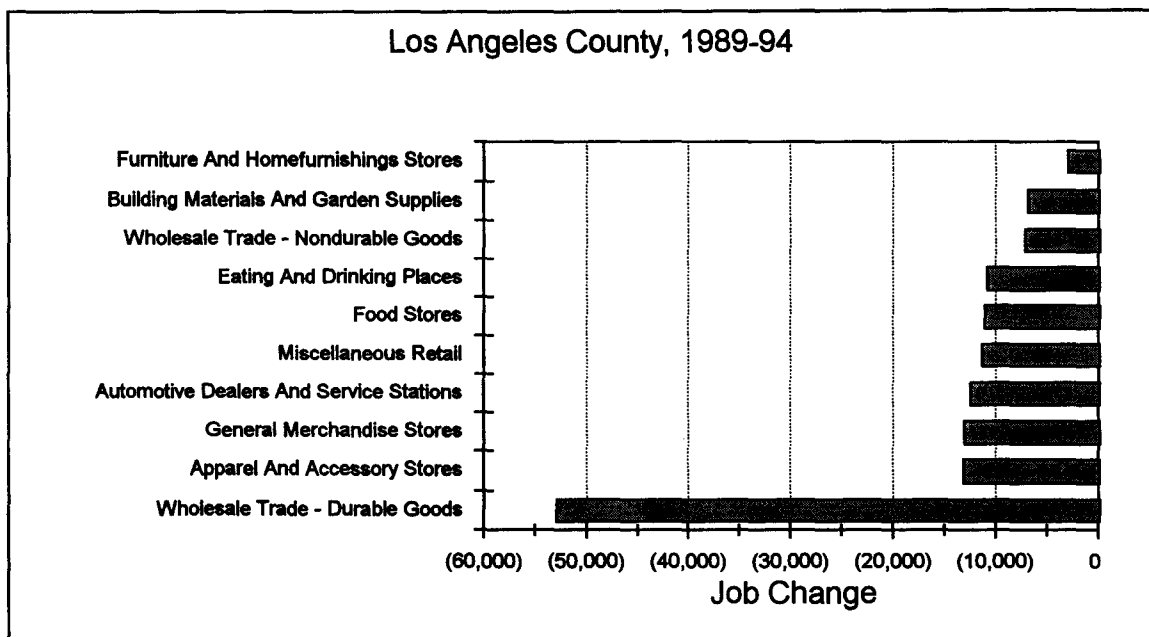
Figures C-8 through C-11 describe job change in major non-manufacturing industry groups between 1989 and 1994.

Figure C-8
Job Change in Transportation/Utilities



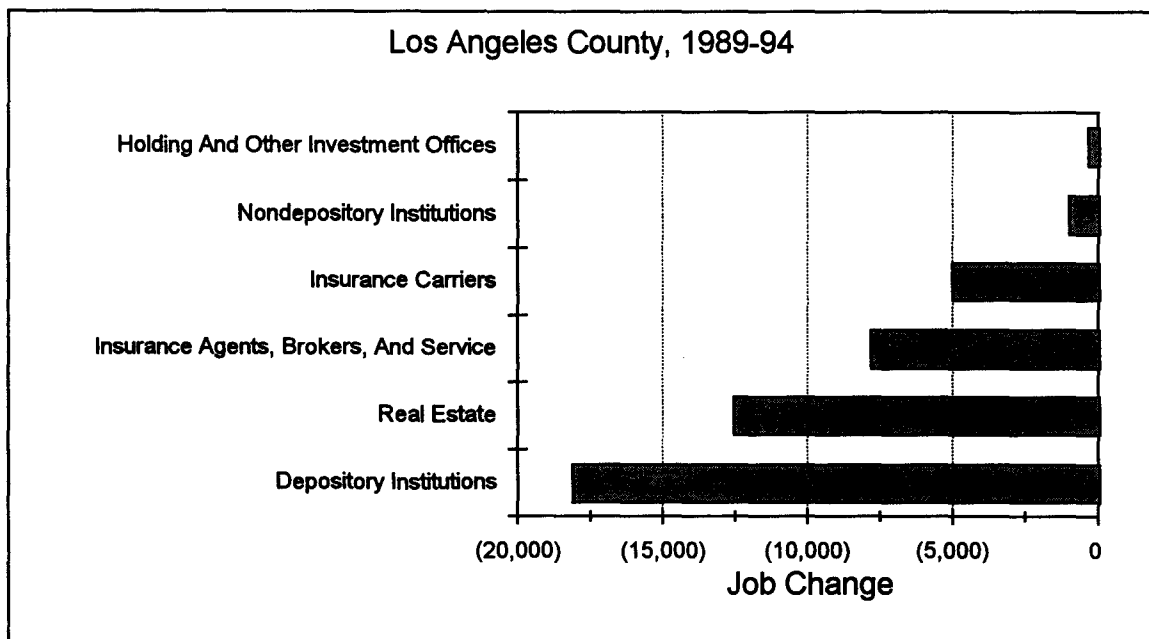
Source: EDD, Labor Market Information Division

Figure C-9
Job Change in Wholesale/Retail Trade



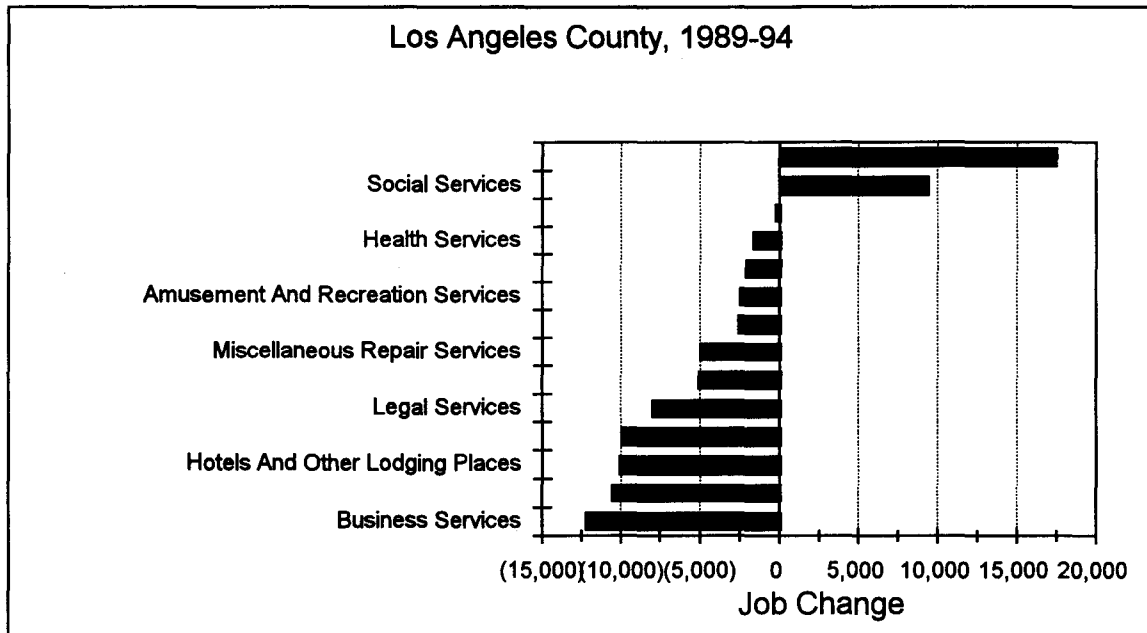
Source: EDD, Labor Market Information Division

Figure C-10
Job Change in the Finance Industries



Source: EDD, Labor Market Information Division

Figure C-11
Job Change in the Service Industries



Source: EDD, Labor Market Information Division

Employment and Payroll Profiles of Los Angeles County Subregions

To present a geographic analysis of employment and earnings in Los Angeles County, and to compare employment and earnings in Southeast Los Angeles County with the rest of the county, the county has been divided into six subregions: Southeast Los Angeles County, South Bay, Westside/Hollywood/Mid-City/Downtown, San Gabriel Valley, San Fernando and Santa Clarita Valleys, and Antelope Valley (North County). The City of Los Angeles is divided among different subregions based upon the city's 35 planning districts.

Southeast Los Angeles County: Southeast Los Angeles County includes 27 cities and adjacent county areas, as well as three City of Los Angeles planning districts (Boyle Heights, Southeast Los Angeles, and South Central Los Angeles). Major cities include Long Beach, Compton, Carson, Norwalk, South Gate, and Whittier. This subregion is the manufacturing core of Los Angeles County.

South Bay: The South Bay region extends from the Los Angeles International Airport area south to San Pedro and the Los Angeles harbor. Major cities include El Segundo, Inglewood, Redondo Beach, and Torrance. This region includes four City of Los Angeles planning districts: Harbor Gateway, Port of Los Angeles, San Pedro, and Westchester/Playa del Rey. Economically this region has been dominated by the aerospace industry and the industries based at the port.

Westside/Hollywood/Mid-City/Downtown: This subregion includes 13 City of Los Angeles planning districts, the cities of West Hollywood, Beverly Hills, Culver City, Santa Monica, and

Malibu, and adjacent county areas. Economically this region is dominated by the office-based industries along the Wilshire Corridor, extending from Downtown Los Angeles to Santa Monica. A large concentration of retail and service industries caters to high-income residents of the westside. The motion picture and entertainment industries are also important employers.

San Gabriel Valley: This region includes 29 cities, adjacent county areas, and the Northeast Los Angeles planning district of the City of Los Angeles. Major cities include Pasadena, El Monte, Monterey Park, and Pomona. This region includes some of the county's major industrial districts, located in and along the sprawling City of Industry.

San Fernando and Santa Clarita Valleys: This region includes the 14 City of Los Angeles planning districts that comprise the San Fernando Valley, the Agoura Hills and Westlake Village areas west of the San Fernando Valley, and the cities of Santa Clarita, San Fernando, Burbank, Glendale, and La Canada Flintridge. Economically, this is a diverse region, and is a major center of the county's aerospace and motion picture industries.

Antelope Valley (North County): This region includes the cities of Lancaster and Palmdale, and unincorporated county areas of the Antelope Valley and other parts of North Los Angeles County. The dominant employer in this region has been the aerospace industry with large plants in Lancaster and Palmdale.

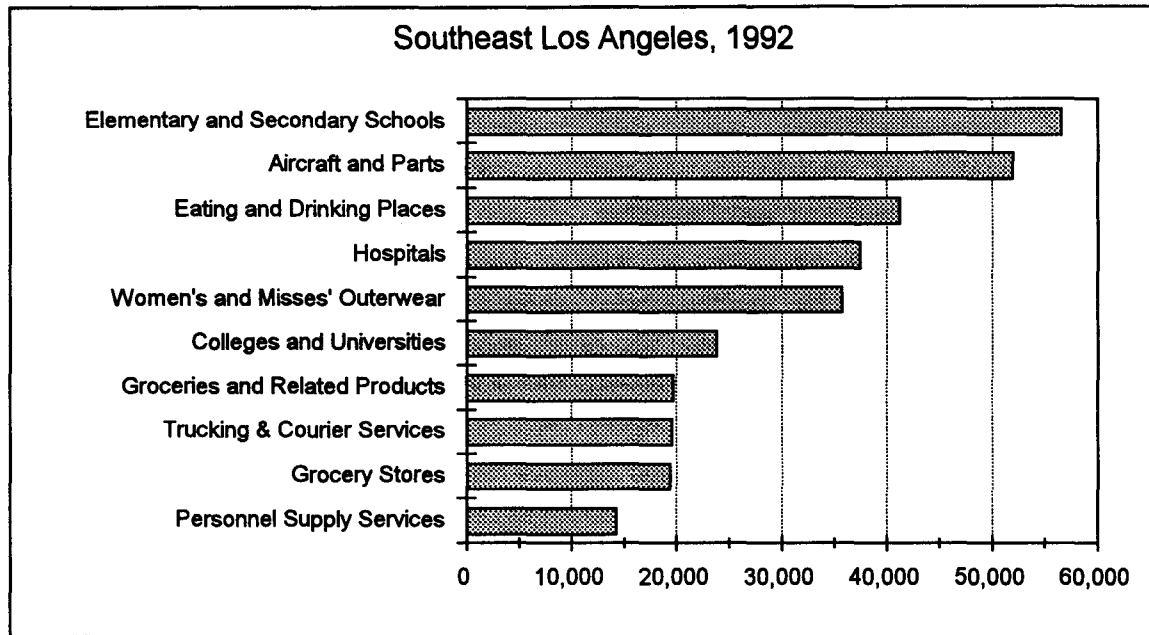
Southeast Los Angeles County

The most salient fact about SELAC's employment structure is the importance of manufacturing (Table C-4). In 1992 manufacturing industries employed 263,900 workers in the SELAC subregion. This was 37 percent of the county's manufacturing employment, and 29 percent of total employment in Southeast Los Angeles County.

The relatively high concentration of manufacturing employment in Southeast Los Angeles County is captured by the location quotient. A location quotient is the ratio of the employment share of a given industry in one area (in this case, the subregion), compared with the employment share of that industry in a larger area (in this case, the county). Comparing SELAC's manufacturing employment share of 29 percent with the county's manufacturing employment share of 20 percent yields a location quotient of 1.47. Relative to the county, manufacturing is highly concentrated in SELAC.

In 1992, one in six workers in Southeast Los Angeles County was employed in durable manufacturing. The aerospace industry employed 54,900 workers, which was 35 percent of county employment in aerospace (location quotient [L.Q.] = 1.40). High employment concentrations were also found in the Metals and Metal Products (27,800 workers, L.Q. = 1.76) and Industrial Machinery (14,300 workers, L.Q. = 1.60) industries, while relatively few SELAC workers were employed in the Computers, Electronics, and Instruments industries (5,100 workers, L.Q. = 0.46).

Figure C-12
Industries With Highest Employment

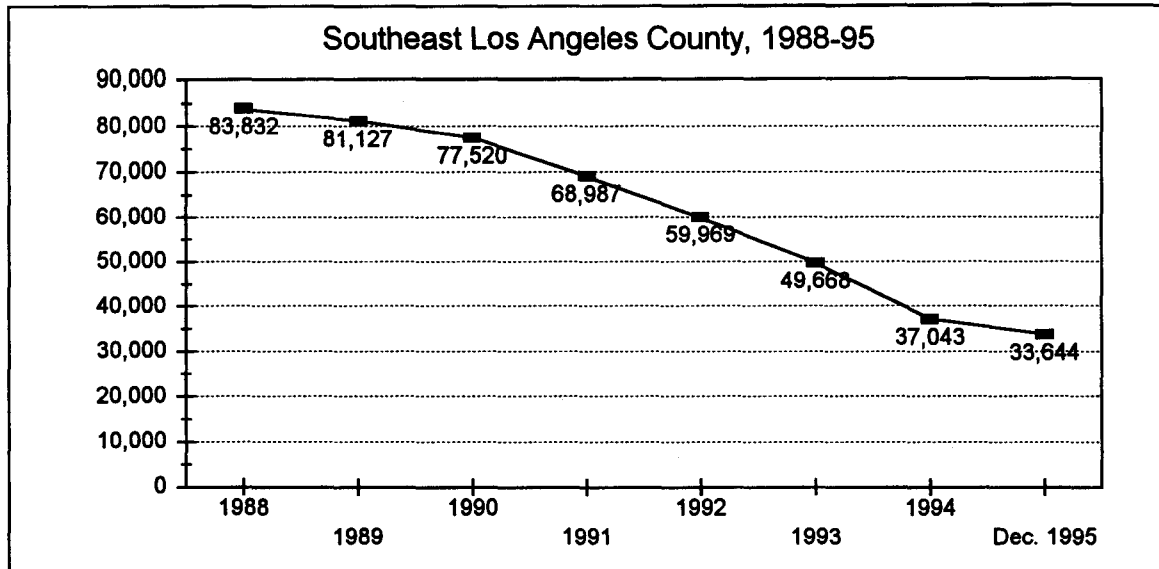


Source: California EDD, Labor Market Information Division

The high level of manufacturing employment in Southeast Los Angeles County was offset by lower employment concentrations in the non-manufacturing industries. Looking at a more detailed break-out of SELAC's industries (3-digit SIC level data), two of the five industries with the most employees are in the manufacturing sector. The leading employer was Elementary and Secondary Schools (56,400 workers), followed by Aircraft and Parts (51,800 workers), Eating and Drinking Places (41,100 workers), Hospitals (37,400 workers), and Women's and Misses' Outerwear (35,600 workers). Together these five industries accounted for 24 percent of total employment in Southeast Los Angeles County.

The SELAC region was home to 34.7% of Los Angeles County's aerospace jobs in 1992. By applying this percentage to Los Angeles County employment data for aerospace industries, it is possible to estimate that from 1988 through the end of 1995, SELAC communities lost 50,188 jobs (see Figure C-13).

Figure C-13
Southeast Los Angeles Aerospace Employment



Source: Consultant's estimates¹

Aerospace industries are more defense dependent than the overall high technology sector (65.4% versus 52.8%²). In 1992, aerospace accounted for 92 percent of total high technology employment in SELAC communities, compared to only 71 percent for the balance of Los Angeles County. This suggests a compound impact on SELAC communities from defense cutbacks. First, SELAC has lost the largest number of aerospace jobs of any region in Los Angeles County and, therefore, defense cutbacks have had the greatest direct impact on this region. And, second, SELAC has proportionately fewer jobs in non-aerospace high technology industries that might absorb laid-off aerospace workers and, therefore, has been able to provide fewer re-employment opportunities for workers displaced by defense cutbacks.

¹ Estimates of SELAC aerospace employment were obtained by using Employment Development Department I.C.E. data to determine the percent of Los Angeles County aerospace jobs that were located in SELAC in 1992, and then applying this percentage to county aerospace employment data for 1988 through December 1995.

² 1993 Economic Roundtable Survey.

Table C-4
Employment and Payroll by Industry
Southeast Los Angeles, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	54,879	6.0%	\$2,401,470,004	9.4%	\$43,759	147
Computers, Electronics, Instruments	5,075	0.6%	\$149,364,340	0.6%	\$29,431	99
High Technology	59,954	6.6%	\$2,550,834,344	10.0%	\$42,547	143
Metals and Metal Products	27,806	3.0%	\$791,772,140	3.1%	\$28,475	96
Industrial Machinery	14,276	1.6%	\$447,520,636	1.8%	\$31,348	105
Transportation Equipment (Non-Aerospace)	11,380	1.2%	\$339,803,100	1.3%	\$29,860	100
Electrical and Communications Equipment	6,257	0.7%	\$172,707,584	0.7%	\$27,602	93
Durable Manufacturing	147,011	16.1%	\$4,931,235,332	19.4%	\$33,543	113
Food Products	20,270	2.2%	\$600,332,684	2.4%	\$29,617	99
Apparel and Textiles	55,195	6.1%	\$925,033,684	3.6%	\$16,759	56
Printing and Publishing	11,052	1.2%	\$338,159,152	1.3%	\$30,597	103
Chemicals, Petroleum, Rubber, Plastics	20,189	2.2%	\$634,640,308	2.5%	\$31,435	105
Non-Durable Manufacturing	116,879	12.8%	\$2,808,860,712	11.0%	\$24,032	81
Manufacturing	263,908	28.9%	\$7,740,096,044	30.4%	\$29,329	98
Transportation, Communication, Utilities	62,692	6.9%	\$2,073,336,652	8.1%	\$33,072	111
Wholesale and Retail Trade	184,978	20.3%	\$5,009,719,492	19.7%	\$27,083	91
Eating and Drinking Places	41,059	4.5%	\$401,641,328	1.6%	\$9,782	33
Finance, Insurance, Real Estate	28,287	3.1%	\$787,348,944	3.1%	\$27,834	93
Business Services	43,172	4.7%	\$962,970,272	3.8%	\$22,305	75
Motion Pictures	1,991	0.2%	\$35,485,624	0.1%	\$17,823	60
Health Services	67,112	7.4%	\$2,242,591,804	8.8%	\$33,416	112
Educational Services	82,797	9.1%	\$2,323,303,292	9.1%	\$28,060	94
Engineering and Management Services	9,763	1.1%	\$292,010,944	1.1%	\$29,910	100
ALL INDUSTRIES	912,095		\$25,451,024,620		\$27,904	94

Source: California EDD, Labor Market Information Division

Southeast Los Angeles County Economic Development Alliance

Tables C-5 through C-12 describe the structure of employment and payroll by industry in the eight cities that comprise the Southeast Los Angeles Economic Development Alliance. The data show significant diversity in the industry employment structures of these eight cities. Based on levels of aerospace and manufacturing employment, the eight cities may be divided into three groups: cities with a high concentration of aerospace employment (Downey, Pico Rivera), other cities with a high concentration of manufacturing jobs, but few aerospace jobs (Commerce, Paramount, Santa Fe Springs), and cities with relatively few manufacturing jobs (Lakewood,

Whittier). The City of Montebello straddles the last two groups, with an average level of manufacturing employment.³

Cities with a High Concentration of Aerospace Employment

Downey (Table C-5): Firms located in the City of Downey employed 41,565 workers in 1992, 4.6 percent of total SELAC employment. The aerospace industry employed 5,654 workers, most of them based at the Rockwell facility. This accounted for 13.6 percent of the city's employment. The high average annual payroll received by Downey aerospace workers (\$46,049) contributed 21.6 percent of the city's total annual payroll in 1992. Outside of aerospace, relatively few workers are employed in manufacturing industries in Downey. The manufacturing sector as a whole employs 7,787 workers, 18.7 percent of city employment. This is well below the level of manufacturing employment in SELAC as a whole (28.9 percent). At the same time, given the domination of Downey manufacturing employment by aerospace, one in every four payroll dollars in the city (25.9 percent) was paid to manufacturing workers.

The major employing industries outside the manufacturing sector included Health Services (6,546 workers, 15.7 percent of city employment), Wholesale and Retail Trade (6,102 workers, 14.7 percent of city employment), and Business Services (5,621 workers, 13.5 percent of city employment). The latter two industries pay relatively low salaries and wages. Average annual payroll was \$24,579 in Wholesale and Retail Trade and \$22,866 in Business Services. This balanced the high earnings of aerospace workers, leaving the city with an average annual payroll of \$28,969, 97 percent of the county average.

Pico Rivera (Table C-6): In 1992, firms located in Pico Rivera employed 21,705 workers, 2.4 percent of total SELAC employment. Two in every five workers in Pico Rivera was employed in the aerospace industry in 1992, a total of 8,640 workers. Most of these workers are based at Northrop Grumman's B-2 facility. Altogether firms in manufacturing industries employed 11,762 workers, 54.2 percent of total city employment. The aerospace industry alone contributed 56.1 percent of the city's payroll. Because of the positive influence of aerospace earnings, the average annual payroll in the city was \$33,741, 113 percent of the county average.

Of the non-manufacturing industries, the major employers included Wholesale and Retail Trade (3,121 employees, 14.4 percent), Educational Services (1,376 workers, 6.3 percent), and Transportation, Communications, and Utilities (1,139 workers, 5.2 percent). The great majority of workers on the latter industry group were employed in the Trucking and Warehousing industry.

³ This discussion focuses on jobs offered by employers located in each city, which is different than the jobs held by residents of each city. Many residents work in a city different than where they live, so the make-up of industries that employ residents of a city may well be different from the make-up of industries located in the city. A high percentage of residents throughout the SELAC subregion work at jobs in aerospace. The next chapter of this report examines the jobs of residents living in the SELAC subregion.

Table C-5
Employment and Payroll by Industry
City of Downey, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	5,654	13.6%	\$260,359,608	21.6%	\$46,049	154
Computers, Electronics, Instruments	9	0.0%	\$360,276	0.0%	\$40,031	134
High Technology	5,663	13.6%	\$260,719,884	21.7%	\$46,039	154
Metals and Metal Products	289	0.7%	\$8,274,408	0.7%	\$28,631	96
Industrial Machinery	442	1.1%	\$11,161,592	0.9%	\$25,252	85
Transportation Equipment (non-aerospace)	117	0.3%	\$2,510,132	0.2%	\$21,454	72
Electrical and Communications Equipment	78	0.2%	\$2,051,380	0.2%	\$26,300	88
Durable Manufacturing	6,869	16.5%	\$289,545,040	24.0%	\$42,162	141
Chemicals, Petroleum, Rubber, Plastics	530	1.3%	\$12,803,748	1.1%	\$24,158	81
Non-Durable Manufacturing	918	2.2%	\$22,720,060	1.9%	\$24,750	83
Manufacturing	7,787	18.7%	\$312,265,100	25.9%	\$40,101	135
Transportation, Communications, Utilities	1,947	4.7%	\$66,166,680	5.5%	\$33,984	114
Wholesale and Retail Trade	6,102	14.7%	\$149,979,728	12.5%	\$24,579	82
Eating and Drinking Places	2,296	5.5%	\$21,665,836	1.8%	\$9,436	32
Finance, Insurance, Real Estate	2,452	5.9%	\$56,621,720	4.7%	\$23,092	77
Business Services	5,621	13.5%	\$128,530,540	10.7%	\$22,866	77
Auto Repair, Services, and Parking	507	1.2%	\$10,079,080	0.8%	\$19,880	67
Health Services	6,546	15.7%	\$217,820,672	18.1%	\$33,275	112
Educational Services	3,802	9.1%	\$119,482,164	9.9%	\$31,426	105
Social Services	1,070	2.6%	\$37,572,688	3.1%	\$35,115	118
Engineering and Management Services	433	1.0%	\$9,797,748	0.8%	\$22,628	76
ALL INDUSTRIES	41,665		\$1,204,100,208		\$28,969	97

Source: California EDD, Labor Market Information Division

Table C-6
Employment and Payroll by Industry
City of Pico Rivera, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	8,640	39.8%	\$410,515,024	56.1%	\$47,513	159
Computers, Electronics, Instruments	74	0.3%	\$1,750,916	0.2%	\$23,661	79
High Technology	8,714	40.1%	\$412,265,940	56.3%	\$47,311	159
Metals and Metal Products	299	1.4%	\$6,793,844	0.9%	\$22,722	76
Industrial Machinery	279	1.3%	\$9,377,420	1.3%	\$33,611	113
Durable Manufacturing	10,146	46.7%	\$444,969,808	60.8%	\$43,857	147
Food Products	510	2.3%	\$18,287,056	2.5%	\$35,857	120
Apparel and Textiles	295	1.4%	\$5,021,128	0.7%	\$17,021	57
Paper and Allied Products	447	2.1%	\$10,595,876	1.4%	\$23,704	80
Non-Durable Manufacturing	1,616	7.4%	\$43,886,108	6.0%	\$27,157	91
Manufacturing	11,762	54.2%	\$488,855,916	66.8%	\$41,562	139
Transportation, Communications, Utilities	1,139	5.2%	\$30,256,072	4.1%	\$26,564	89
Wholesale and Retail Trade	3,121	14.4%	\$80,179,224	10.9%	\$25,690	86
Eating and Drinking Places	851	3.9%	\$7,389,540	1.0%	\$8,683	29
Finance, Insurance, Real Estate	369	1.7%	\$11,162,344	1.5%	\$30,250	101
Personal Services	284	1.3%	\$5,225,932	0.7%	\$18,401	62
Business Services	294	1.4%	\$10,001,520	1.4%	\$34,019	114
Auto Repair, Services, and Parking	304	1.4%	\$7,601,172	1.0%	\$25,004	84
Health Services	898	4.1%	\$20,894,784	2.9%	\$23,268	78
Educational Services	1,376	6.3%	\$38,322,672	5.2%	\$27,851	93
Engineering and Management Services	265	1.2%	\$6,577,092	0.9%	\$24,819	83
ALL INDUSTRIES	21,706		\$732,342,768		\$33,741	113

Source: California EDD, Labor Market Information Division

Cities with a High Concentration of Manufacturing Employment and Relatively Low Aerospace Employment

Commerce (Table C-7): Firms located in the City of Commerce employ a relatively high number of workers in the manufacturing sector (17,615 workers, 38.2 percent of total city employment). Commerce's total employment of 46,136 was 5.1 percent of SELAC employment in 1992. Most of these workers are employed in the non-durable manufacturing industries, including the Chemicals, Petroleum, Rubber, and Plastics industries (2,908 workers), Apparel and Textiles (2,352 workers), and Food Products (2,012 workers). The leading durable manufacturing industry was Metals and Metal Products (2,079 workers).

Non-manufacturing employment was dominated by Wholesale and Retail Trade, with 13,668 workers (29.6 percent of total city employment). Most of these workers were employed in the wholesale trade sector (10,568).

Average annual payroll in Commerce was \$29,984 in 1992, slightly above the county average.

Paramount (Table C-8): Firms located in the City of Paramount employed a total of 16,052 workers in 1992, 1.8 percent of total SELAC employment. A relatively high percent of Paramount's workers were employed in manufacturing industries (30.9 percent). Most of these workers were found in the durable manufacturing sector, led by the Metals and Metal Products industries (1,650 workers, 10.3 percent of city employment).

The major non-manufacturing employers were Wholesale and Retail Trade (2,919 workers, 18.2 percent of city employment), Educational Services (1,364 workers, 8.5 percent of city employment), and Business Services (1,239 workers, 7.7 percent of city employment).

The city's annual average payroll in 1992 was \$26,581, 89 percent of the county average.

Santa Fe Springs (Table C-9): Firms located in Santa Fe Springs employed 45,709 workers in 1992, 5.0 of total SELAC employment. A total of 16,909 workers were employed in manufacturing (37.0 percent of city employment), divided fairly evenly between durable and non-durable manufacturing industries. Major durable manufacturing employers included Metals and Metal Products (2,803 workers) and Industrial Machinery (2,280 workers). Most non-durable manufacturing workers were employed in Chemicals, Petroleum, Rubber, and Plastics industries (2,421 workers).

Santa Fe Springs employment in the non-manufacturing sector was strongly concentrated in the Wholesale and Retail Trade industries, with 13,224 workers (28.9 percent of city employment). Most of these workers (9,524) were employed in the Wholesale Trade industries. A relatively high concentration of workers was found in the Transportation, Communications, and Utilities industries (5,957, 13 percent of city employment).

Average annual payroll was \$29,508 in 1992, slightly below the county average.

Montebello (Table C-10): Firms located in Montebello employed 21,653 workers in 1992, 2.4 percent of SELAC employment. Montebello has a relatively low concentration of manufacturing employment relative to SELAC as a whole, with its 3,722 manufacturing workers comprising 17.2 percent of the city's workforce. Most of these workers were employed in non-durable manufacturing industries, dominated by Food Products (1,110 workers).

A relatively high percentage of workers were found in the Wholesale and Retail Trade and Transportation, Communications (26.4 percent of the city's workers), and Utilities industries (12.3 percent of the city's workforce). A total of 1,992 workers were employed in the Trucking and Warehousing industry.

The average annual payroll was \$25,249, 85 percent of the county average.

Table C-7
Employment and Payroll by Industry
City of Commerce, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	259	0.6%	\$10,036,052	0.7%	\$38,749	130
Computers, Electronics, Instruments	315	0.7%	\$12,032,896	0.9%	\$38,200	128
High Technology	574	1.2%	\$22,068,948	1.6%	\$38,448	129
Furniture and Fixtures	838	1.8%	\$13,959,960	1.0%	\$16,659	56
Metals and Metal Products	2,079	4.5%	\$63,491,332	4.6%	\$30,539	102
Industrial Machinery	791	1.7%	\$23,999,396	1.7%	\$30,341	102
Electrical and Communications Equipment	772	1.7%	\$18,710,068	1.4%	\$24,236	81
Durable Manufacturing	6,701	14.5%	\$185,576,112	13.4%	\$27,694	93
Food and Kindred Products	2,012	4.4%	\$68,104,860	4.9%	\$33,849	114
Apparel and Textiles	2,352	5.1%	\$57,891,712	4.2%	\$24,614	83
Paper and Allied Products	1,702	3.7%	\$58,043,632	4.2%	\$34,103	114
Printing and Publishing	1,623	3.5%	\$59,806,784	4.3%	\$36,850	124
Chemicals, Petroleum, Rubber, Plastics	2,908	6.3%	\$89,327,580	6.5%	\$30,718	103
Non-Durable Manufacturing	10,914	23.7%	\$338,729,020	24.5%	\$31,036	104
Manufacturing	17,615	38.2%	\$524,305,132	37.9%	\$29,765	100
Transportation, Communications, Utilities	3,132	6.8%	\$95,719,688	6.9%	\$30,562	103
Wholesale and Retail Trade	13,668	29.6%	\$429,754,016	31.1%	\$31,442	105
Eating and Drinking Places	560	1.2%	\$5,649,052	0.4%	\$10,088	34
Finance, Insurance, Real Estate	828	1.8%	\$27,612,244	2.0%	\$33,348	112
Business Services	2,495	5.4%	\$61,469,892	4.4%	\$24,637	83
Amusement and Recreation Services	1,923	4.2%	\$30,736,704	2.2%	\$15,984	54
Social Services	588	1.3%	\$18,270,864	1.3%	\$31,073	104
ALL INDUSTRIES	46,136		\$1,383,323,324		\$29,984	101

Source: California EDD, Labor Market Information Division

Table C-8
Employment and Payroll by Industry
City of Paramount, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	147	0.9%	\$6,459,876	1.5%	\$43,945	147
Computers, Electronics, Instruments	79	0.5%	\$2,084,796	0.5%	\$26,390	89
High Technology	226	1.4%	\$8,544,672	2.0%	\$37,808	127
Metals and Metal Products	1,650	10.3%	\$48,362,728	11.3%	\$29,311	98
Industrial Machinery	685	4.3%	\$21,181,144	5.0%	\$30,921	104
Transportation Equipment (non-aerospace)	260	1.6%	\$5,526,480	1.3%	\$21,256	71
Electrical and Communications Equipment	191	1.2%	\$5,373,176	1.3%	\$28,132	94
Durable Manufacturing	3,631	22.0%	\$98,968,392	23.2%	\$28,026	94
Apparel and Textiles	631	3.9%	\$9,107,744	2.1%	\$14,434	48
Chemicals, Petroleum, Rubber, Plastics	584	3.6%	\$20,001,940	4.7%	\$34,250	115
Non-Durable Manufacturing	1,422	8.9%	\$33,363,960	7.8%	\$23,463	79
Manufacturing	4,953	30.9%	\$132,322,352	31.0%	\$26,716	90
Transportation, Communications, Utilities	838	5.2%	\$25,995,704	6.1%	\$31,021	104
Wholesale and Retail Trade	2,919	18.2%	\$72,663,612	17.0%	\$24,893	84
Eating and Drinking Places	413	2.6%	\$3,608,924	0.8%	\$8,738	29
Finance, Insurance, Real Estate	389	2.4%	\$10,346,528	2.4%	\$26,598	89
Personal Services	479	3.0%	\$10,485,324	2.5%	\$21,890	73
Business Services	1,239	7.7%	\$24,310,972	5.7%	\$19,621	66
Miscellaneous Repair Services	416	2.6%	\$12,221,308	2.9%	\$29,378	99
Health Services	787	4.9%	\$21,959,580	5.1%	\$27,903	94
Educational Services	1,364	8.5%	\$39,297,992	9.2%	\$28,811	97
ALL INDUSTRIES	16,062		\$426,674,052		\$26,581	89

Source: California EDD, Labor Market Information Division

Table C-9
Employment and Payroll by Industry
City of Santa Fe Springs, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	654	1.4%	\$23,594,832	1.7%	\$36,078	121
Computers, Electronics, Instruments	548	1.2%	\$14,799,836	1.1%	\$27,007	91
High Technology	1,202	2.6%	\$38,394,668	2.8%	\$31,942	107
Metals and Metal Products	2,803	6.1%	\$88,464,364	6.6%	\$31,561	106
Industrial Machinery	2,280	5.0%	\$71,416,188	5.3%	\$31,323	105
Electrical and Communications Equipment	826	1.8%	\$21,608,980	1.6%	\$26,161	88
Durable Manufacturing	9,064	19.8%	\$263,226,892	19.5%	\$29,041	97
Food Products	1,436	3.1%	\$38,226,528	2.8%	\$26,620	89
Apparel and Textiles	1,001	2.2%	\$28,126,396	2.1%	\$28,098	94
Paper and Allied Products	1,582	3.5%	\$53,872,356	4.0%	\$34,053	114
Printing and Publishing	1,405	3.1%	\$38,949,840	2.9%	\$27,722	93
Chemicals, Petroleum, Rubber, Plastics	2,421	5.3%	\$76,545,996	5.7%	\$31,618	106
Non-Durable Manufacturing	7,845	17.2%	\$235,721,116	17.5%	\$30,047	101
Manufacturing	16,909	37.0%	\$498,947,008	37.0%	\$29,508	99
Transportation, Communications, Utilities	5,957	13.0%	\$184,409,288	13.7%	\$30,957	104
Wholesale and Retail Trade	13,224	28.9%	\$402,559,908	29.8%	\$30,442	102
Eating and Drinking Places	1,158	2.5%	\$20,624,884	1.5%	\$17,811	60
Finance, Insurance, Real Estate	1,025	2.2%	\$28,330,100	2.1%	\$27,639	93
Business Services	2,561	5.6%	\$57,832,012	4.3%	\$22,582	76
Miscellaneous Repair Services	587	1.3%	\$16,545,688	1.2%	\$28,187	95
Educational Services	449	1.0%	\$12,308,356	0.9%	\$27,413	92
Social Services	539	1.2%	\$16,296,328	1.2%	\$30,234	101
ALL INDUSTRIES	46,709		\$1,348,791,004		\$29,508	99

Source: California EDD, Labor Market Information Division

Table C-10
Employment and Payroll by Industry
City of Montebello, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Metals and Metal Products	269	1.2%	\$7,368,332	1.3%	\$27,392	92
Industrial Machinery	284	1.3%	\$9,538,276	1.7%	\$33,585	113
Transportation Equipment (non-aerospace)	112	0.5%	\$2,749,608	0.5%	\$24,550	82
Electrical and Communications Equipment	73	0.3%	\$2,491,380	0.5%	\$34,128	114
Durable Manufacturing	888	4.1%	\$26,272,856	4.6%	\$28,460	95
Food Products	1,110	5.1%	\$32,858,136	6.0%	\$29,602	99
Apparel and Textiles	649	3.0%	\$13,029,840	2.4%	\$20,077	67
Paper and Allied Products	387	1.8%	\$15,192,760	2.8%	\$39,258	132
Printing and Publishing	381	1.8%	\$9,826,876	1.8%	\$25,792	87
Non-Durable Manufacturing	2,834	13.1%	\$79,342,376	14.5%	\$27,997	94
Manufacturing	3,722	17.2%	\$104,615,232	19.1%	\$28,107	94
Transportation, Communications, Utilities	2,670	12.3%	\$79,088,832	14.5%	\$29,621	99
Wholesale and Retail Trade	5,719	26.4%	\$134,367,264	24.6%	\$23,495	79
Eating and Drinking Places	1,663	7.7%	\$15,536,312	2.8%	\$9,342	31
Finance, Insurance, Real Estate	593	2.7%	\$13,997,852	2.6%	\$23,605	79
Personal Services	361	1.7%	\$5,410,424	1.0%	\$14,987	50
Business Services	785	3.6%	\$13,750,520	2.5%	\$17,517	59
Auto Repair, Services, and Parking	356	1.6%	\$8,304,556	1.5%	\$23,327	78
Health Services	1,833	8.5%	\$60,377,348	11.0%	\$32,939	110
Educational Services	1,965	9.1%	\$59,250,124	10.8%	\$30,153	101
ALL INDUSTRIES	21,653		\$646,708,120		\$26,249	85

Source: California EDD, Labor Market Information Division

Cities with Lower Levels of Manufacturing Employment

Lakewood (Table C-11): Lakewood has very few manufacturing jobs. In 1992, firms in the city employed 16,954 workers (1.9 percent of total SELAC employment). Of this total, only 792 workers were employed by manufacturing firms (4.7 percent of city employment).

Major employers included Wholesale and Retail Trade (5,159, 30.4 percent of city employment), Eating and Drinking Places (2,700 workers, 15.9 percent of city employment), and Educational Services (1,935 workers, 11.4 percent of city employment).

The average annual payroll in 1992 was \$21,499, only 72 percent of the county average. This is explained by the lack of higher wage manufacturing jobs in the city, and the plethora of low wage jobs in the retail and service industries.

Whittier (Table C-12): As with Lakewood, firms located in Whittier employ few manufacturing workers. In 1992 total city employment was 22,422, 2.5 percent of SELAC employment. Only 2,150 workers were employed in manufacturing industries, 9.6 percent of total city employment.

The leading non-manufacturing industries were Wholesale and Retail Trade (4,668 workers, 20.8 percent of city employment), Health Services (3,822 workers, 17.0 percent), and Educational Services (2,407, 10.7 percent).

In 1992 the average annual payroll in Whittier was \$25,512, 86 percent of the county average.

Table C-11
Employment and Payroll by Industry
City of Lakewood, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	20	0.1%	\$346,528	0.1%	\$17,326	58
Communication, Electronics, Instruments	7	0.0%	\$173,364	0.0%	\$24,766	83
<i>High Technology</i>	27	0.2%	\$519,892	0.1%	\$19,255	65
Metals and Metal Products	204	1.2%	\$5,572,132	1.5%	\$27,314	92
Industrial Machinery	19	0.1%	\$548,904	0.2%	\$28,890	97
Transportation Equipment (non-aerospace)	2	0.0%	\$68,084	0.0%	\$34,042	114
Electrical and Communications Equipment	13	0.1%	\$228,112	0.1%	\$17,547	59
Durable Manufacturing	289	1.7%	\$7,841,772	2.2%	\$27,134	91
Chemicals, Petroleum, Rubber, Plastics	385	2.3%	\$16,876,628	4.6%	\$43,835	147
Non-Durable Manufacturing	503	3.0%	\$19,638,648	5.4%	\$39,043	131
Manufacturing	792	4.7%	\$27,480,420	7.5%	\$34,698	116
Transportation, Communications, Utilities	412	2.4%	\$18,689,672	5.1%	\$45,363	152
Wholesale and Retail Trade	5,159	30.4%	\$92,827,692	25.5%	\$17,993	60
Eating and Drinking Places	2,700	15.9%	\$23,226,428	6.4%	\$8,602	29
Finance, Insurance, Real Estate	862	5.1%	\$24,404,024	6.7%	\$28,311	95
Personal Services	273	1.6%	\$2,947,144	0.8%	\$10,795	36
Business Services	759	4.5%	\$12,263,860	3.4%	\$16,158	54
Motion Pictures	279	1.6%	\$1,718,156	0.5%	\$6,158	21
Health Services	1,139	6.7%	\$41,128,184	11.3%	\$36,109	121
Educational Services	1,935	11.4%	\$50,110,836	13.7%	\$25,897	87
Social Services	339	2.0%	\$12,712,820	3.5%	\$37,501	126
Membership Organizations	657	3.9%	\$13,217,924	3.6%	\$20,119	67
ALL INDUSTRIES	16,954		\$364,499,412		\$21,499	72

Source: California EDD, Labor Market Information Division

Table C-12
Employment and Payroll by Industry
City of Whittier, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	154	0.7%	\$6,012,164	1.1%	\$39,040	131
Communication, Electronics, Instruments	32	0.1%	\$708,632	0.1%	\$22,145	74
High Technology	186	0.8%	\$6,720,796	1.2%	\$36,133	121
Durable Manufacturing	1591	7.1%	\$39,147,724	6.8%	\$24,606	83
Paper and Allied Products	264	1.2%	\$7,142,640	1.2%	\$27,055	91
Non-Durable Manufacturing	559	2.5%	\$13,722,596	2.4%	\$24,548	82
Manufacturing	2,150	9.6%	\$52,870,320	9.2%	\$24,591	82
Transportation, Communications, Utilities	1,234	5.5%	\$38,001,168	6.6%	\$30,795	103
Wholesale and Retail Trade	4,668	20.8%	\$127,412,124	22.3%	\$27,295	92
Eating and Drinking Places	1,680	7.5%	\$14,511,108	2.5%	\$8,638	29
Finance, Insurance, Real Estate	1,339	6.0%	\$36,460,804	6.4%	\$27,230	91
Personal Services	378	1.7%	\$5,566,124	1.0%	\$14,725	49
Business Services	1,000	4.5%	\$14,192,192	2.5%	\$14,192	48
Auto Repair, Services, and Parking	323	1.4%	\$6,140,264	1.1%	\$19,010	64
Amusement and Recreation Services	231	1.0%	\$3,181,576	0.6%	\$13,773	46
Health Services	3,822	17.0%	\$120,306,664	21.0%	\$31,477	106
Educational Services	2,407	10.7%	\$61,255,632	10.7%	\$25,449	85
Social Services	270	1.2%	\$3,265,024	0.6%	\$12,093	41
Membership Organizations	357	1.6%	\$7,409,676	1.3%	\$20,755	70
Engineering and Management Services	335	1.5%	\$11,712,028	2.0%	\$34,961	117
ALL INDUSTRIES	22,422		\$572,018,868		\$25,512	86

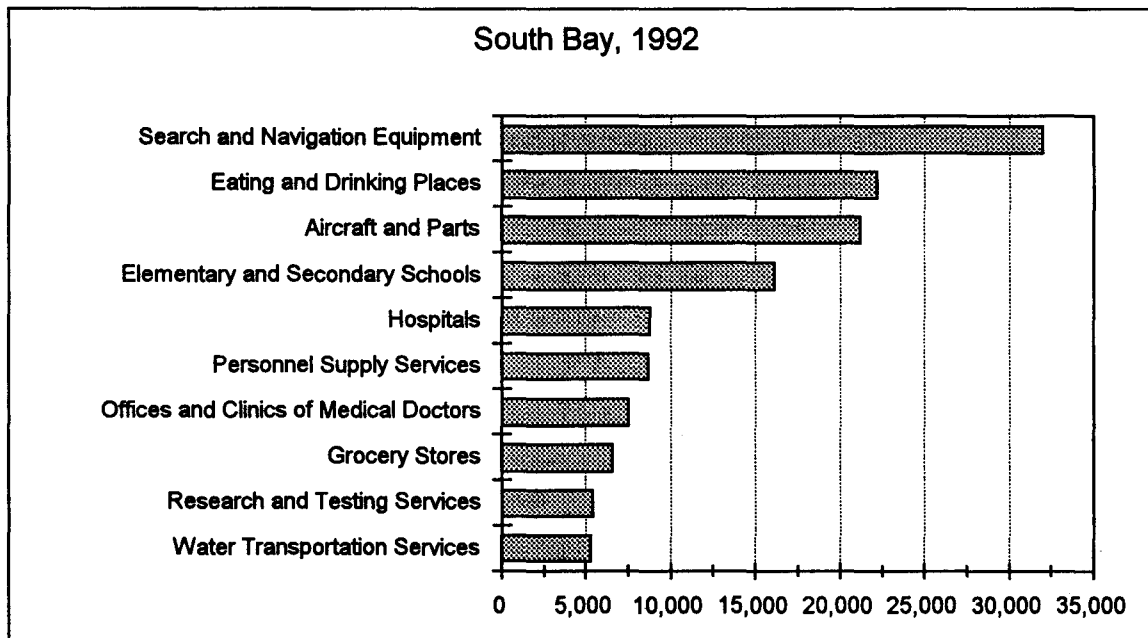
Source: California EDD, Labor Market Information Division

South Bay

Employment in the South Bay subregion is dominated by the aerospace industry, with 55,400 workers (15 percent of total employment in the South Bay) as shown in Table C-13. With 35 percent of county aerospace employment, and 32 percent of county high technology employment, the South Bay has the highest concentration of aerospace and high technology employment in the county (location quotients are respectively 2.55 and 2.76). Relatively few employees are found in other durable or non-durable manufacturing industries.

Industries with the most employees include Search and Navigation Equipment (31,900 workers); Eating and Drinking Places (22,100 workers); Aircraft and Parts (21,100 workers); Elementary and Secondary Schools (16,000 workers); and Hospitals (8,700 workers) as shown Figure C-14. These five industries employed 28 percent of the South Bay's workers in 1992.

Figure C-14
Industries With Highest Employment



Source: California EDD, Labor Market Information Division

Table C-13
Employment and Payroll by Industry
South Bay, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	55,444	15.3%	\$2,682,108,496	23.1%	\$48,375	162
Computers, Electronics, Instruments	10,398	2.9%	\$481,197,632	4.1%	\$46,278	155
High Technology	65,842	18.2%	\$3,163,306,128	27.3%	\$48,044	161
Metals and Metal Products	6,185	1.7%	\$185,101,124	1.6%	\$29,927	100
Industrial Machinery	4,095	1.1%	\$127,183,536	1.1%	\$31,058	104
Transportation Equipment (Non-Aerospace)	1,413	0.4%	\$46,722,152	0.4%	\$33,066	111
Electrical and Communications Equipment	3,402	0.9%	\$107,150,576	0.9%	\$31,496	106
Durable Manufacturing	86,688	23.9%	\$3,822,939,388	33.0%	\$44,151	148
Food Products	4,670	1.3%	\$116,509,904	1.0%	\$24,949	84
Apparel and Textiles	2,628	0.7%	\$48,169,044	0.4%	\$18,329	61
Printing and Publishing	5,625	1.6%	\$174,182,616	1.5%	\$30,966	104
Chemicals, Petroleum, Rubber, Plastics	6,726	1.9%	\$261,661,776	2.3%	\$38,903	130
Non-Durable Manufacturing	20,060	5.5%	\$609,042,228	5.3%	\$30,361	102
Manufacturing	106,648	29.4%	\$4,431,981,616	38.2%	\$41,557	139
Transportation, Communications, Utilities	29,571	8.2%	\$1,098,924,600	9.5%	\$37,162	125
Wholesale and Retail Trade	57,920	16.0%	\$1,547,315,344	13.3%	\$26,715	90
Eating and Drinking Places	22,080	6.1%	\$214,162,324	1.8%	\$9,699	33
Finance, Insurance, Real Estate	15,198	4.2%	\$477,216,000	4.1%	\$31,400	105
Business Services	21,785	6.0%	\$468,366,680	4.0%	\$21,500	72
Motion Pictures	896	0.2%	\$14,184,132	0.1%	\$15,831	53
Health Services	24,067	6.6%	\$807,019,196	7.0%	\$33,532	112
Educational Services	20,424	5.6%	\$544,371,704	4.7%	\$26,654	89
Engineering and Management Services	10,159	2.8%	\$441,629,460	3.8%	\$43,472	146
ALL INDUSTRIES	362,511		\$11,597,387,896		\$31,992	107

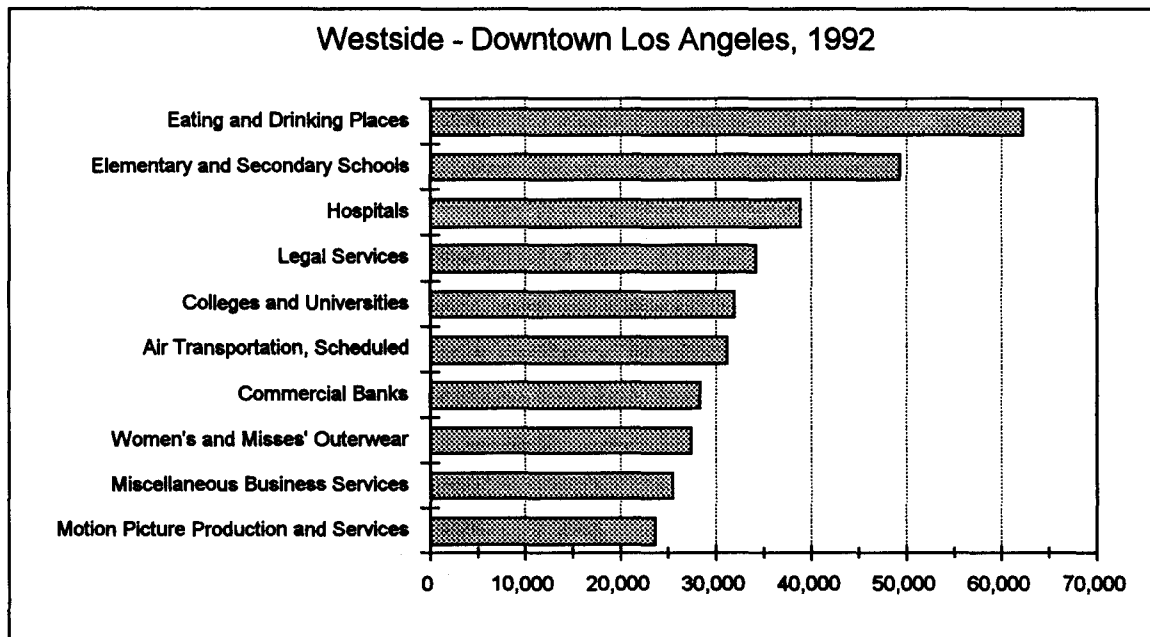
Source: California EDD, Labor Market Information Division

Westside-Downtown

With few manufacturing districts outside of the Downtown area, the Westside/Hollywood/Mid-City/Downtown Los Angeles subregion is dominated by non-manufacturing industries (Table C-14). Manufacturing firms employed 91,800 workers, 9 percent of the subregion's total employment. Only two manufacturing industries were major employers: Apparel and Textiles (37,000 workers), and Printing and Publishing (16,900 workers). High employment concentrations were found in the Transportation, Communications, and Utilities industries; Finance, Insurance, and Real Estate; Motion Pictures; and Engineering and Management Services.

The five industries with the most employees are Eating and Drinking Places (62,200 workers); Elementary and Secondary Schools (49,100 workers); Hospitals (38,800 workers); Legal Services (34,100 workers); and Colleges and Universities (31,900 workers) as shown in Figure C-15. These five industries accounted for 22 percent of the subregion's employment in 1992.

Figure C-15
Industries With Highest Employment



Source: California EDD, Labor Market Information Division

Table C-14
Employment and Payroll by Industry
Westside/Mid-City/Hollywood/Downtown, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	4,862	0.5%	\$278,722,040	0.9%	\$57,327	192
Computers, Electronics, Instruments	4,313	0.4%	\$159,516,012	0.5%	\$36,985	124
High Technology	9,175	0.9%	\$438,238,052	1.4%	\$47,764	160
Metals and Metal Products	2,516	0.3%	\$62,884,740	0.2%	\$24,994	84
Industrial Machinery	1,491	0.2%	\$39,763,328	0.1%	\$26,669	89
Transportation Equipment (Non-Aerospace)	818	0.1%	\$27,051,020	0.1%	\$33,070	111
Electrical and Communications Equipment	4,326	0.4%	\$172,186,704	0.5%	\$39,803	134
Durable Manufacturing	24,938	2.6%	\$894,825,064	2.8%	\$35,882	120
Food Products	6,585	0.7%	\$223,918,388	0.7%	\$34,004	114
Apparel and Textiles	36,954	3.8%	\$561,015,240	1.7%	\$15,181	51
Printing and Publishing	16,934	1.7%	\$626,520,500	1.9%	\$36,998	124
Chemicals, Petroleum, Rubber, Plastics	5,266	0.5%	\$258,977,568	0.8%	\$49,179	165
Non-Durable Manufacturing	66,860	6.8%	\$1,704,900,924	5.3%	\$25,500	86
Manufacturing	91,798	9.4%	\$2,699,726,988	8.0%	\$28,320	95
Transportation, Communications, Utilities	90,571	9.3%	\$3,534,101,352	10.9%	\$39,020	131
Wholesale and Retail Trade	123,330	12.6%	\$3,298,153,020	10.2%	\$26,743	90
Eating and Drinking Places	62,219	6.4%	\$760,107,876	2.3%	\$12,217	41
Finance, Insurance, Real Estate	95,165	9.7%	\$4,047,726,092	12.5%	\$42,534	143
Business Services	68,939	7.0%	\$1,779,219,204	5.5%	\$25,809	87
Motion Pictures	28,915	3.0%	\$1,799,319,224	5.5%	\$62,228	209
Health Services	76,414	7.8%	\$2,816,464,224	8.7%	\$36,858	124
Educational Services	86,114	8.8%	\$2,431,003,492	7.5%	\$28,230	95
Engineering and Management Services	43,549	4.5%	\$1,722,390,252	5.3%	\$39,551	133
ALL INDUSTRIES	977,936		\$32,428,468,800		\$33,160	111

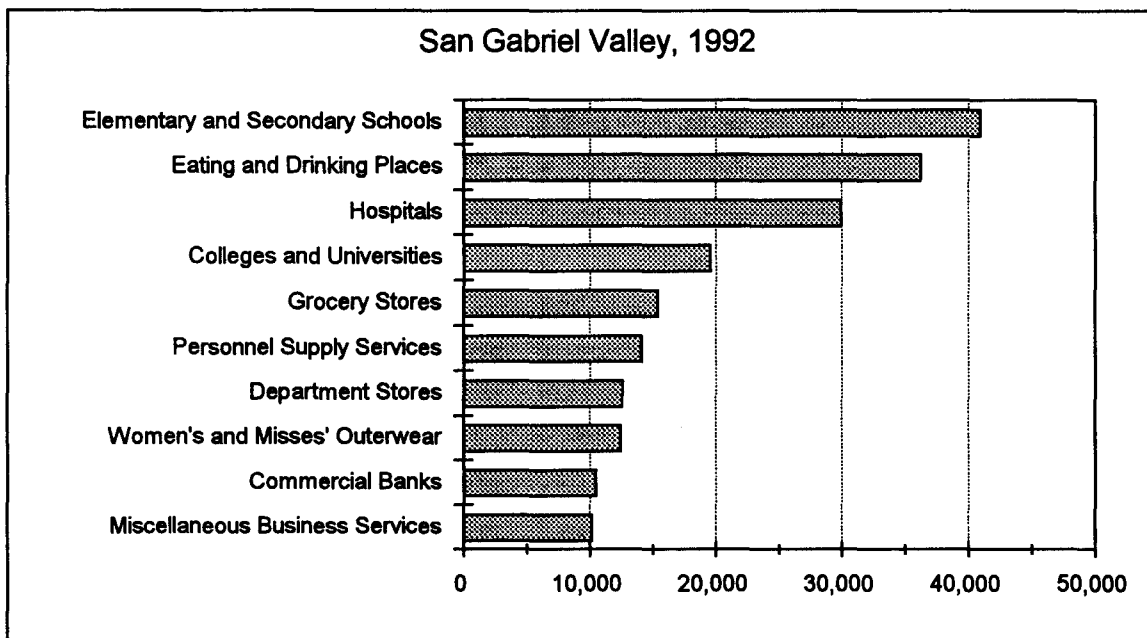
Source: California EDD, Labor Market Information Division

San Gabriel Valley

In the San Gabriel Valley one in five workers was employed in manufacturing industries in 1992 (Table C-15). The subregion employed relatively few workers in the aerospace industry (14,100 workers, L.Q. = 0.53).

Industries with the most employees included Elementary and Secondary Schools (40,800 workers), Eating and Drinking Places (36,100 workers), Hospitals (29,900 workers), Colleges and Universities (19,500 workers), and Grocery Stores (15,400 workers) (Figure C-16). The major manufacturing industries were Women's and Misses' Outerwear (12,400 workers) and Miscellaneous Plastics Products (7,300 workers).

Figure C-16
Industries With Highest Employment



Source: California EDD, Labor Market Information Division

Table C-15
Employment and Payroll by Industry
San Gabriel Valley, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	14,113	2.3%	\$612,632,128	3.8%	\$43,409	146
Computers, Electronics, Instruments	8,950	1.5%	\$289,175,344	1.8%	\$32,310	108
<i>High Technology</i>	23,063	3.8%	<i>\$901,807,472</i>	5.6%	<i>\$39,102</i>	<i>131</i>
Metals and Metal Products	15,224	2.5%	\$402,698,780	2.5%	\$26,452	89
Industrial Machinery	7,572	1.3%	\$266,085,884	1.6%	\$35,141	118
Transportation Equipment (Non-Aerospace)	2,195	0.4%	\$58,327,276	0.4%	\$26,573	89
Electrical and Communications Equipment	6,304	1.0%	\$200,569,952	1.2%	\$31,816	107
Durable Manufacturing	67,847	11.3%	\$2,184,473,840	13.5%	\$32,197	108
Food Products	9,574	1.6%	\$240,197,064	1.5%	\$25,088	84
Apparel and Textiles	16,900	2.8%	\$206,924,136	1.3%	\$12,244	41
Printing and Publishing	8,086	1.3%	\$247,067,372	1.5%	\$30,555	102
Chemicals, Petroleum, Rubber, Plastics	13,880	2.3%	\$403,328,292	2.5%	\$29,058	97
Non-Durable Manufacturing	53,559	8.9%	\$1,255,847,524	7.7%	\$23,448	79
Manufacturing	121,406	20.2%	\$3,440,321,364	21.2%	\$28,337	95
Transportation, Communications, Utilities	33,318	5.5%	\$1,225,994,228	7.6%	\$36,797	123
Wholesale and Retail Trade	101,677	16.9%	\$2,400,374,980	14.8%	\$23,608	79
Eating and Drinking Places	36,138	6.0%	\$364,441,004	2.2%	\$10,085	34
Finance, Insurance, Real Estate	39,371	6.5%	\$1,272,837,768	7.8%	\$32,329	108
Business Services	35,379	5.9%	\$659,288,384	4.1%	\$18,635	63
Motion Pictures	1,478	0.2%	\$20,940,880	0.1%	\$14,168	48
Health Services	54,196	9.0%	\$1,710,020,900	10.5%	\$31,553	106
Educational Services	63,039	10.5%	\$1,704,305,940	10.5%	\$27,036	91
Engineering and Management Services	16,080	2.7%	\$652,612,952	4.0%	\$40,585	136
ALL INDUSTRIES	601,152		\$16,236,465,432		\$27,009	91

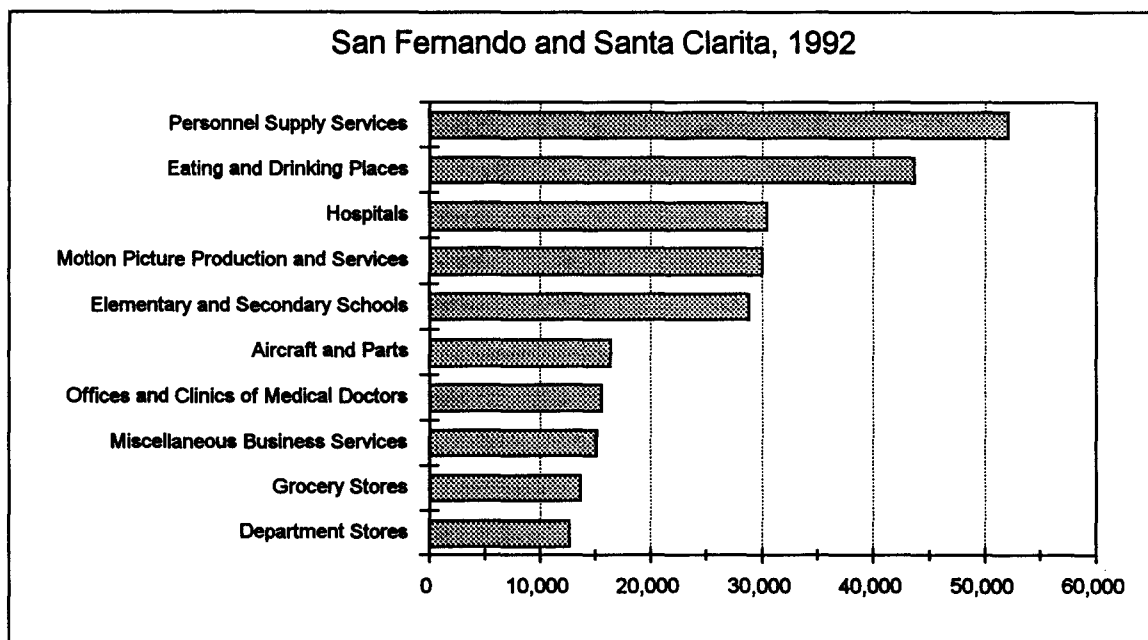
Source: California EDD, Labor Market Information Division

San Fernando Valley and Santa Clarita Valley

Non-manufacturing industries are strongly represented in the San Fernando and Santa Clarita valleys (Table C-16). Industries with particularly high employment concentrations in this subregion include Motion Pictures (33,100 workers, location quotient = 2.50); Business Services (84,000 workers, L.Q. = 1.63); and Finance, Insurance, and Real Estate (61,500 workers, L.Q. = 1.27). The aerospace industry employed 22,000 workers, and durable manufacturing accounted for 10.8 percent of the subregion's total employment, slightly below the county average of 11.4 percent.

The five industries with the most employees included Personnel Supply Services (52,000 workers); Eating and Drinking Places (43,600 workers); Hospitals (30,300 workers); Motion Picture Production and Services (29,900 workers); and Elementary and Secondary Schools (28,000 workers) (Figure C-17). These industries employed 25 percent of the subregion's workers. The major manufacturing employer was the Aircraft and Parts industry (16,200 workers).

Figure C-17
Industries With Highest Employment



Source: California EDD, Labor Market Information Division

Table C-16
Employment and Payroll by Industry
San Fernando and Santa Clarita Valleys, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	21,966	3.0%	\$980,215,112	4.6%	\$44,624	150
Computers, Electronics, Instruments	16,811	2.3%	\$630,162,596	2.9%	\$37,485	126
High Technology	38,777	5.3%	\$1,610,377,708	7.5%	\$41,529	139
Metals and Metal Products	10,351	1.4%	\$288,920,032	1.3%	\$27,912	94
Industrial Machinery	7,601	1.0%	\$237,122,568	1.1%	\$31,196	105
Transportation Equipment (Non-Aerospace)	4,185	0.6%	\$136,593,600	0.6%	\$32,639	109
Electrical and Communications Equipment	21,990	3.0%	\$772,833,708	3.6%	\$35,145	118
Durable Manufacturing	79,826	10.8%	\$2,826,972,204	13.2%	\$35,414	119
Food Products	6,904	0.9%	\$264,791,752	1.2%	\$38,353	129
Apparel and Textiles	10,281	1.4%	\$162,774,612	0.8%	\$15,833	53
Printing and Publishing	12,087	1.6%	\$370,361,480	1.7%	\$30,641	103
Chemicals, Petroleum, Rubber, Plastics	10,420	1.4%	\$321,104,768	1.5%	\$30,816	103
Non-Durable Manufacturing	41,428	5.6%	\$1,165,808,304	5.4%	\$28,141	94
Manufacturing	121,254	16.5%	\$3,992,780,608	18.6%	\$32,929	110
Transportation, Communications, Utilities	30,233	4.1%	\$1,040,614,460	4.9%	\$34,420	115
Wholesale and Retail Trade	124,950	17.0%	\$3,119,950,948	14.6%	\$24,970	84
Eating and Drinking Places	43,589	5.9%	\$474,889,512	2.2%	\$10,895	37
Finance, Insurance, Real Estate	61,510	8.4%	\$2,063,386,220	9.6%	\$33,546	113
Business Services	83,956	11.4%	\$1,687,113,736	7.9%	\$20,095	67
Motion Pictures	33,056	4.5%	\$1,739,551,884	8.1%	\$52,624	177
Health Services	66,559	9.0%	\$2,141,436,868	10.0%	\$32,174	108
Educational Services	39,197	5.3%	\$1,095,384,272	5.1%	\$27,946	94
Engineering and Management Services	16,832	2.3%	\$636,366,528	3.0%	\$37,807	127
ALL INDUSTRIES	736,559		\$21,442,140,456		\$29,111	98

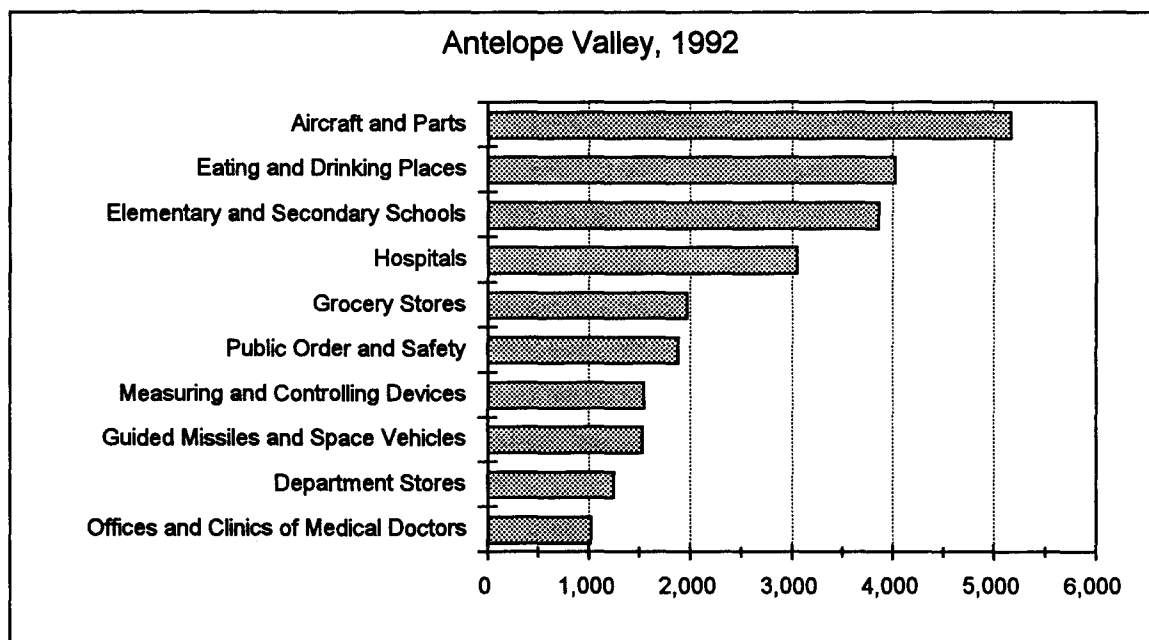
Source: California EDD, Labor Market Information Division

Antelope Valley

The Antelope Valley and the rest of North Los Angeles County has a strong representation of aerospace employers, which provided jobs for 6,700 workers (13.5 percent of the subregion's total employment) in 1992, as shown in Table C-17.

The five industries with the most employees were Aircraft and Parts (5,200 workers); Eating and Drinking Places (4,000 workers); Elementary and Secondary Schools (3,800 workers); Hospitals (3,000 workers); and Grocery Stores (2,000 workers) as shown in Figure C-18. These industries accounted for 36 percent of the subregion's employment. Other important manufacturing industries include Measuring and Controlling Devices (1,500 workers) and Guided Missiles, Space Vehicles, and Parts (1,500 workers).

Figure C-18
Industries With Highest Employment



Source: California EDD, Labor Market Information Division

Table C-17
Employment and Payroll by Industry
Antelope Valley, 1992

Industry	Employment	Percent	Total Annual Payroll	Percent	Average Annual Payroll	Payroll Index (LA = 100)
Aerospace	6,673	13.5%	\$326,895,196	23.9%	\$48,988	164
Computers, Electronics, Instruments	1,529	3.1%	\$70,066,032	5.1%	\$45,825	154
<i>High Technology</i>	8,202	16.6%	\$396,961,228	29.1%	\$48,398	162
Metals and Metal Products	100	0.2%	\$2,079,480	0.2%	\$20,795	70
Industrial Machinery	54	0.1%	\$1,005,048	0.1%	\$18,612	62
Transportation Equipment (Non-Aerospace)	23	0.0%	\$498,752	0.0%	\$21,685	73
Electrical and Communications Equipment	27	0.1%	\$680,196	0.0%	\$25,192	85
Durable Manufacturing	8,544	17.2%	\$405,005,356	29.6%	\$47,402	159
Food Products	62	0.1%	\$2,096,660	0.2%	\$33,817	113
Apparel and Textiles	3	0.0%	\$27,004	0.0%	\$9,001	30
Printing and Publishing	364	0.7%	\$9,290,088	0.7%	\$25,522	86
Chemicals, Petroleum, Rubber, Plastics	28	0.1%	\$693,984	0.1%	\$24,785	83
Non-Durable Manufacturing	476	1.0%	\$12,694,748	0.9%	\$26,670	89
Manufacturing	9,020	18.2%	\$417,700,104	30.6%	\$46,308	155
Transportation, Communications, Utilities	2,049	4.1%	\$61,248,004	4.5%	\$29,892	100
Wholesale and Retail Trade	8,512	17.2%	\$148,022,436	10.8%	\$17,390	58
Eating and Drinking Places	4,004	8.1%	\$33,987,024	2.5%	\$8,488	28
Finance, Insurance, Real Estate	1,681	3.4%	\$39,685,428	2.9%	\$23,608	79
Business Services	887	1.8%	\$13,435,292	1.0%	\$15,147	51
Motion Pictures	205	0.4%	\$2,009,616	0.1%	\$9,803	33
Health Services	5,372	10.8%	\$167,825,528	12.3%	\$31,241	105
Educational Services	4,596	9.3%	\$136,954,472	10.0%	\$29,799	100
Engineering and Management Services	602	1.2%	\$17,129,408	1.3%	\$28,454	95
ALL INDUSTRIES	49,541		\$1,366,344,552		\$27,580	93

Source: California EDD, Labor Market Information Division

Data Note

The main database used in the profiles of industry employment and earnings in Los Angeles County and the six subregions was the Industrial-Commercial Employer (ICE) database developed by the California Employment Development Department. This data includes location, industry designation, number of workers, and quarterly payroll for all establishments in Los Angeles County in the third quarter of 1992. Data in the ICE database was recategorized to determine the employment and earnings profiles of the six subregions and the eight Southeast Los Angeles County Economic Alliance cities.

Part D: Displaced Aerospace/Defense Worker Strategies

Introduction

In 1992, the Aerospace industry contributed \$7.3 billion, or 7 percent, to the total county payroll, and employed 4 percent of the Los Angeles County's workers. In that same year, Southeast Los Angeles County employed 54,900 people in the aerospace sector, which was 35 percent of employment in the aerospace sector in Los Angeles County. This high exposure to the Aerospace/Defense sector meant that when defense spending cutbacks began, SELAC found one of its major industries with a diminishing market. The precipitous decline in employment in aerospace and related high technology industries was accompanied by a steady drop in employment in most other durable manufacturing industries, including metals and machinery industries. Many of these other durable manufacturers suffered as subcontractors to the declining aerospace industry. Not only have many of these jobs vanished, but they have taken with them the above-average wages that they once provided. As the economic dislocations from defense spending cut backs hit the SELAC region, one of the critical challenges is to find a viable way to reemploy these displaced Aerospace/Defense workers.

Understanding who is unemployed, what skills they bring to the labor pool and what they need to ensure a permanent transition into another industry, is a key element in designing Aerospace/Defense reemployment programs. The analysis presented in this chapter is devoted to illuminating important characteristics of the pool of displaced Aerospace/Defense labor. This examination supports the strong workforce transition mandate of the Gateway Cities Partnership. The Gateway Cities Partnership (GCP) will act as the coordinating body to help link the displaced labor force to other clusters in the SELAC Region. It will ensure that a well directed and comprehensive retraining avenue is provided for displaced Aerospace/Defense workers in the SELAC region. Details of the operation, goals and challenges of the GCP workforce transition mandate are outlined at the end of this chapter.

This chapter focuses on discussing the characteristics of the displaced workers and their retraining needs. The broader assessment of industry job loss is contained in Part E: Aerospace/Defense Subcontractor Strategies.

Summary of Findings About Laid-off Workers and Retraining Needs

- Twenty-nine percent of Los Angeles County's displaced aerospace workers reside in SELAC communities, making it the most severely impacted region of the county.
- SELAC residents are especially concentrated in machine operator and precision production occupations. Workers displaced from these occupations face wage deflation of as much as 50% when seeking to transfer their skills to related jobs outside aerospace.

- Minorities make up nearly two-thirds of laid-off aerospace workers — loss of these jobs is a multiethnic issue, having serious adverse impacts on all groups.
- Half of laid-off aerospace workers have only a high school degree and one-fifth are not high school graduates. Specific vocational training received on the job, a 10% to 20% salary differential typically paid by defense employers, and employee benefits equaling 49% of salary have enabled these workers to achieve a level of productivity and standard of living that is extremely difficult for them to replicate outside the durable manufacturing sector.
- Laid-off aerospace workers are typically mature adults with deep roots in the community, making it difficult to relocate and begin a new career. Forty percent are 45 years of age or older, and another 42% are between 31 and 44 years of age.
- In fiscal year 1994-95 there were roughly 3 laid-off aerospace workers for every job opening utilizing aerospace-linked skills. Overall, job openings were scarcest for the most skilled workers: over 4 mechanics, first-line supervisors and natural scientists for every job opening, and 5 engineers and 6 managers for every opening.
- The average wage for job openings in aerospace-linked occupations in Los Angeles County is \$8.15 per hour, less than one-third the average annual aerospace salary of \$48,900. Many manufacturing jobs now available in the region are in the nondurable sector (e.g., apparel, plastic products) where value-added-per-worker is much lower than in aerospace. For example, assembler jobs that are available typically pay \$5 to \$6 per hour, compared to \$12 to \$14 per hour in aerospace.
- Existing training programs were designed to help workers in a growing economy reconnect with employers in the same industry that previously employed them. These programs are poorly suited for helping workers make fundamental career changes to qualify for new occupations in different industries, or for providing incentives to employers to hire workers needing extensive retraining.

Overview of SELAC Work Force Issues

The fundamental impact of defense cutbacks is that some of the most productive workers in SELAC communities have lost the opportunity to contribute to the economy, and are instead unemployed or underemployed. Los Angeles County has lost 60% of the aerospace jobs it had in 1988. The most recent study of what has happened to these displaced workers found that 39% have retired, left the state or remain unemployed. Another 27% have some employment earnings but have not found permanent, secure jobs, and when they did work earned roughly 14% less than in their former jobs.¹

There is an important public interest in capitalizing on the social investment and economic productivity linked to the skills of durable manufacturing workers in high technology sectors. The

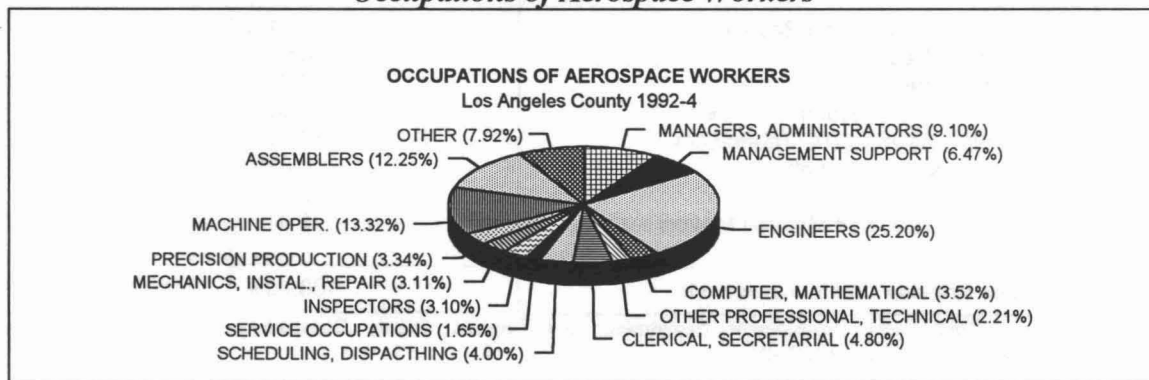
¹ 1996 RAND study entitled, *Life After Cutbacks: Tracking California's Aerospace Workers*. Cited in Oden, Michael, et al, *Post Cold War Frontiers: Defense Downsizing and Conversion in Los Angeles*, p. 90. Project on Regional and Industrial Economics, Rutgers, 1996.

quality of the work force is a key factor in determining the course of the regional economy. Skilled workers being laid-off by defense employers represent an asset for the SELAC region in retaining and attracting skilled manufacturing and related producer service industries.

Aerospace Occupations

Aerospace work force reductions are a dynamic process, reflecting both overall reductions in work force size caused by defense cutbacks, a depressed market for commercial aircraft, as well as changes in the types of occupational skills employers need as defense products and manufacturing processes undergo change. This section looks at the work force composition of aerospace industries and the next section looks at dynamic changes resulting from industry restructuring. Figure D-1 summarizes occupations employed in aerospace industries, and Table D-1 below provides a more detailed listing of the percent of workers in each aerospace job family. Appendix D1 provides a full occupational matrix for Los Angeles County aerospace industries (aircraft and parts, missiles and space vehicles, and search and navigation equipment).

Figure D-1
Occupations of Aerospace Workers



Aerospace has been remarkably effective in linking highly trained engineers, scientists and technicians (30% of the work force) with high school-educated production workers (70% of laid-off workers have a high school education or less) to create high-value-added design and production networks that support a high standard of living for all workers.

Aerospace industries include aircraft (SIC 372), missiles (SIC 376), and search and navigation equipment (SIC 381). In Los Angeles County these industries have grown into a concentrated, specialized, high value added durable manufacturing network encompassing basic scientific research, design and engineering activities, precision production, assembly, maintenance, and replacement of parts. The following sections explore information from recent aerospace lay-offs and postings of aerospace job openings that indicates this occupational structure is undergoing fundamental restructuring.

Table D-1

Job Family	Percent of Aerospace Workers
Managers and Administrators	9.10%
Management Support	6.47%
Engineers and Related Workers	25.20%
Natural Scientists and Related Workers	1.27%
Computer, Mathematical, Operations Research	3.52%
Health Technicians	0.13%
Writers, Artists	0.93%
Other Professional, Technical	2.21%
Sales	0.78%
Clerical and Administrative	0.76%
Secretarial and General Office	4.05%
Electronic Data Processing	0.54%
Communications Equipment Operators	0.05%
Scheduling, Dispatching, Distributing	4.00%
Other Clerical, Administrative Support	1.12%
Service Occupations	1.65%
Agricultural, Forestry	0.01%
First Line Supervisors/Managers	1.27%
Inspectors	3.10%
Mechanics, Installers and Repairers	3.11%
Construction Trades	0.60%
Precision Production	3.34%
Machine Setters, Operators, Tenders	13.32%
Hand Work - Assemblers, Fabricators	12.25%
Plant and System Occupations	0.03%
Vehicle Operators	0.57%
Helpers, Laborers, and Material Movers	0.61%
Total Los Angeles County Aerospace	100.00%

Source: Employment Development Department, Los Angeles County Occupational Employment Statistic Survey 1992-94.

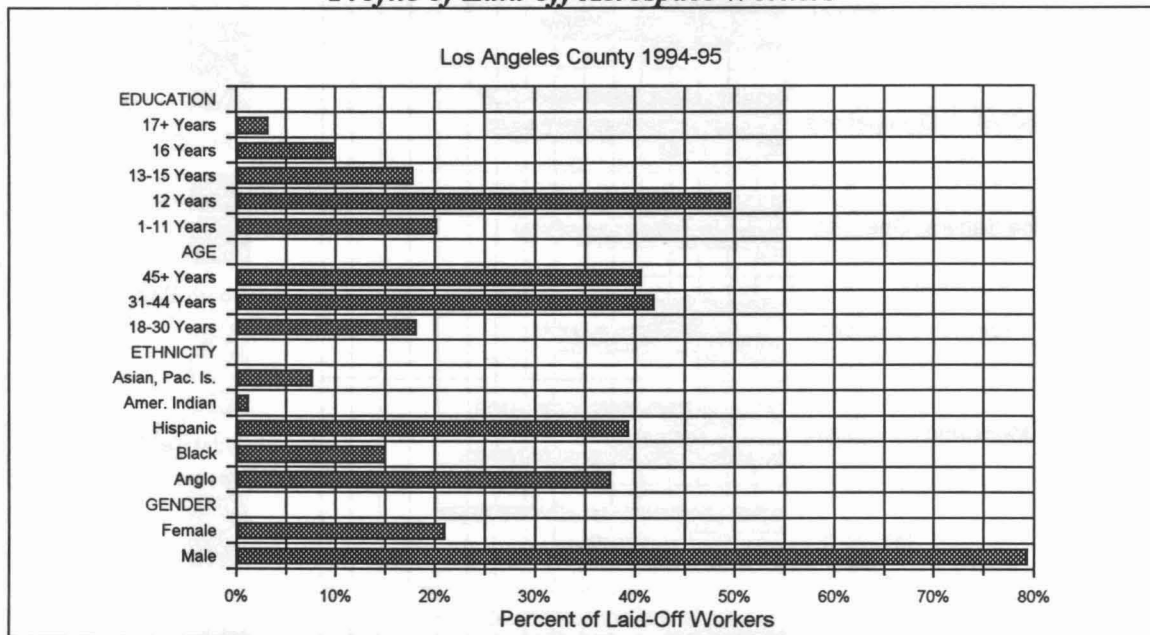
Geography of Aerospace Lay-Offs

The California Employment Development Department (EDD) assisted this study by providing data bases on Los Angeles County job seekers it served in the 1994-95 fiscal year, job openings in the county posted with EDD during 1994-95, and the occupational composition of industries in Los Angeles County. These data bases were sorted and analyzed to provide a variety of detailed information about workers laid-off² from aerospace occupations and job openings occurring in those same occupations. Information in these data bases identifies laid-off workers' zip code of residence, occupation, education, age, ethnicity, and gender. Information about job openings identifies the occupation title, wage, and number of openings. Figure D-2 summarizes information about the characteristics of laid-off aerospace workers.

² The data base on job seekers includes all individuals requesting employment services from EDD, most of whom have lost their jobs and are seeking new jobs. For the sake of simplicity, this report refers to these individuals as laid-off workers, although other categories of job seekers such as discouraged workers seeking to reenter the labor market are part of this population.

Using occupational matrices for aerospace industries it was possible to determine that of the 191 OES occupations hired for aerospace work, 101 occupations are industry-specific, that is they are found predominantly in aerospace industries. For example, aeronautical engineers and punch machine setters are industry-specific occupations; accountants, secretaries and truck drivers are generic occupations found in many industries other than aerospace. The 101 industry-specific aerospace occupations account for 71% of total aerospace employment.

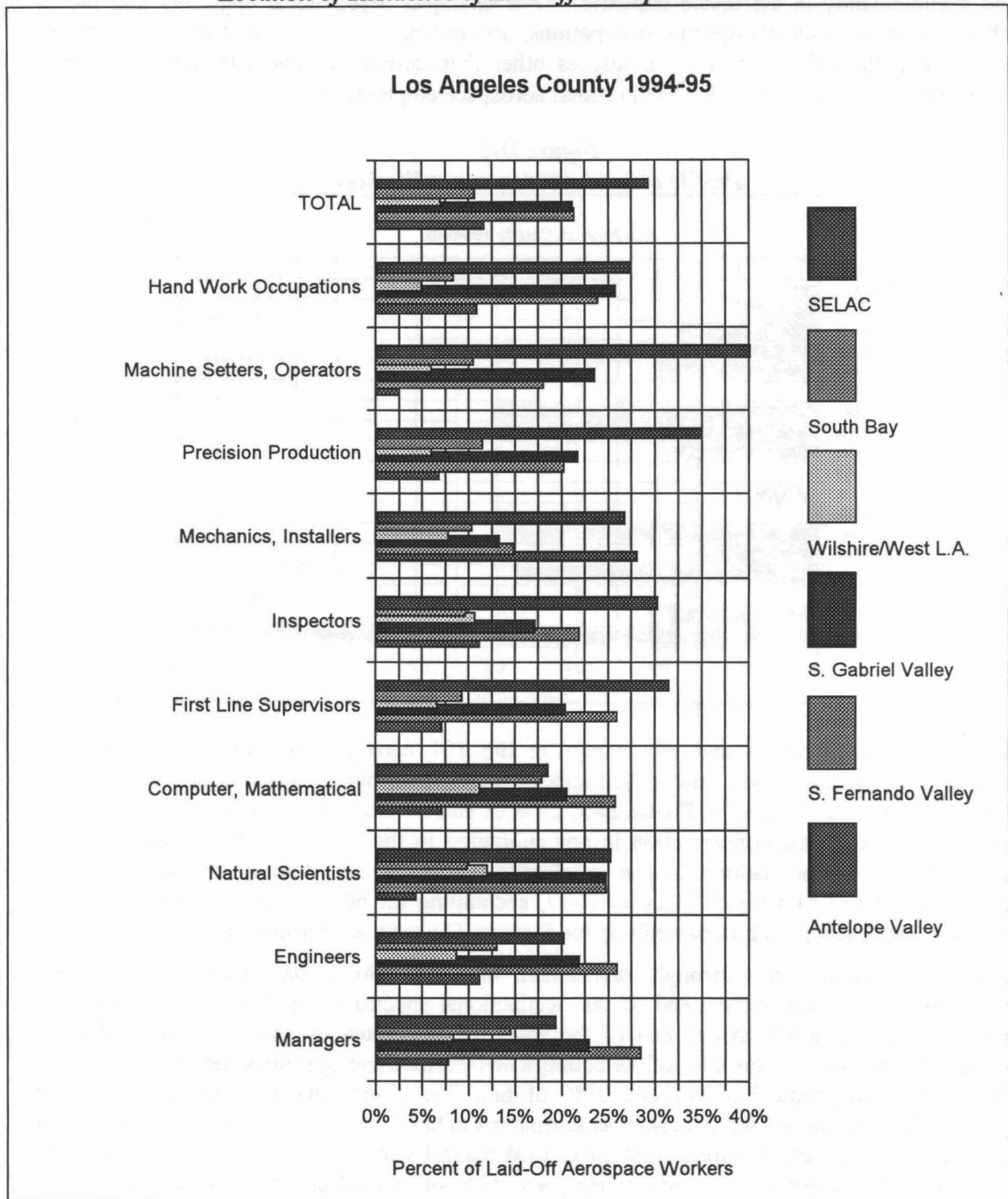
Figure D-2
Profile of Laid-off Aerospace Workers



Information about workers and job listings in the 101 aerospace-specific occupations was extracted from the data bases, and broken into six subregions, one of which is the twenty-seven city SELAC area. As shown in Figure D-3, 29% of laid-off aerospace workers live in SELAC communities, the largest concentration in any subregion in the county. This is not surprising given that two of the nation's largest production programs for defense aircraft, Northrop Grumman's B-2 and McDonnell Douglas' C-17, accounting for 60% of county defense revenue reported in 1994, along with Rockwell's Space Systems Division, are located in SELAC.

SELAC residents are most strongly represented in skilled blue collar occupations and less concentrated at the professional end of the occupational spectrum populated by engineers and managers or at the lower skilled end of the spectrum populated by assemblers and laborers. SELAC residents account for 40% of the county's laid-off machine operators, setters and tenders, 35% of precision production workers, 31% of first line supervisors and managers, 30% of inspectors, 27% of laid-off workers such as assemblers in hand work occupations, 27% of laid-off mechanics, installers and repairers, 25% of laid-off natural scientists, 20% of laid-off engineers, 19% of laid-off managers and administrators, and 18% of laid-off computer, mathematical and operations research workers.

Figure D-3
Location of Residence of Laid-off Aerospace Workers



In terms of absolute numbers of impacted workers, the largest number of laid-off SELAC aerospace workers were in machine setter, operator and tender occupations (1,241), followed by

hand working occupations (1,002), mechanics, installers and repairers (804), precision production occupations (622), engineers (502), inspectors (272), first line supervisors (176), computer, mathematical and operations research workers (84), managers and administrators (76), and natural scientists (55). Appendix D2 provides detailed information identifying the subregions in which dislocated workers from each occupation live.

Education of Laid-Off Aerospace Workers

Laid-off workers in managerial and technical occupations (managers and administrators, engineers and related workers, natural scientists, and computer and mathematical workers) typically have college degrees, with some technician and paraprofessional workers in those occupational groups having some college but less than a four-year degree, or just a high school degree. Laid-off first line supervisors, inspectors, mechanics and installers, and precision production workers predominantly have high school degrees. Laid-off machine setters, operators and tenders as well as workers from hand working occupations such as assemblers most frequently have high school degrees, but many (37% and 33%, respectively) have less than a high school education. The 70% of laid-off aerospace workers who have only a high school education or less will find it very difficult to earn family-supporting wages outside the shrinking durable manufacturing sector. Figure D-4 shows the education of laid-off aerospace workers in each industry-specific occupational group (detailed information about characteristics of laid-off aerospace workers is provided in Appendix D3).

Age of Laid-Off Aerospace Workers

The largest number of laid-off managers, inspectors, mechanics and installers, precision production workers, machine setters and operators, and assemblers are between 31 and 44 years of age. This is followed by workers 45 and older. Workers between 18 and 30 years of age are the smallest group of workers laid-off from these occupations. Laid-off workers in professional and technical occupations such as engineers, as well as first line supervisors, tend to be older. The largest group is 45 or older, followed by workers between 31 and 44 years of age, with a relatively small group of laid-off 18 to 30 year olds. Work force reductions in the aerospace industry are thrusting many older (and often less educated) workers into an inhospitable and unpromising labor market. Figure D-5 shows the age of laid-off aerospace workers in each industry-specific occupational group.

Ethnicity and Gender of Laid-Off Aerospace Workers

An important finding from this study is that the largest group of laid-off aerospace workers is Hispanic (39%), followed by Anglos (37%), African Americans (15%), Asians and Pacific Islanders (8%), and American Indians, Eskimos and Aleuts (1%). Hispanics predominate in the assembler and machine operator occupations, and Anglos predominate in the mechanic, engineering, computer and mathematical, and administrative occupations. Inspectors, first line supervisors, and natural scientists are more heterogeneous, with no single ethnic group predominating. This finding indicates that minority blue collar workers have been important

beneficiaries of aerospace jobs, and lay-offs may separate many from opportunities for a decently housed, financially stable and upwardly mobile future. Figure D-6 shows the ethnicity of laid-off aerospace workers in each industry-specific occupational group.

Women account for 21% of laid-off aerospace workers, and 48% of lay-offs from hand working occupations such as assemblers. The next largest concentrations of female lay-offs are from inspectors (38%), machine setters, operators and tenders (15%), and engineers (15%). Figure D-7 shows the presence of laid-off female workers in different occupational groups.

Jobs Available in Aerospace-Linked Occupations

Job openings for aerospace occupations in the SELAC region are in large measure the result of growth in nondurable manufacturing industries such as apparel and textiles that use some of the same occupations as aerospace (for example, assemblers, machine operators, inspectors) but achieve less value-added-per-worker and offer lower pay. Figure D-8 shows the number of job openings in aerospace-linked occupations posted with the Employment Development Department in fiscal year 1994-95. The availability of job openings in different occupational groups tends to be in inverse proportion to the pay level offered for the jobs. The largest number of job openings are for hand working (assembly and fabrication) occupations, which have the lowest pay levels, with progressively declining numbers of openings for machine operators, precision production workers, mechanics, inspectors, supervisors, technical professionals, and managers.

The number of laid-off aerospace workers for every job opening in aerospace-linked occupations in fiscal year 1994-95 is shown in Figure D-9. Overall, there were slightly more than 3 laid-off aerospace job seekers for every job opening. Hand working-assembler workers had the most favorable prospects for finding a job, with less than two job seekers for every opening. Engineers and managers faced the most difficult prospects, with more than 5 and 6, respectively, job seekers for every opening (Appendix D4 provides a detailed break-out of this information).

The median hourly wages offered for available aerospace-linked jobs is shown in Figure D-10. The weighted average pay for all job openings was \$8.15 per hour. Jobs in hand working occupations such as assemblers paid an average of \$5.62 per hour. The highest pay offered was for engineers and related occupations and averaged \$16.43 per hour. The average wage of \$8.15 per hour for job openings in aerospace-linked occupations in Los Angeles County is less than one-third the average annual aerospace salary of \$48,900 (which does not include the 49% employee benefit package provided, for example, to Northrop Grumman workers at the Pico Rivera B-2 facility).

Figure D-4
Education of Laid-off Aerospace Workers

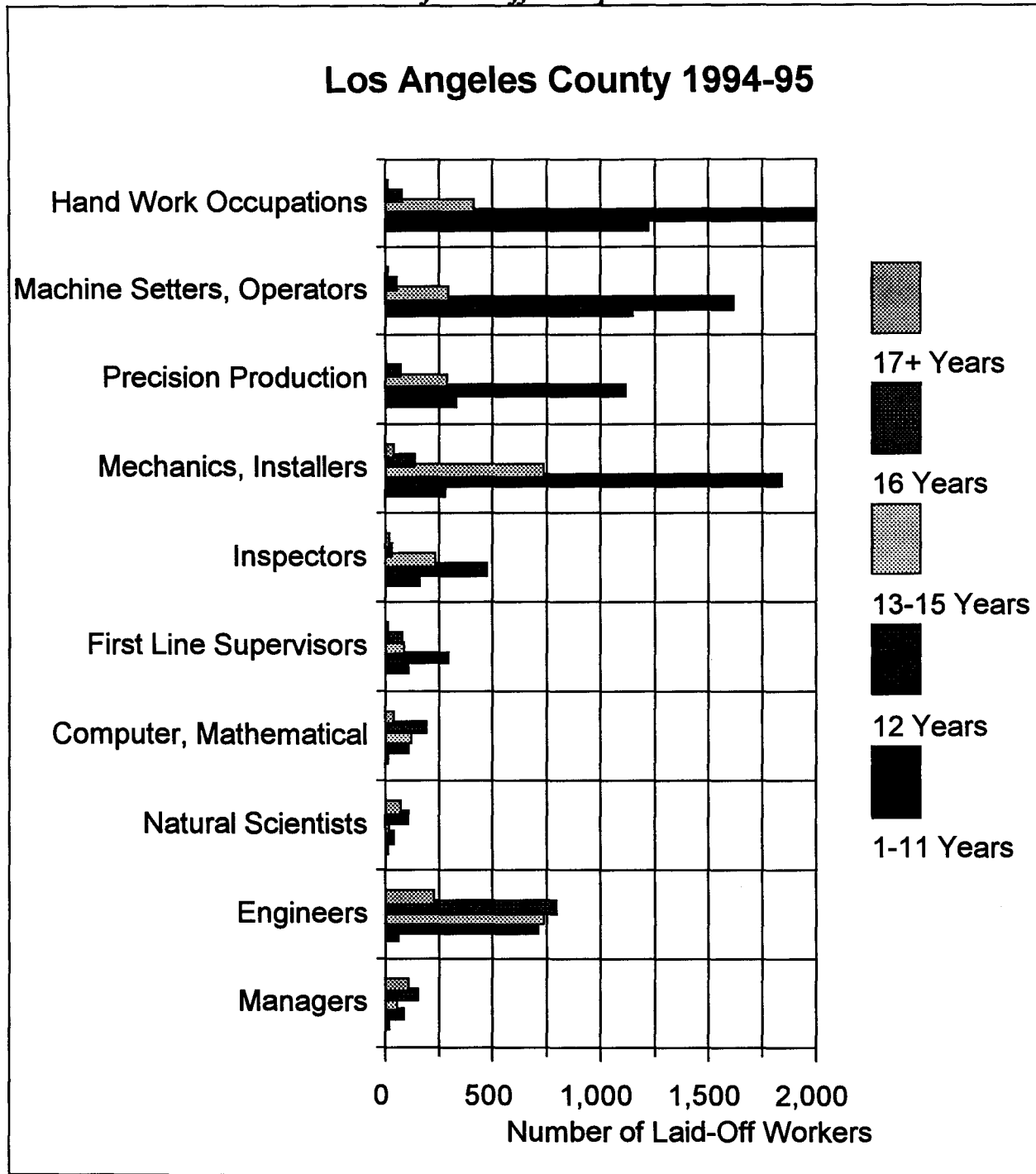


Figure D-5
Age of Laid-Off Aerospace Workers

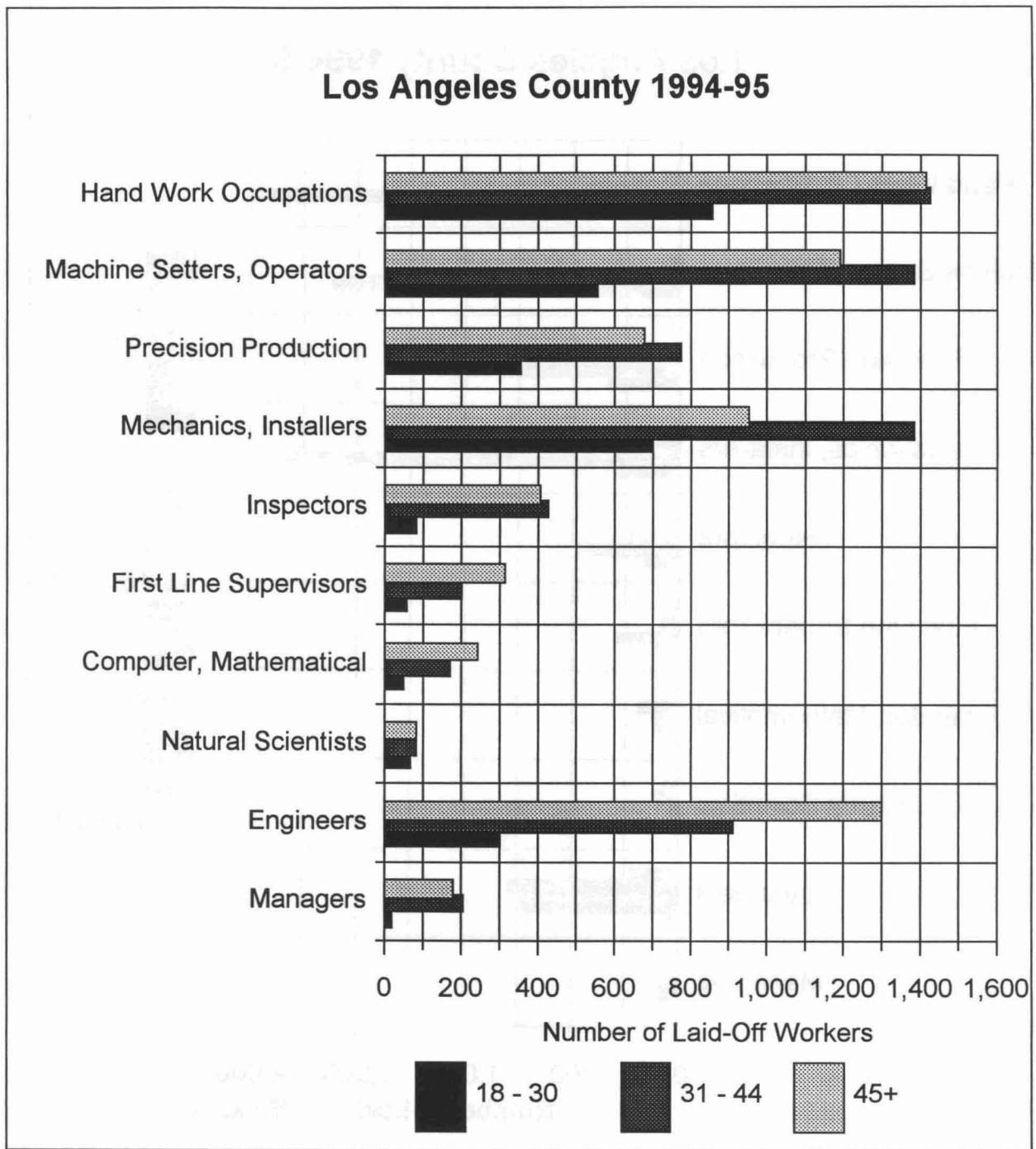


Figure D-6
Ethnicity of Laid-off Aerospace Workers

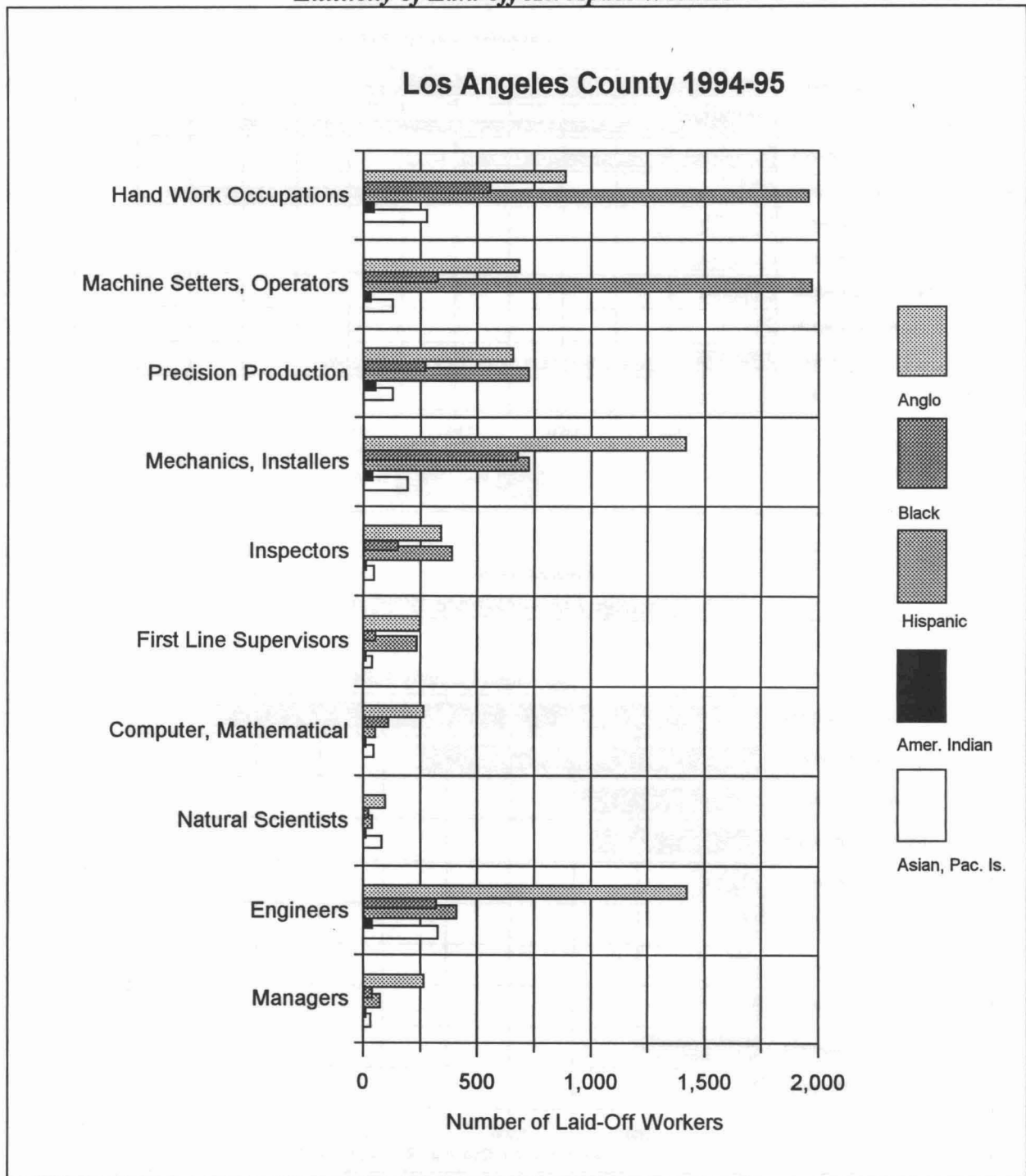


Figure D-7
Gender of Laid-off Aerospace Workers

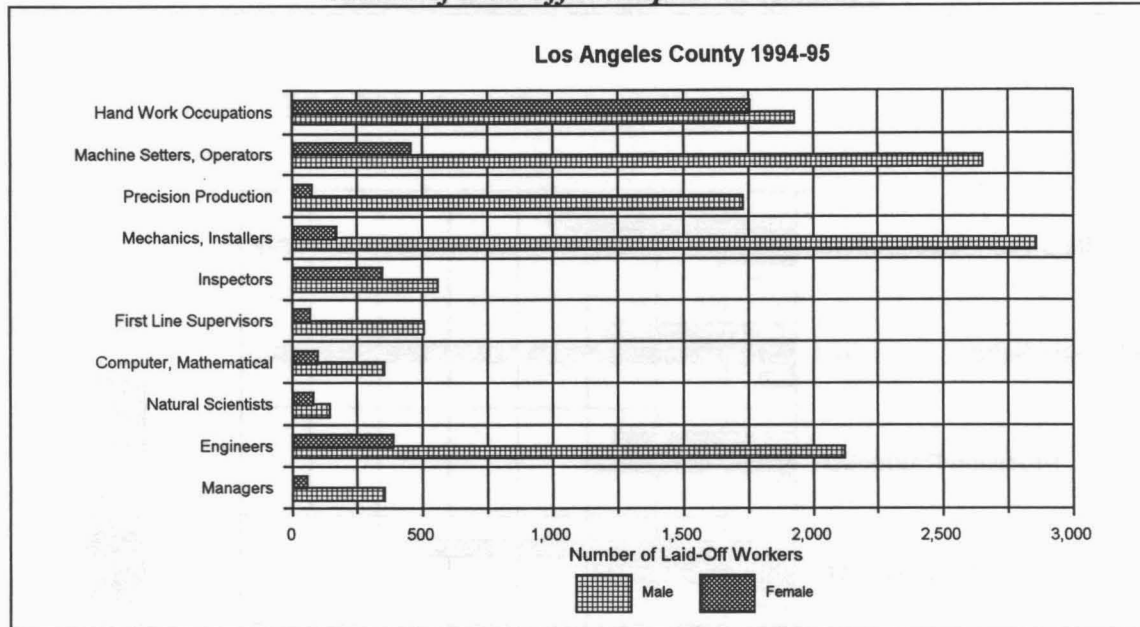


Figure D-8
Job Openings for Aerospace Workers

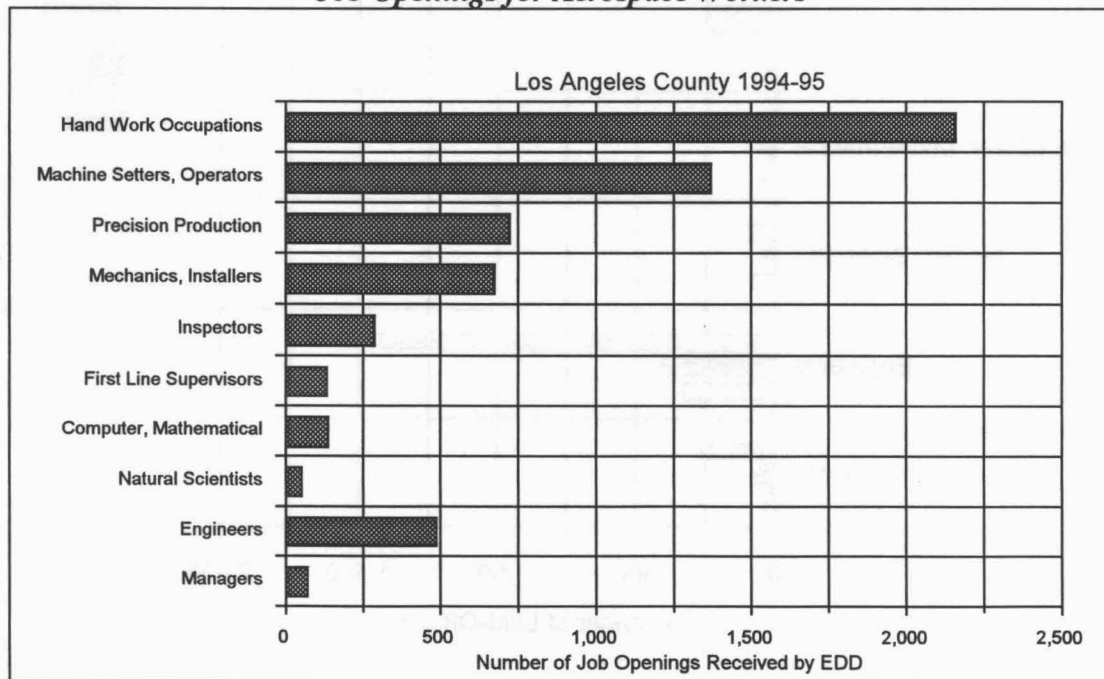


Figure D-9
Wages Offered for Available Jobs

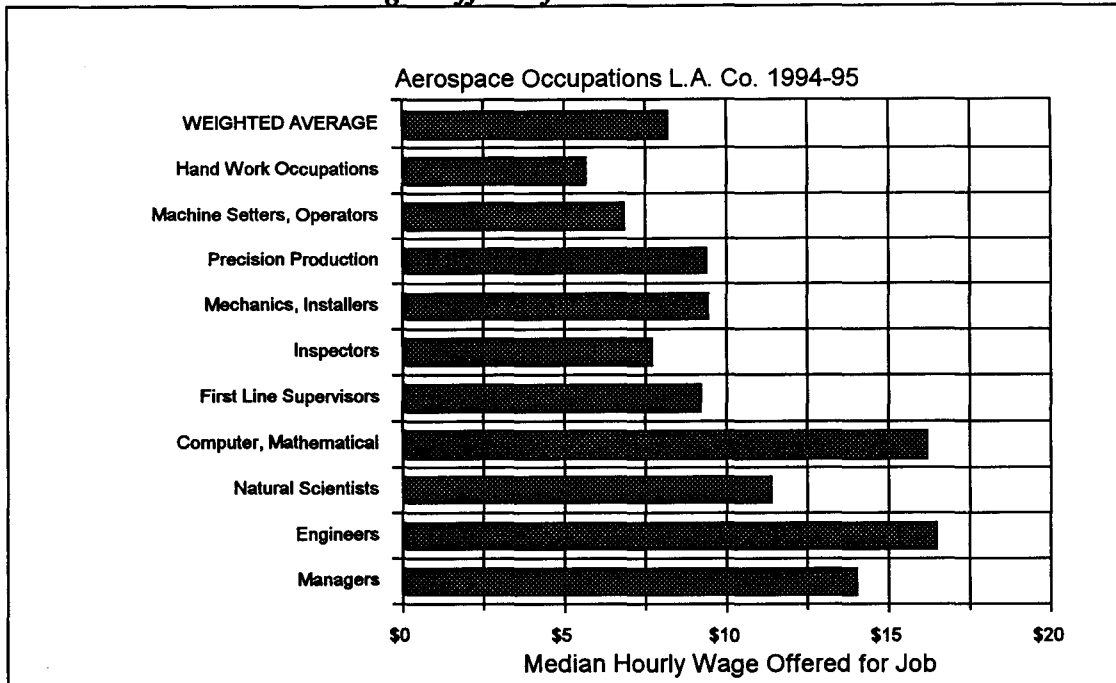
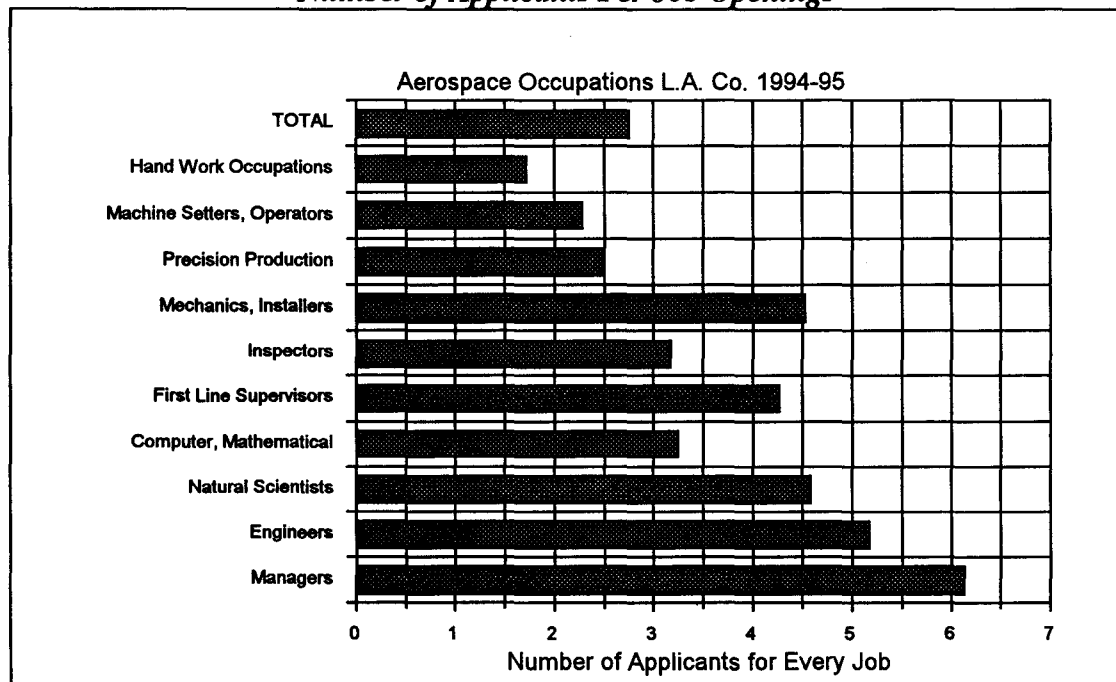


Figure D-10
Number of Applicants Per Job Openings



Work Force Restructuring in Aerospace Industries

Important insights into the changing make-up of the aerospace work force as well as changing skill demands in the regional labor market are provided in Figure D-11. The chart makes it possible to compare the percent of the total aerospace work force in each job family to the percent of laid-off workers from each job family, as well as the percent of job openings available to job seekers from each job family. Findings for each job family are as follows:

- Aerospace workers in hand working occupations such as assemblers are being laid-off in disproportionately large numbers compared to their presence in the aerospace work force, but an even larger percent of available job openings are in these occupations although for much less pay than in aerospace. (It should be remembered that the pool of available jobs is only one-third as large as the pool of laid-off aerospace workers, and that even for assemblers, there are nearly two laid-off workers for every job opening.)
- Machine operators are being laid-off in numbers proportionate to their presence in the aerospace work force, with a percent of job openings for this occupational group that is disproportionately large compared to the percent of laid-off workers.
- Precision production workers account for a percent laid-off aerospace workers roughly double their presence in the aerospace work force, with a percent of job openings available to them that is slightly greater than their share of aerospace lay-offs.
- Mechanics, installers and repairers account for a percent of laid-off aerospace workers nearly five times greater than their share of the aerospace work force, with a percent of job openings available to them that is about a third smaller than their share of lay-offs.
- Inspectors and first line supervisors are being laid-off in numbers slightly greater than their share of the aerospace workforce, with a percent of job openings available to them that is roughly proportionate to their presence among laid-off workers.
- Computer, mathematical and system operations researchers, natural scientists, engineers, and managers and administrators account for a percent of laid-off aerospace workers that is less than half their share of the aerospace work force, and the percent of job openings available to them through the Employment Development Department is only half as large as their share of aerospace lay-offs. (Note: this may over-state the scarcity of jobs professional and technical job openings because it is possible employers of these workers are less likely than other employers to recruit workers through EDD, and therefore are under-represented in this data set.)

This overview suggests aerospace lay-offs are falling disproportionately heavily on production workers, with relatively few engineers and managers being laid-off. The increasing emphasis of the region's aerospace employers on retaining higher skilled and higher paid jobs is in marked contrast to overall trends in the regional labor market where demand is greatest for low-skilled occupations such as assemblers, and least for high-skilled occupations such as engineers. Retention and growth of aerospace and other durable manufacturing jobs is clearly essential if high-value-added and well paid production workers are to have a place in the regional economy.

Figure D-11
Supply and Demand for Aerospace Skills

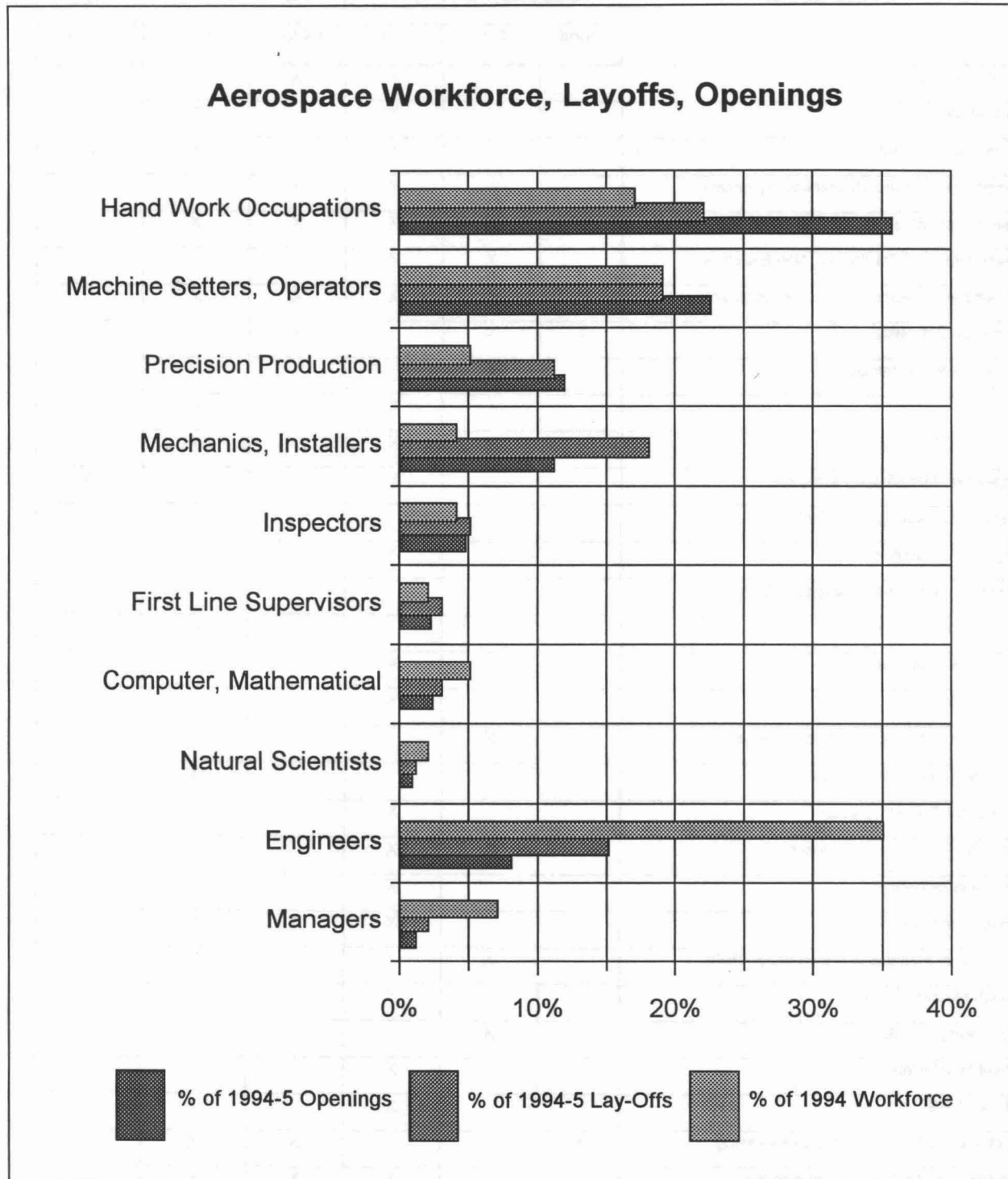


Table D-2
Occupational Transition Path Data for Major L.A. County Aerospace Occupations

Occupation Title	Re-Employment Prospects			Duration of Needed Retraining		
	Good	Fair	Poor	1-6 Mo.	6-18 Mo.	18+ Mo.
Accounting Clerks			X	X	X	
Aircraft Mechanics			X		X	
Assemblers, Aircraft			X		X	X
Assemblers, Electro-Mechanical Equipment		X	X	X	X	
Assemblers, Electronic and Electrical		X	X	X	X	
Assemblers and Fabricators, Non-Electrical		X	X		X	
Assemblers, Electrical Equipment-Precision			X	X	X	
Computer Scientists	X	X		X	X	
Computer Programmers		X			X	
Drafters			X		X	X
Electronic Repairers			X		X	
Engineers, Aircraft and Aerospace			X			X
Engineers, Electrical and Electronic		X			X	
Engineers, Industrial			X		X	X
First Line Supervisors/Managers-Production		X			X	
General Office Clerks		X			X	
General Secretaries			X		X	X
Machinists			X		X	
Managers, Engineering, Math, Science		X			X	
Managers, Industrial Production		X			X	
Numerical Control Operator			X		X	X
Operating Systems Researchers		X	X		X	X
Precision Inspectors			X		X	
Production Inspectors			X	X	X	
Production, Planning and Expediting Clerks		X		X	X	
Punch Machine Setters			X		X	
Purchasing Agents		X				X
Sheet Metal Workers			X		X	
Stock Clerks			X		X	
Systems Analysts, Elec. Data Processing	X	X		X	X	
Technicians, Mechanical Engineering			X	X	X	
Technicians and Technologists, Elect.			X		X	
Technical Writers		X	X			X

Existing Training Programs

Generally, the training resources in the region are limited and information about what is available is not being clearly passed on to those in need. At one time two local unions had programs for displaced aerospace union members, however both these programs have ended. Hughes Aircraft, McDonald Douglas, Lockheed, Northrop and Rockwell all use outside services for retraining, however these provided only resume writing and job finding strategies. The Aerospace Network, a coalition of 14 Service Delivery Area Private Industry Councils which work with aerospace firms such as Hughes, Northrop, McDonald Douglas and TRW. This coalition includes union members. They have a \$18 million grant which allows workers to access services where they live as opposed to where they worked. Many organizations claim to provide aerospace related training but only those that are part of the Aerospace Network are the ones recognized by the Employment Development Department. The database of training providers was completed for this study using information from Network members and it includes approximately 492 different training programs. It was been sorted alphabetically by occupational area and also by name of program. The database is listed in Appendix D. The map on the next page displays the location of each of the establishments listed in this database.

In general there are indications that salaries are not high in the training sector which could affect the quality of the intake personnel. Also, an assessment of some training programs indicated that they did not appear to be pertinent to industry requirements. For instance, at one training provider, training was still being conducted in WordPerfect 5.1 even though the industry standard is now 6.1. This is critical considering that one of the areas that aerospace-related firms are behind is that they do not upgrade their systems and many of their employees are not computer literate in the latest software packages. This meant that laid-off workers who got training were hampered in their ability to immediately find work.

The state of existing training programs suggests that the Gateway Cities Partnership or the County should maintain the list of training providers so that it is readily accessible to any interested party. There should also be some central entity that controls the kind of training provided so that it meets the needs of business and businesses should be involved in developing training.

Conclusions and Recommendations for Worker Retraining

One of the harsh realities in the downsizing of the Aerospace/Defense sector is that the displaced workforce stands little chance of getting another job in this field. As a consequence, many of them need the type of retraining that will enable them to make career changes into other industries.

The Gateway Cities Partnership

The Gateway Cities Partnership (GCP) will act as the coordinating body to help link the displaced labor force to other clusters in the SELAC Region. The GCP will be given the task of providing skills transition network services, enabling Aerospace/Defense companies to retrain threatened or displaced workers for new civilian markets. The GCP will ensure that a well directed and comprehensive retraining avenue is provided for displaced Aerospace/Defense worker in the SELAC region.

Retraining programs will focus on providing long-term retraining and support services needed by the Aerospace/Defense workforce. It is important to recognize that current retraining facilities are not suitable for providing the transitional assistance needed by the displaced Aerospace/Defense sector employees. Most existing worker training programs were designed in the 1980s when the economy was growing and the need was for programs that could provide short-term transitional assistance for workers seeking a new job in an industry in which they already had experience. This model does not fit the situation of aerospace workers, many of whom must leave both their industry and occupation behind. These individuals must acquire the competencies needed to start over in a new industry and occupation if they are to find a job. It is, therefore, recommended that programs under the GCP be designed specifically to address the problems of the displaced Aerospace/Defense workers, and not be merely incremental adjustments to existing program models.

To help laid-off aerospace workers make this difficult transition, the GCP will:

- Establish new cost and performance standards that allow retraining and supportive services to be provided for as long as 24 months.
- Provide training assistance in a form that is appealing to employers and offsets the costs they incur in training workers coming from different industries. An example of an innovative, employer-friendly form of training would be customized classroom training provided at the employer's site followed by on-the-job training at that site for successful graduates of the classroom training program.

Throughout this document, one of the key goals of the SELAC Defense Adjustment Strategy has been *to help link the displaced labor force to other clusters*. At ground level this means helping Aerospace/Defense workers become suitable for jobs in other, often unrelated, companies. It is, therefore, of crucial importance to the successful outcome of this strategy that the GCP ensure that these non-Aerospace/Defense companies are active participants in the process. To bring companies on board, the GCP will need to market the benefits that the retraining programs can afford these firms.

- Participation in GCP directed retraining programs provides wage subsidies to employers and an opportunity to evaluate workers before making a hiring commitment.

In designing programs for the displaced Aerospace/Defense workforce, it is important to recognize that these workers are not a homogenous group, they differ in education, experience and skills. It is only reasonable that they will ideally end-up in a variety of occupations and industries. Any program designed to address the needs of all of the displaced Aerospace/Defense labor force must, therefore, be sufficiently flexible to accommodate an eclectic array of retraining requirements. To assist in this goal, the GCP will:

- Allow combinations of training modalities that meet the needs of both employers and workers, including classroom training (either customized training at the employer site or instruction at a dedicated facility) and on-the-job training.
- Target recruitment efforts on groups such as mechanics, installers and repairers that are being particularly hard hit by lay-offs and have very few job openings available to them in the regional economy.
- Support the initiative of displaced workers from skilled occupations in finding innovative means of becoming reemployed, including vouchers for self-selected training programs and entrepreneurial projects for becoming self-employed.
- Design training programs to seek optimal (rather than minimal) matches between the skills and aptitudes of displaced workers and the requirements of new jobs. This should include use of aptitude tests, skills transference inventories, and labor market data.
- Use labor market data to identify growing firms that need workers with skills similar to those of displaced workers. Specific efforts should be made with these employers to overcome the stigma often associated with previous defense employment.

Although it is important for the GCP to recognize and implement systems sufficiently flexible to meet the needs of the wide array of displaced defense/aerospace workers, the GCP will also be the responsible for establishing general standards for retraining programs. The GCP will:

- Set standards for needs-related payments to cover costs for medical insurance, child care, transportation, and tools essential for reemployment.
- Establish new cost and performance standards that allow retraining and supportive services to be provided for as long as 24 months.

Three tools to assist the Gateway Cities Partnership facilitate SELAC's Aerospace/Defense workers move towards employment in the region's clusters are listed below:

- **Flexible Training Funding:** This will taking advantage of federal funding programs, while managing their application in the region to ensure the provision of flexible retraining programs.
- **Transition Vouchers:** These vouchers will be for self-selected training programs and entrepreneurial projects for self-employment. They are part of the initiatives to support displaced workers from skilled occupations find innovative means of becoming reemployed.

- **Retain Aerospace/Defense jobs and competencies:** Develop a civilian marketing partnership to assemble and share information on market structure, segments and opportunities that can be served by the region's Aerospace/Defense competencies. The program will establish collaborative development centers that provide access to services and equipment for proof of concept, product development and beta testing.

Part E: Aerospace/Defense Subcontractor Strategies

Introduction

A diverse set of Aerospace/Defense subcontractors call SELAC home. These companies have used the region as a base to participate in the production of aircraft, missiles, space vehicles and search and navigation equipment. They have been severely hurt by defense expenditure reductions and increased outsourcing by prime contractors in the region to companies located outside of the SELAC area. The restructuring, relocation and closure of prime contractors and subcontractors resulted in the loss of 60 percent of Los Angeles County's aerospace jobs between 1988 and 1995.

To face their challenges, the subcontractors need:

- a flexible and consistent tax and regulatory regime.
- improved access to financing for product development and re-tooling.
- improved access to high-risk capital for starting new businesses.
- more help in applying new technologies to improve productivity.
- improved marketing and product commercialization skills.
- more workforce training programs focused on their specific needs.

The workforce training, market transition and technology innovation efforts of the Gateway Cities Partnership will play valuable complementary roles in addressing the needs of the Aerospace/Defense subcontractors.

Summary of Findings of Subcontractors Analysis

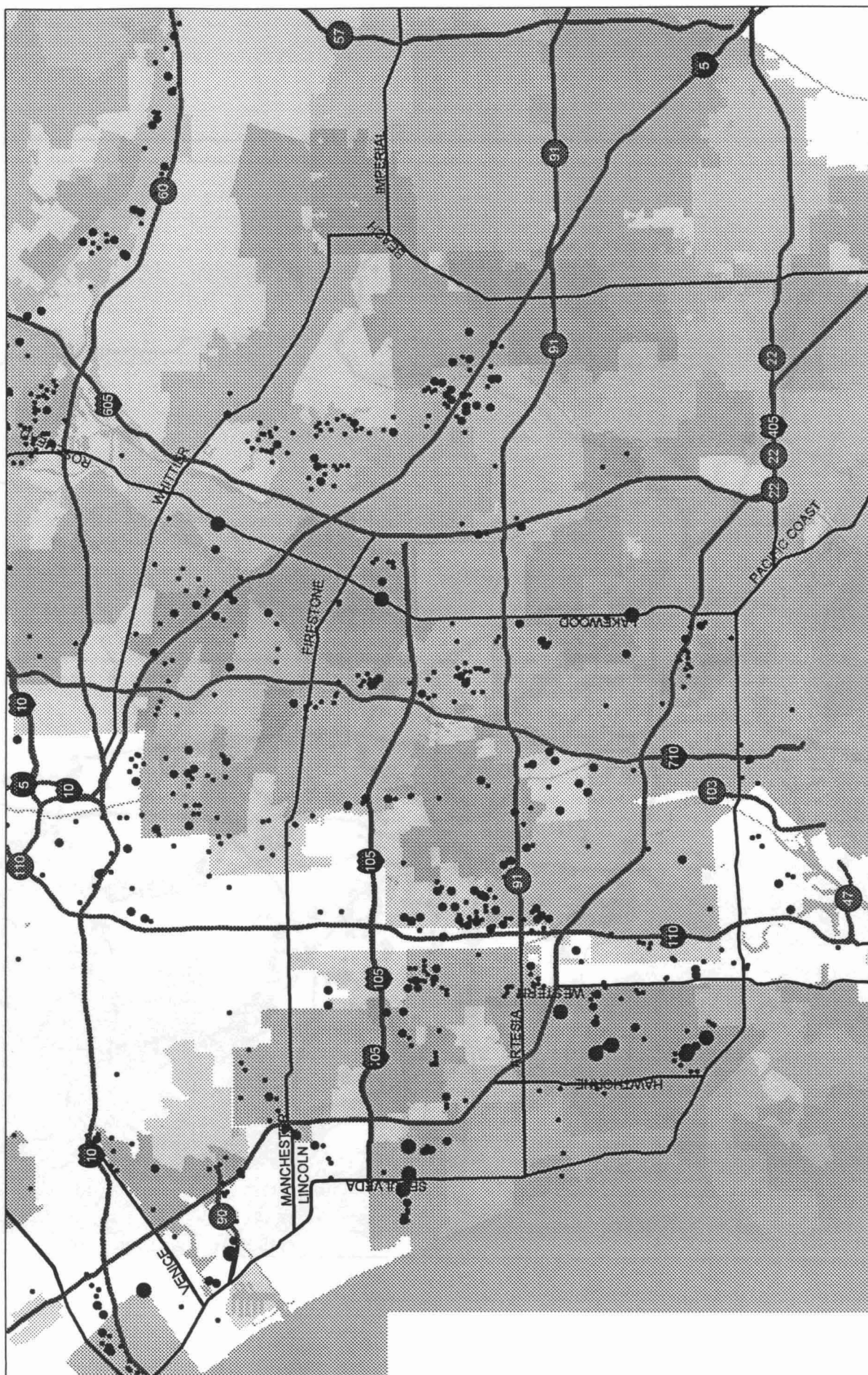
Extensive analysis was undertaken of trends in publicly disclosed and secret defense expenditures, and the relationship between prime contractors and subcontractors in the region. The needs of subcontractors in the face of the challenges in front of them was also determined. The key analytical findings of this process are:

- The current-year value of publicly disclosed defense contracts awarded to firms in the county declined only 18 percent between 1987 and 1994, but increased labor productivity further reduced this by 22 percent, and inflation reduced it by another 19 percent.
- The B-2 Advanced Technology Bomber and the C-17 Cargo Aircraft accounted for 59 percent of DoD revenue for Los Angeles County in 1994, but when these programs end, the county's once dominant military aircraft industry may no longer exist.

- The number of firms in the county receiving DoD prime contracts declined from a high of 1,557 in 1987 to 939 in 1994. This 40 percent decrease means that more than 600 local firms stopped receiving defense business during those seven years.
- Defense funding is highly concentrated. The share received by the ten largest contractors increased from 73 percent in 1987 to 88 percent in 1994. The county's top three firms (McDonnell Douglas, Northrop Grumman, and Hughes) now account for nearly two thirds of DoD revenue.
- The missile industry has gone from Los Angeles County. Hughes purchased and moved existing production programs to Tucson, Northrop Grumman's development programs were canceled, and no local prime contractor is part of the new JASSM program.
- The value of secret programs in Los Angeles County declined from an estimated 50% of publicly disclosed funding for high technology defense programs (or \$5.4 billion) in 1987 to 35% of reported high technology programs (or \$3.4 billion) in 1994, accounting for an estimated 38 percent of the county's overall decline in defense revenue.
- Los Angeles County is losing jobs because a disproportionate amount of local defense funds are subcontracted to other regions. If the county captured all of the jobs created by contracts awarded to facilities within the county, as many as 12,882 more aerospace workers might have been employed in 1994.
- The highest priority need that high technology firms have for the public sector is to provide reliable assurances about future regulatory requirements.
- Eighty-four percent of high technology firms say it is important for Southern California's economic future that defense-related industries diversify into new commercial markets and 71 percent say a regional industrial development policy is necessary.

Distribution of the Region's Subcontractors

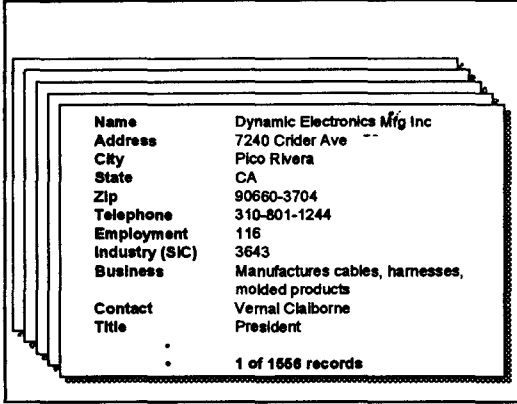
The distribution of the region's Aerospace/Defense subcontractors is illustrated in the maps on the next two pages. These maps were produced using the SELAC Subcontractor Data Base developed as part of this study. The size of the dot on each map indicates the reported employment at that establishment. The smallest size dot indicates employment of between 1 and 49, the next largest size dot indicates employment between 50 and 499, and the largest size dot indicates employment of 500 or more.



Data Note:

The SELAC Subcontractor Data Base also provides the names, addresses and contacts for the region's subcontractors and is a potentially valuable tool to be used in the implementation of the strategies recommended in this report. A sample from this data base is displayed in Figure E-1.

Figure E-1
Subcontractor Data Base Record



Name	Dynamic Electronics Mfg Inc
Address	7240 Crider Ave
City	Pico Rivera
State	CA
Zip	90660-3704
Telephone	310-801-1244
Employment	116
Industry (SIC)	3643
Business	Manufactures cables, harnesses, molded products
Contact	Vernal Claiborne
Title	President
	1 of 1558 records

Overview of Trends in Los Angeles County Defense Revenue

Contraction, relocation and closure of firms making aircraft, missiles and space vehicles, and search and navigation equipment resulted in the loss of 60 percent of Los Angeles County's aerospace jobs between 1988 and 1995 (see Figure E-2). This loss occurred even though the current-year value of publicly disclosed defense contracts awarded to firms in the county declined by only 18 percent, from \$12.9 billion in 1987 to \$10.6 billion in 1994.¹ The massive loss of jobs resulting from this seemingly modest decline in defense revenues is explained by three factors:

- 1) Reductions in overhead and more efficient use of labor meant that in 1994 the same value of production could be achieved with 22 percent fewer workers than were needed in 1987.
- 2) Inflation reduced the value of defense dollars by 19 percent between 1987 and 1994.
- 3) The value of secret (i.e., special access classified) projects being undertaken in the county has declined from an estimated 42 percent of funding additional to reported defense revenues in 1987, to 32 percent additional in 1994. This decline accounted for an estimated 38 percent of the county's overall decline in defense revenue, measured in constant dollars.

Factors deflating the value of defense revenue are shown in Figure E-3 with supporting data in Table E-1. Analysis of defense procurement data leads to the following important findings:

¹ Beltramo and Associates conducted an analysis of defense contract records for this report and prepared a paper entitled, "Defense Spending Decline in Los Angeles County: Very Real but Hard to Quantify." Data on all unclassified Los Angeles County defense contracts greater than \$25,000 was provided by the Department of Defense Office of Economic Adjustment for years 1987 through 1992, and by DRI/McGraw-Hill for 1993 and 1994.

- The top 10 firms received about 90 percent of contract awards in Los Angeles County in 1993 and 1994, compared to 75 percent in 1987.
- The Air Force contributed 63 percent of cumulative DoD revenue to Los Angeles County during the 1987-1994 period. Its relative importance has grown from 48 percent in 1987 and 1988, to 76 percent in 1993 and 1994.
- Contract awards for the B-2 Advanced Technology Bomber program were not identified before 1991. It accounted for 30 percent of funding to Los Angeles County firms in 1994.
- The C-17 cargo aircraft also accounted for about 30 percent of DoD funding in 1994.

When these two programs are completed, the county's once dominant military aircraft industry may no longer exist.

Figure E-2
Los Angeles High Technology Jobs

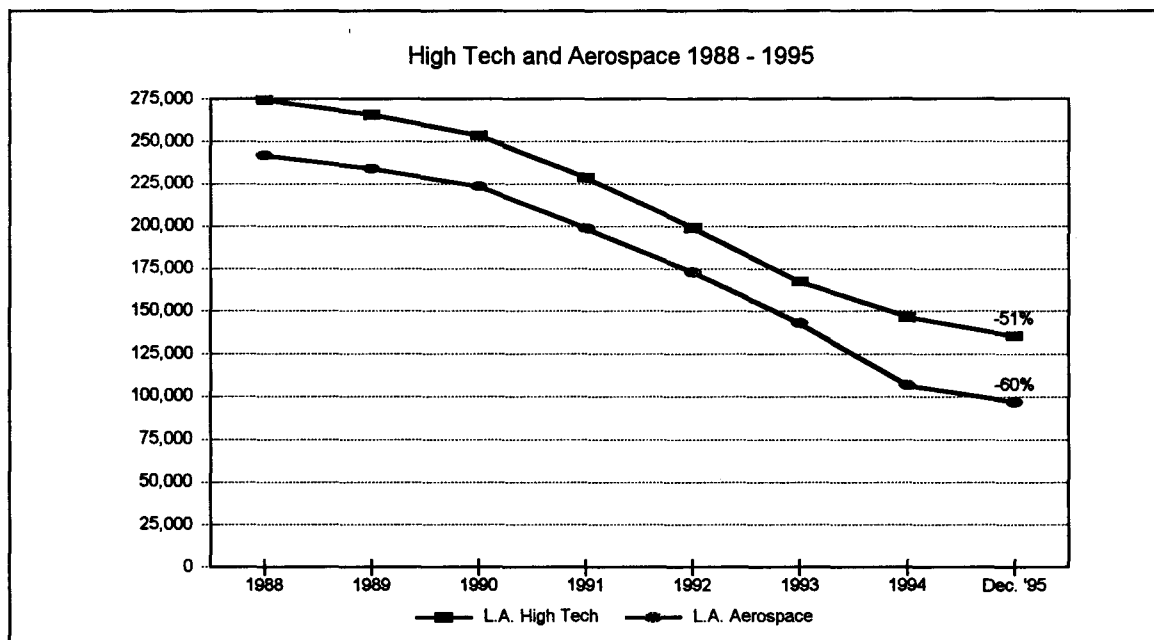
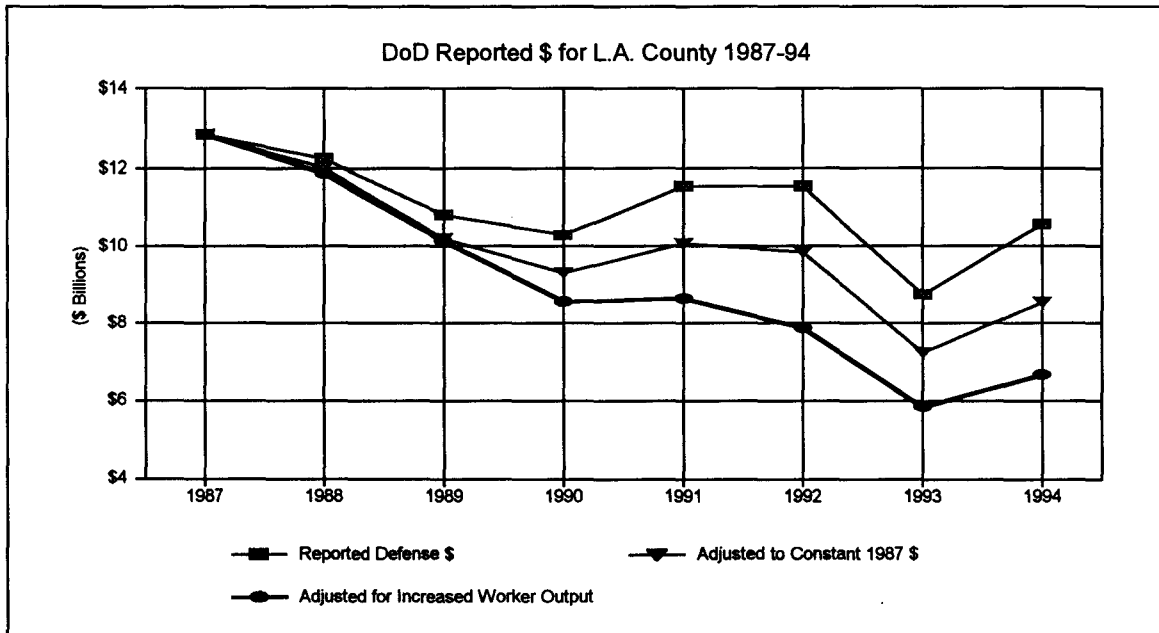


Figure E-3
Deflation of Defense Revenue



Ground Rules and Methodology

Detailed information was collected on defense businesses within Los Angeles County during the past eight years. It was converted to constant dollars and analyzed to chart the evolving defense funding status of the county, its geographical components, and its defense firms. Information that is available includes:

- Total amount awarded to each prime contractor
- City of the firm or division receiving the awards
- The military service or defense agency that provided the funding

Data for 1987-1990 and 1993-1994 also included:

- Individual contract awards
- The weapon system code and description of the end item for which the award was made (when appropriate)
- The federal supply or service code and description of the work covered by the award

Table E-1
Los Angeles County Defense Revenue 1987-94
(Millions of \$)

	1987	1988	1989	1990	1991	1992	1993	1994
High Technology Industries								
Aircraft (SIC 372)	3,443	4,558	4,328	4,301	5,905	6,705	4,553	6,747
Missiles (SIC 376)	2,558	1,818	1,333	1,270	1,148	825	482	472
Search & Navigation (SIC 381)	2,583	1,837	2,214	2,656	1,950	1,734	1,658	1,345
Electronics (SIC 36)	712	489	464	473	508	441	387	331
Computer Programming (SIC 737)	67	54	38	115	94	84	10	7
Universities (SIC 822)	48	40	40	43	44	38	0	0
Engineering/Research (SIC 87)	1,424	1,483	1,476	1,294	1,272	1,000	964	704
Subtotal of Reported High Technology Projects	\$10,834	\$10,280	\$9,894	\$10,151	\$10,921	\$10,827	\$8,053	\$9,606
Estimated Additional Funding for Secret Projects	50%	50%	50%	45%	40%	40%	35%	35%
Estimated \$ for Secret High Technology Projects	\$5,417	\$5,140	\$4,947	\$4,568	\$4,368	\$4,331	\$2,819	\$3,362
Estimated Subtotal with Secret DoD \$	\$16,252	\$15,420	\$14,842	\$14,719	\$15,289	\$15,158	\$10,871	\$12,968
Other Industries								
Petroleum (SIC 291)	652	644	266	0	1	0	0	0
Industrial Equipment (SIC 35)	25	33	16	18	5	100	18	176
Air Transportation (SIC 452)	193	181	80	0	0	0	0	0
Ships (SIC 373)	137	93	30	32	27	39	14	2
Ordnance (SIC 348)	109	63	24	52	24	49	0	33
Repairs (SIC 769)	0	0	0	0	0	0	0	40
All Other (SIC 99)	922	954	515	41	568	537	659	726
Total Contract \$ Reported by DoD	\$12,874	\$12,248	\$10,825	\$10,293	\$11,546	\$11,552	\$8,744	\$10,582
Constant 1987 \$ Factor	1,000	1,019	1,061	1,105	1,146	1,174	1,208	1,238
Total Contracts Reported by DoD-Constant 1987 \$	\$12,874	\$12,020	\$10,203	\$9,315	\$10,075	\$9,840	\$7,238	\$8,548
Estimated Total with DoD Secret \$	\$18,291	\$17,388	\$15,722	\$14,861	\$15,914	\$15,883	\$11,563	\$13,944
Estimated Total-Constant 1987 \$	\$18,291	\$17,064	\$14,865	\$13,449	\$13,886	\$13,529	\$9,572	\$11,263
Sales Per Job in Constant 1987 \$*	\$85,810	\$86,883	\$86,457	\$93,399	\$100,089	\$107,318	\$106,438	\$110,000
Estimated Jobs from L.A. Co. Defense Contracts	213,155	196,403	171,939	143,995	138,740	126,066	89,927	102,394

* Aerospace Industries Association. Aerospace Facts and Figures 1994-95, pp. 13, 25, 140. Sales per worker shown in constant 1987 dollars, with 1994 estimated. Full dollars per job shown.

Important and unresolvable limitations are inherent in available data, including:

- Contract data are provided only for prime contractors²
- Much of a contract may be performed in a place different from that where it was awarded
- Neither special access classified programs nor their expenditures are indicated
- The relationship of many programs to a particular weapon system is not shown
- Only commercial funding is identified in the data base (i.e., funding for DoD installations is not indicated)

This prevents precise and detailed representation of the size and substance of defense programs. Even with these limitations, however, the data support important findings.

Prime Contractors, Subcontractors, Award Locations

A long held rule of thumb is that 66 to 75 percent of DoD prime contract funds are spent by firms other than the prime contractor (i.e., subcontractors and vendors). This suggests that most prime contract funds awarded will be spent by firms other than the initial recipients.

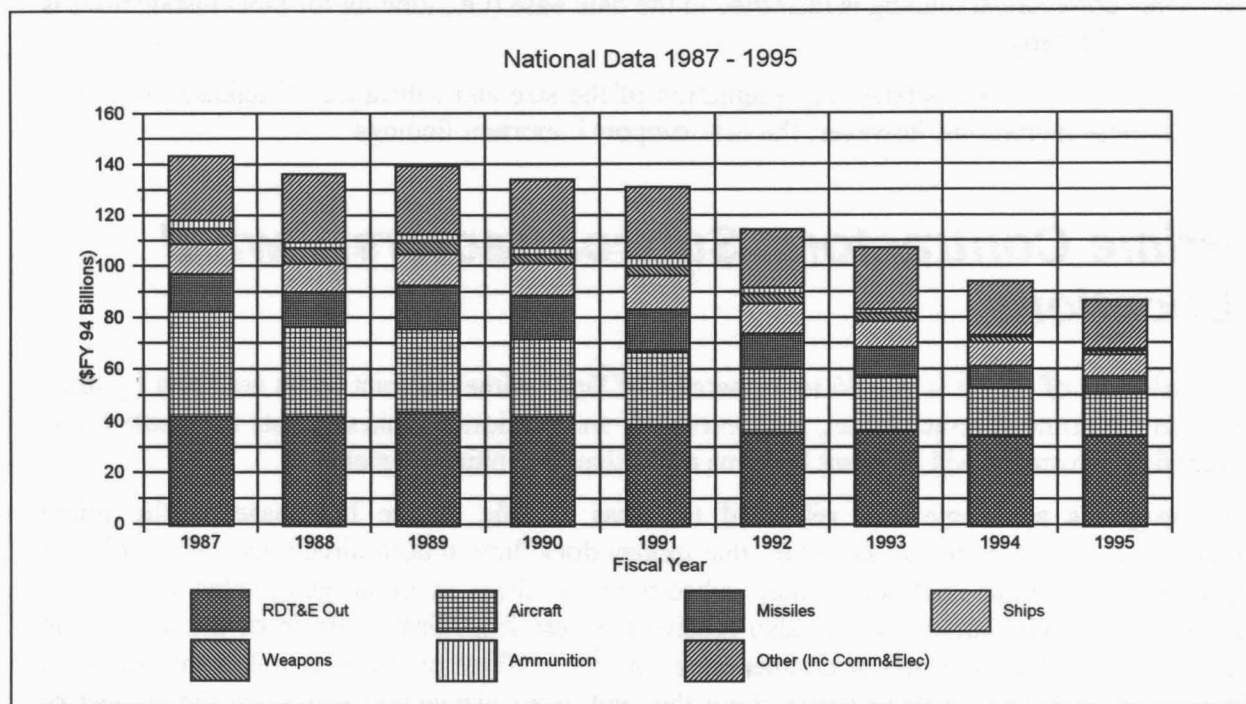
These programs are sometimes relocated to areas outside of the homebase of the prime contractor. It should be noted, however, that money does flow in both directions. Although Los Angeles County prime contractors may subcontract to firms in other geographic areas, Los Angeles County subcontractors may also receive business from firms outside of the area. The exact extent to which the inflow compensates for the outflow of funds is unknown, although estimates are made later in this chapter about the kind of imbalance that exists and the number of jobs it is costing the county.

The 66-to-75 percent rule of thumb applies primarily to large production contracts. From 1987 through 1990, over 50 percent of Los Angeles County's defense funds were for Research Development Test and Evaluation and Services (RDT&E). Most RDT&E awards are spent in-house by prime contractors and the flow of funds from prime contractors to subcontractors is not nearly as substantial as 66-to-75 percent. In 1993 and 1994, the share of county defense funds earmarked for RDT&E declined to under 30%.

² There is a common misunderstanding about the meanings of "prime contractor" and "subcontractor." The prime contractor on a large production program is frequently the system integrator (i.e., the firm that performs final assembly, inspection, test, and delivery). Thus, prime contractor and systems integrator are often used as synonyms. A subcontractor is commonly thought of as a firm that provides major subsystems or components under an agreement with the prime contractor. In reality, the distinction between prime and subcontractor is not nearly so precise. Rather, the Government Program Office determines how it will manage a program and award contracts. This establishes the number and roles of prime contractors that will be involved. Therefore, a prime contractor's function may range from supplying a major component of a subsystem to building an entire system from the ground up, depending upon the preference of the Program Office.

A stable or growing defense industry is characterized by a pipeline into which funding for basic, exploratory, and advanced research leads to engineering development, culminating in production. Mature programs are, thereby, replaced by new ones and continuity is retained. Without a viable production capability, the high value component of RDT&E is lost and without a substantial RDT&E foundation, new production business is unlikely.

Figure E-4
DoD Systems Acquisitions Outlays



Findings

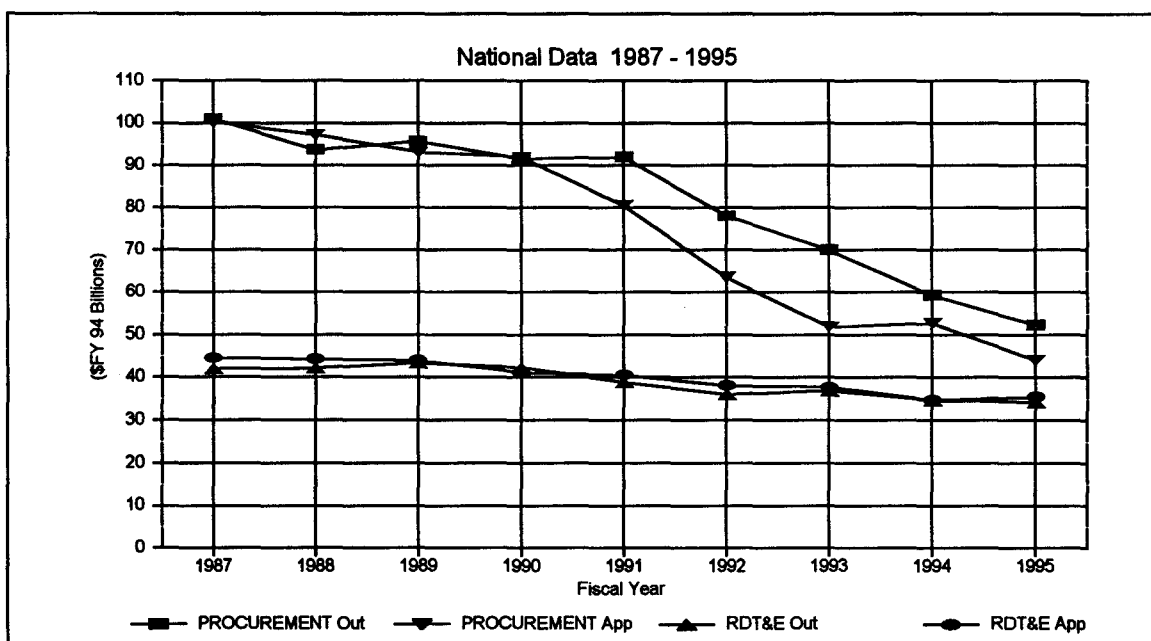
Federal defense spending for products and services provided by industry has declined steadily since the late 1980's as shown in Figure E-3. This is no surprise to even the most casual observer. But Research and Development funding at a national level has decreased by only 18 percent in absolute terms as measured in constant 1994 dollars³ and has increased as a portion of the total DoD budget from 29 to 40 percent. Similarly, Other Procurement spending, including expenditures for communications and electronics equipment, has decreased by 26 percent in absolute terms and has increased as a portion of the total acquisition budget from about 25 to 35 percent (see Figure E-4). This is relatively good news for Los Angeles County since R&D and electronics represent the region's remaining strengths.

³ All constant 1994 dollar amounts are based upon deflators provided in: *Aerospace Facts and Figures 1994-1995*, Aerospace Industries Association.

Appropriations versus Outlays

Structural realities related to the DoD budget will exacerbate the problem. Specifically, DoD outlays have recently been greater than appropriations for procurement.⁴ This gap means that funds budgeted by Congress are awarded to defense manufacturers at some later date. Thus, procurement receipts for Los Angeles County defense firms will experience further downturns as continuing decreases in federal appropriations for aerospace products work their way through the contracting pipeline and are felt six to eighteen months later as reductions in defense outlays that support jobs for much of the county's aerospace workforce.⁵ Figure E-5 shows a comparison of outlays and appropriations for DoD systems acquisition.

Figure E-5
DoD Outlays and Appropriations



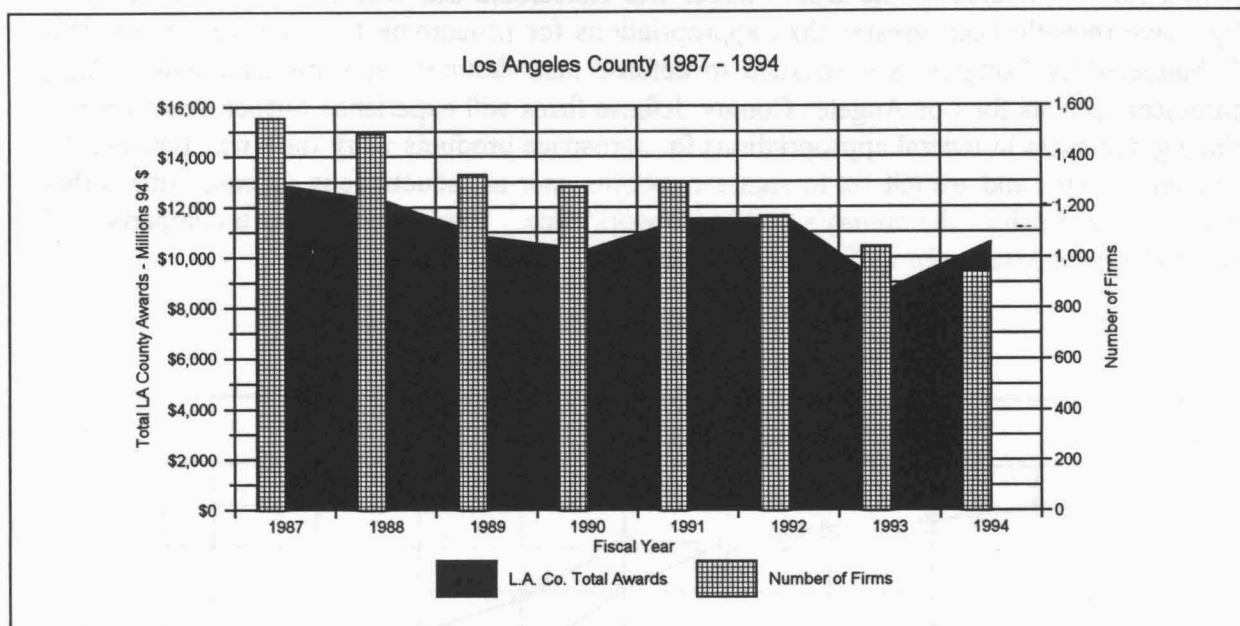
The Big Picture

A cursory review of the data would suggest that Los Angeles County has defied national trends and that local defense funding increased between 1990 and 1994. This information is shown in Figure E-6. However, this apparent gain is illusory as discussed later because of changes in the classification of key programs and their reporting. Figure E-6 also shows that the number of firms receiving DoD prime contracts awards declined from a high of 1,557 in 1987 to 939 in 1994. This is a decrease of 40 percent and means that more than 600 Los Angeles County firms stopped receiving defense business during those seven years.

⁴ An appropriation obligates the US Government to pay for specific goods or services. An outlay is a payment made by the government to liquidate an obligation.

⁵ DoD outlays for procurement have declined by 48 percent from 1987 to 1995.

Figure E-6
DoD Spending and Number of Recipients

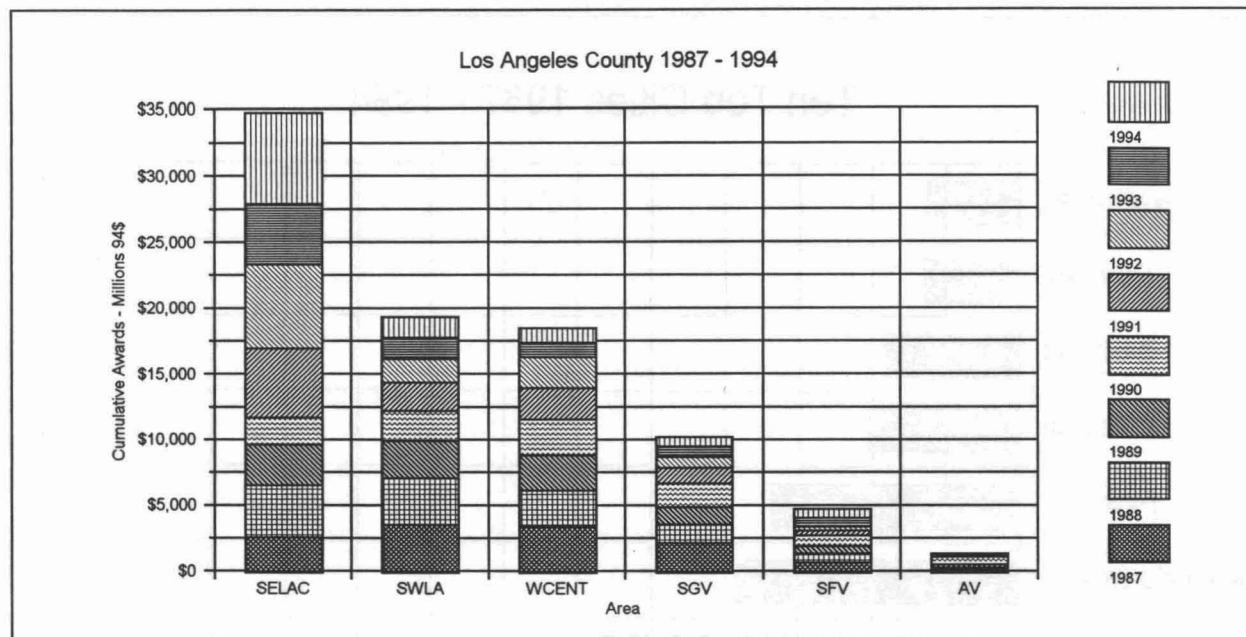


Funding by Area

Southeast Los Angeles County stands out as the leading recipient of defense funding for the combined 1987-1994 period as shown in Figure E-7. It received 52 and 64 percent of total Los Angeles County defense revenues in 1993 and 1994, respectively. This is primarily because Pico Rivera and Long Beach are home to two of the largest defense production programs in the nation, the B-2 and C-17 aircraft. Furthermore, SELAC also had the most firms receiving DoD awards (254 in 1993 and 236 in 1994) of any subregion in the county. Figure E-8 shows that Los Angeles, Long Beach, and El Segundo remained consistently strong in terms of the level of defense revenue they received from 1987-1994, with Pico Rivera coming from nowhere and posting total receipts of over \$13 billion between 1991 and 1994.⁶

⁶ Contract awards reported for Pico Rivera during the 1987 to 1990 period totaled only \$24 million.

Figure E-7
DoD Spending By County Area



Sources of Funds

It is instructive to identify sources of defense funds. The Air Force continued to be the leading provider of DoD funds to Los Angeles County firms. Its importance increased both relatively and absolutely between 1987 and 1994 while funding from other Services has declined. The Air Force contributed more to the Los Angeles County economy than all other DoD organizations combined—over 60 percent of total funding and over 71 percent during the last four years. Figure E-9 shows the contribution each Service made to Los Angeles County. Most Air Force funding was for aircraft. However, there are only two unclassified military aircraft production programs still active in the county: the C-17A transport at McDonnell Douglas in Long Beach and the B-2 Advanced Technology Bomber at Northrop Grumman in Pico Rivera and Palmdale. The county gets the majority of its defense revenue from these two aircraft programs. When either of them ends, total defense revenue is likely to decline precipitously and the region's standing as a national center of aerospace production will become much more tenuous.

Figure E-8
DoD Spending in Los Angeles County

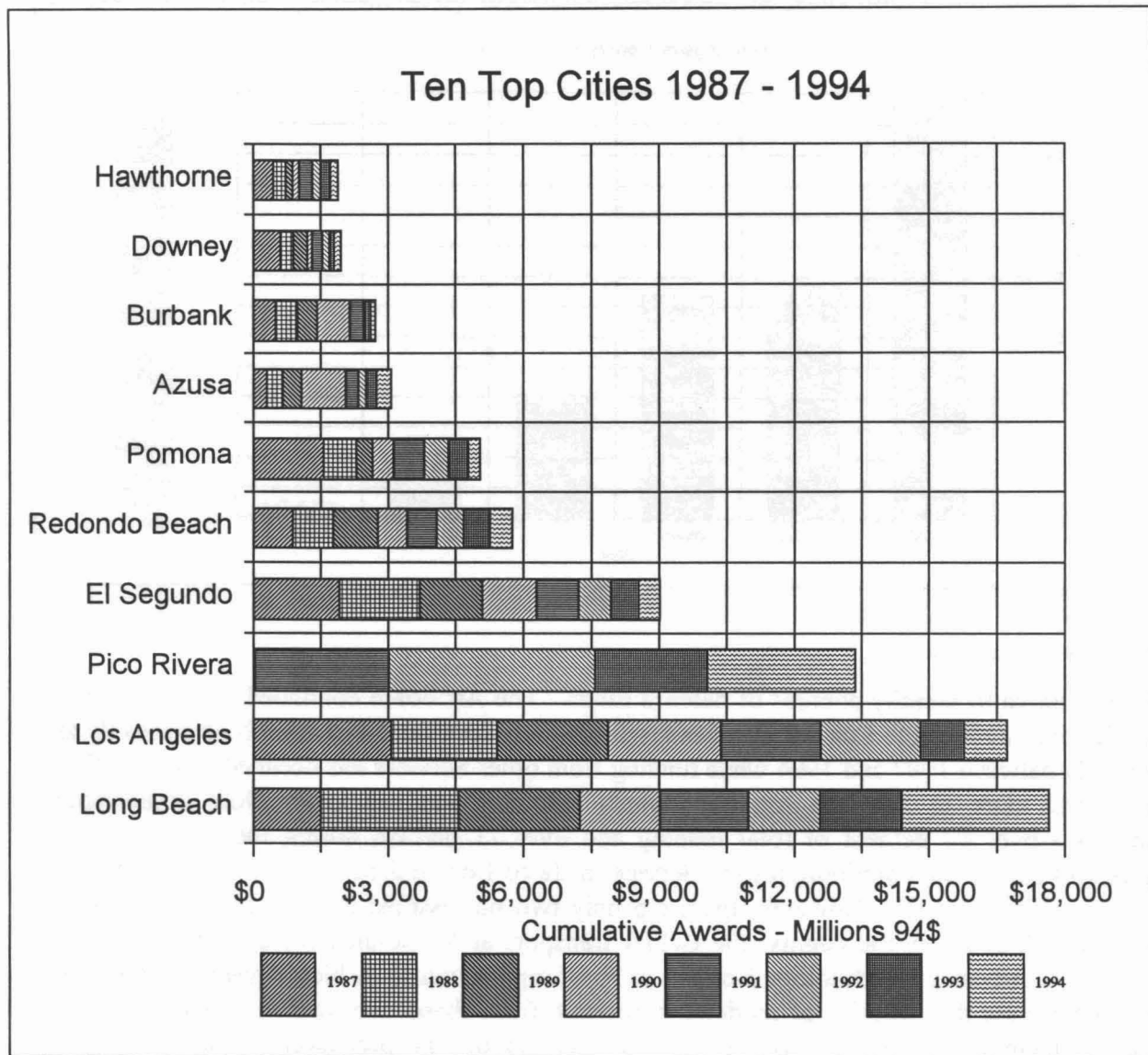
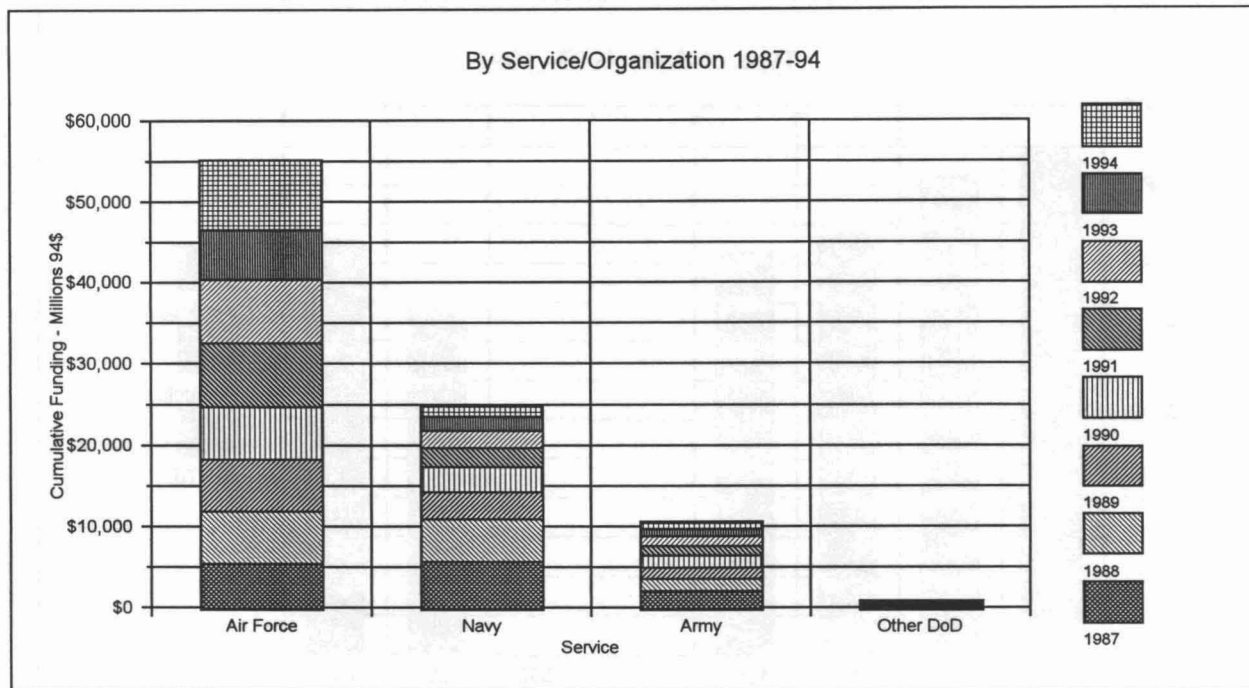


Figure E-9
DoD Funding for Los Angeles County



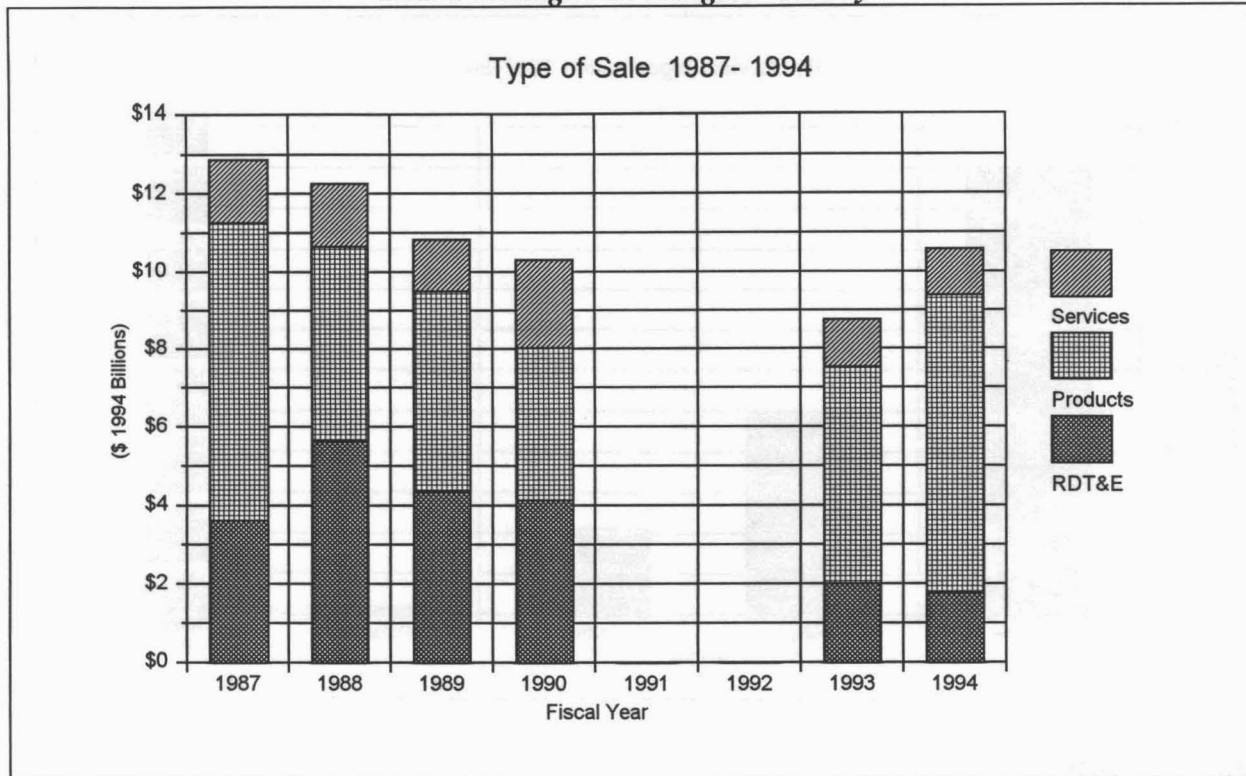
Type of Funds

There has been a significant change in the type of funding received by firms within Los Angeles County as shown in Figure E-10. In particular, funds received for RDT&E and Services declined to less than 30 percent of total defense revenue by 1994, after averaging over 50 percent between 1987 and 1990. This suggests there are far fewer new projects being developed locally that will reach fruition as future production programs.

An analysis of DoD funding to different industry groups is presented in Figure E-11. Publicly disclosed funding for aircraft has increased substantially, while missile funding has decreased, with funding for other industries remaining relatively constant.

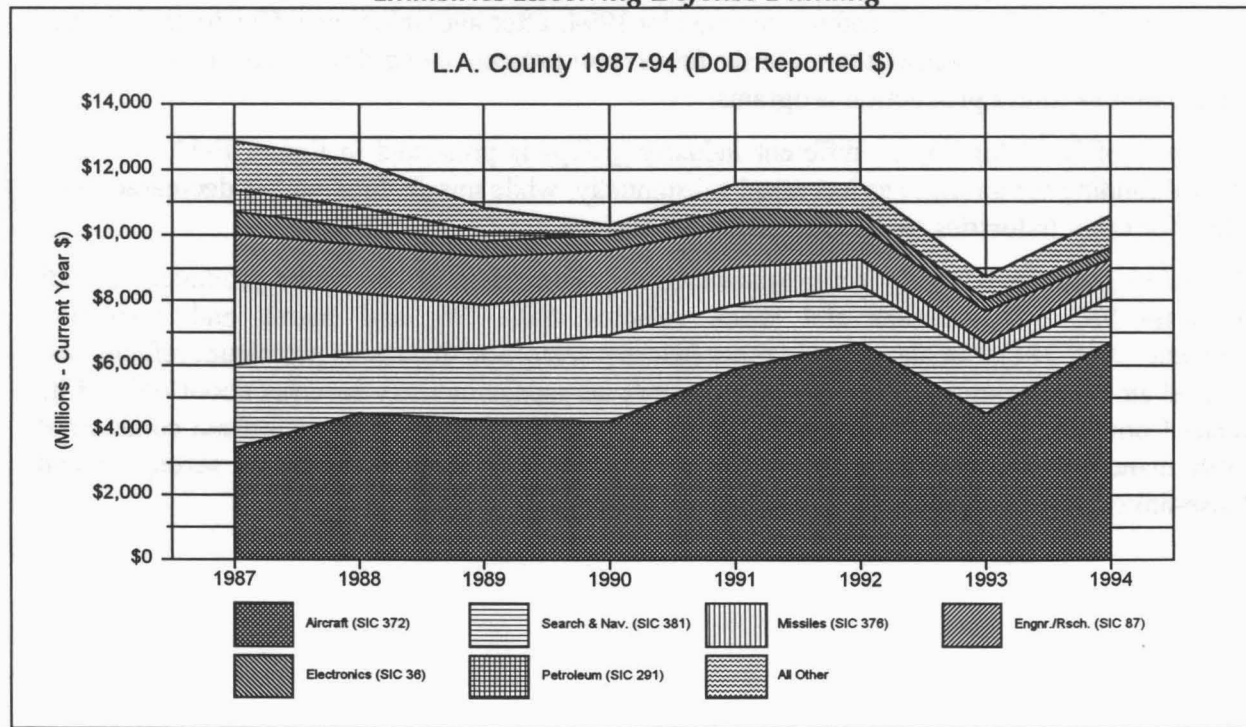
Defense-linked jobs are largely in aerospace (which is comprised of companies producing aircraft and parts—SIC 372, missiles and space vehicles—SIC 376, and search and navigation equipment—SIC 381), but also include other industry sectors as diverse as petroleum refining and chartered air transportation. Similarly, the county's aerospace industry receives about 65% of its revenue from sales to the defense market, but also receives significant revenue from commercial aircraft manufacturing and sales to NASA. Trends in Los Angeles County's aerospace and defense-linked sectors are closely related but not identical.

Figure E-10
DoD Funding to Los Angeles County



Note: Data not available for 1991 and 1992.

Figure E-11
Industries Receiving Defense Funding



Size Counts

Department of Defense funds coming into the county are concentrated among a few major firms. DoD funding for the ten contractors receiving the most funds is shown in Figure E-13. The share of funds awarded to those contractors increased from 73 percent in 1987 to 88 percent in 1994, in constant 1994 dollars. Even more striking, is the fact that Northrop Grumman, the leading recipient of DoD funds recently, accounted for 33 percent of the county's total in 1994 (down from 41 percent in 1992). The county's top three firms (McDonnell Douglas, Northrop Grumman, and Hughes) accounted for nearly two thirds of Los Angeles County's revenue from DoD between 1991 and 1994.

This concentration greatly increases the county's vulnerability to the relocation of its principal defense firms and/or losses of major programs. It now has most of its defense eggs in three baskets, and each of those baskets has shown a proclivity to either establish new or shift existing operations outside California. Funding received by defense firms other than the Top 10 has declined from 27 to 12 percent (\$3.4 to \$1.2 billion) of prime contract awards from 1987-1994 as shown in Figure E-12.

Figure E-12
Declining Share of Funds to Small Firms

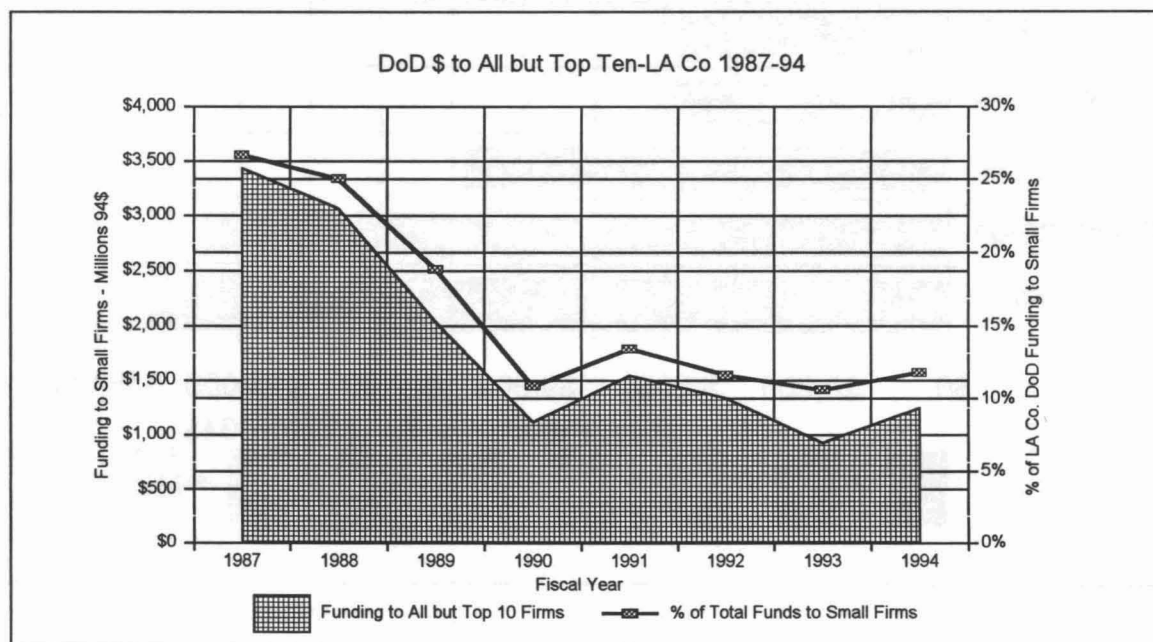
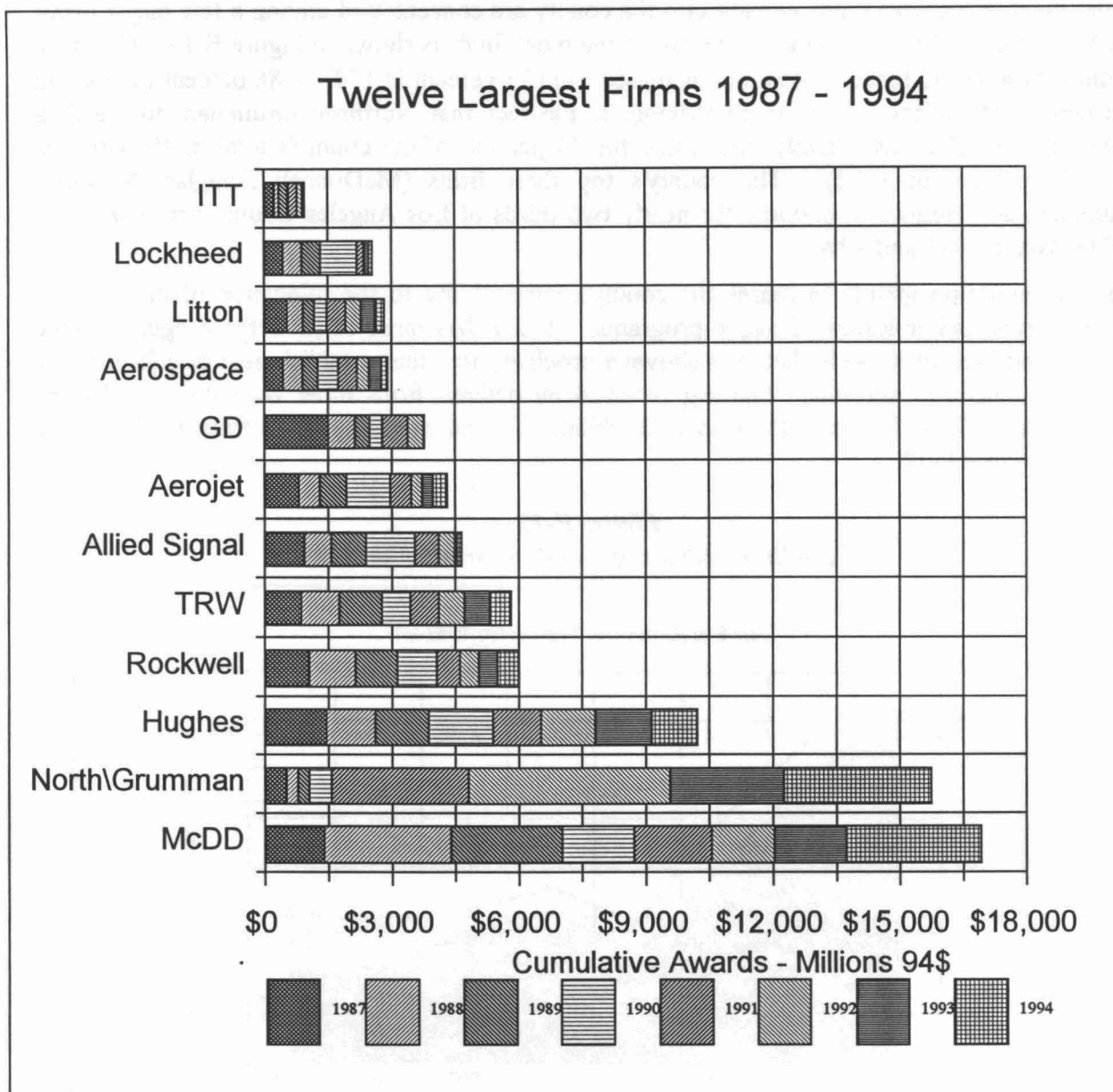


Figure E-13
DoD Awards to Los Angeles County



Long-Term Trends in Defense Procurement

Findings presented above accurately represent official data, however they do not reflect changes in the defense environment that have taken place. It is helpful examine these findings in the context of what we know and what we may reasonably assume about defense procurement in Los Angeles County:

- Large special access classified programs existed during the 1987-1990 period. They included: the B-2, F-117A aircraft; TSSAM and Tacit Rainbow missiles, and classified

space surveillance programs, among others. Funding was not reported for them during that time. Thus, the amount shown for 1987-1990 was significantly understated. Recently reported expenditures for classified programs adds an "apples and oranges" dimension to publicly available data.

- Classified programs have become less prevalent because maintaining especially intense secrecy is no longer as crucial given the demise of the Soviet Union. Also, secrecy worked against building the kind of political constituency necessary to sustain classified programs during lean budget periods—elected officials that are not aware of programs in their districts cannot support them.
- Although national funding for Research and Development has remained relatively strong as noted previously, its character has changed from designing new weapon platforms (i.e., aircraft, tanks, ships) to enhancing existing systems through retrofit programs and developing new technology prototypes that are not intended to lead to large and lucrative production programs.
- The trend toward consolidation and downsizing in defense firms has continued and increased.⁷

Major Aircraft Programs

Given this set of underlying issues it is appropriate to apply some sensitivity analyses and to interpret the data subjectively. Certain reasonable assumptions can be made. First, removing B-2 funding⁸ from the 1991-1994 Los Angeles County totals provides a more reasonable picture of the county's defense funding during the 1987-1994 period.

Eliminating funding for the B-2 reduces revenues between 1991 and 1994 by 26 to 40 percent per year. Figure E-14 shows that funding decreased steadily from \$12.3 to \$7.3 billion during the 19891-1994 period in constant 1994 dollars without the B-2 Program. Thus, the best estimate of the decline in defense funding in Los Angeles County during the 1987-1994 period would suggest a reduction of at least 45 percent.

This assumption probably understates the actual drop because over 80 percent (\$34.1 billion of \$41.8 billion) of the B-2 budget was spent before 1992. Furthermore, it is also likely that the percentage of the R&D work actually performed in Los Angeles County during the 1980's in getting this program ready for production was much higher than the percentage of production work currently done in the county. Large portions of the B-2 are being produced by Northrop Grumman's major subcontractors (including Boeing, Vought, and GE) outside Los Angeles County. Since R&D expenses amounted to \$26.8 billion, B-2 revenue for Los Angeles County before 1991 undoubtedly exceeded subsequent B-2 revenue.

⁷ Contractors have made following cuts, on average: capital expenditures by 76%, overhead in all areas including employee compensation by 59%, IR&D expenditures by 54%, and facilities space by 26%. These figures understate actual reductions because they include only "surviving" firms and not those eliminated through mergers and acquisitions.

⁸ More correctly, funding provided to Northrop Grumman in Pico Rivera which is dedicated to B-2 production.

The B-2 program is assured of producing 20 total aircraft through 1998. And an additional contract for \$493 million has been awarded to upgrade the B-2 flight test vehicle to operational status by June 2000. Justification for this supplemental contract included the need to maintain a critical element of the defense industrial base and manufacturing technology.

The Air Force recently awarded production of 80 additional C-17's to McDonnell Douglas bringing the total number of aircraft funded for production to 120, and it is now widely regarded as a success both technically and financially. The C-17 accounted for about 18 percent of Los Angeles County's prime contract dollars in between 1991 and 1994 as shown in Figure E-14. But its relative share of the Los Angeles County revenues has increased to about 30 percent in 1994 as noted above. Because of the successful turn-around of the C-17 program by McDonnell Douglas, and successful efforts by the City of Long Beach and the state to keep this program in Long Beach, there are virtually certain prospects for continued local production until the year 2003 or 2004.

Save a major secret program at Lockheed Martin's Skunk Works, Northrop Grumman, or elsewhere⁹, the hope of another major aircraft development program leading to substantial production within the county is dim. As bad as defense downsizing has been for the county to date, another, much larger shoe is likely to drop. Sometime within the next decade, when both the B-2 and C-17 programs are completed, the county may be without a military aircraft industry. Unless offsetting growth is achieved in commercially-linked high technology industries, this loss of defense revenue will further devastate the county's economy and further erode one of the United States' premier centers of technical excellence.

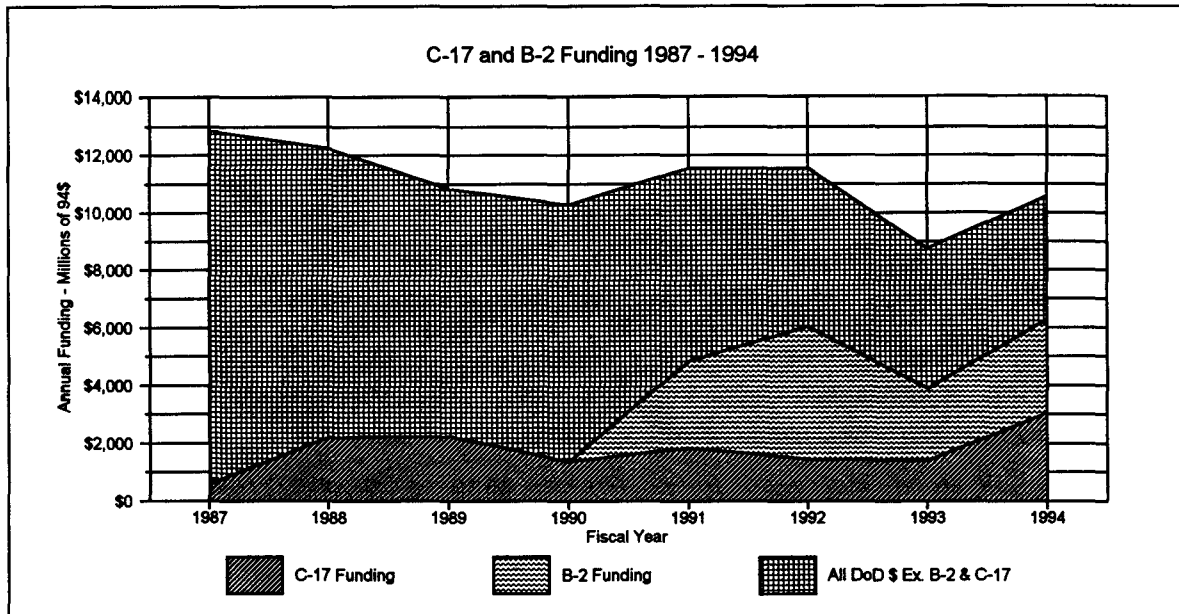
Missiles

Although there is some hope left for Los Angeles County's aircraft industry, its missiles industry has essentially departed. In 1987, the county received almost \$2.6 billion for unclassified missiles programs.¹⁰ By 1994, annual revenue for missiles was below \$500 million. This is the result of Hughes' acquisition of General Dynamics' missile business and its decision to move all of its missile business to Tucson. The last chance for continuation of local missile work was lost when Northrop Grumman was not able to meet cost and performance milestones on its stealth cruise missile programs (Tacit Rainbow and TSSAM) and they were canceled. DoD missile R&D and production have declined significantly. However, if there is a resurgence, Los Angeles County is unlikely to participate. Neither Hughes or Northrop Grumman are part of the new JASSM (Joint Air-to-Surface Standoff Missile) program, which is the last major tactical missile program likely to be introduced for the remainder of this century.

⁹ An article in *Aviation Week and Space Technology*, February 6, 1995, indicated that there were 12 on-going classified programs, two of which were for fixed wing aircraft. Therefore, it is not improbable that Northrop Grumman and Lockheed Martin both have large classified aircraft programs underway. It should be noted that Northrop Grumman had an extraordinarily large (i.e., \$2.8 billion) charge to "other projects" in its 1995 Annual Report.

¹⁰ That does not include large classified programs such as Tacit Rainbow and TSSAM.

Figure E-14
Importance of Key Aircraft Programs



Revenue from Secret Defense Projects

To fill in gaps in information about defense revenue that result from the absence of publicly disclosed information about defense expenditures for special access classified programs, an analysis was made of the amount of defense revenue Los Angeles County has received from secret projects. The enormous but concealed scope of secret projects is illustrated by the B-2 (stealth bomber) program which became public in 1991. The apparent increase in funding for aircraft programs in the county is in fact largely an artifact of disclosing funding for this program to the public. When the B-2 program was revealed in 1991, the amount of defense funding disclosed for Northrop increased 445 percent to a total of \$3.3 billion, and the company jumped from twenty-sixth to sixth in the Department of Defense ranking of largest contractors. At the same time, the percentage of the company's revenues estimated (based on SEC 10-K filings) to be earned through secret projects declined from 82 percent to 23 percent.

The analysis of funding coming into the county for secret defense programs made use of contract information released by the Department of Defense and NASA, Security and Exchange Commission (SEC) 10-K filings, annual reports from a group of very large aerospace firms with a concentrated presence in the county, and previous survey responses from defense firms concerning the percentage of revenues coming from defense sales as well as through subcontracts from other firms. The steps in conducting this analysis were to:

- 1) Identify a group of large firms receiving secret funding whose revenue is primarily derived from the defense sector, and whose business activities are concentrated in the Los Angeles area. These criteria were used to simplify the problem of eliminating nondefense sources of revenue.

- 2) Identify total revenue received by the firm from 1987 through 1994 using data from Security and Exchange Commission 10-K filings and annual reports from the firms.
- 3) Identify all publicly reported defense contracts awarded to the firm from 1987 to 1994 using data from the DoD Directorate for Information Operations and Reports.
- 4) Identify and subtract all revenue not received through defense subcontracts including:
 - a) NASA funding
 - b) Subcontracts from other defense firms
 - c) Commercial projects

Data for this step came from NASA listings of contract awards and SEC 10-K reports.

- 5) Identify the residual amount of annual revenue that was not accounted for by publicly reported DoD contracts, NASA funding, subcontracts, or commercial projects and assume that this was for secret defense projects.

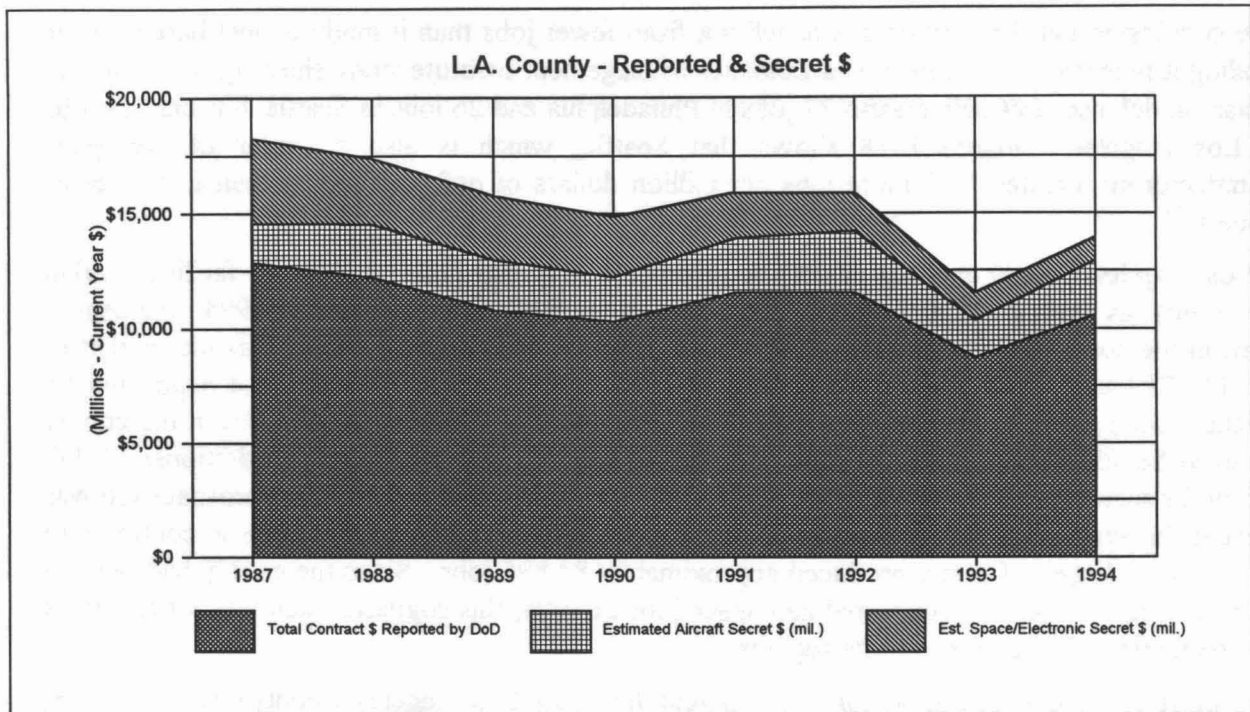
The analysis identified an order of magnitude, rather than an exact percentage, for secret projects in the county because the sample of firms analyzed was small and some data series were incomplete. Nevertheless, these estimates are essential for understanding the scope of defense cutbacks in Los Angeles. Without this information, local economic development planners are in the situation of a builder asked to repair a home but not allowed to inspect the condition of the second story. The results of this analysis are shown in Table E-1.

Estimates of Revenue from Secret Defense Projects

Major findings about the amount and type of revenue for secret defense projects coming into Los Angeles are shown in Figure E-15. Findings include:

- The value of secret programs in Los Angeles County declined from an estimated 50% of publicly disclosed funding for high technology defense programs (or 43 percent of total reported defense revenues) in 1987 to 35% of reported high technology programs (or 32 percent of total reported defense revenues) in 1994.
- Funding for secret projects in Los Angeles County declined from an estimated \$5.4 billion 1987 to \$3.4 billion 1994 (both amounts in current-year dollars), accounting for an estimated 38 percent of the county's overall decline in defense revenue, measured in constant dollars.

Figure E-15
Estimated Total Defense Funding



Capturing More Benefits from Locally-Awarded Defense Contracts

Los Angeles appears to have both received more defense funds and lost more defense jobs than were generally known. From 1988 to 1994, Los Angeles' share of the shrinking U.S. defense pie increased by a quarter, yet its share of the nation's aerospace work force declined by a fifth, as shown in Figure E-16. In other words, even though Los Angeles received less than its expected share of defense cutbacks, it received more than its share of aerospace job losses, making it a sieve for some of the nation's most coveted high technology jobs.

Another way of looking at this phenomena is to compare Los Angeles County's aerospace job losses with those of the rest of the United States, as is shown in Figure E-17. Between 1988 and 1994, Los Angeles County lost 48 percent of its aerospace jobs, the balance of California lost almost as many (46 percent), but the balance of the United States lost only 32 percent, meaning that aerospace job losses in California have been 50 percent greater than in the rest of the United States.

The subcontractors have not only lost defense contracts, but they also have lost contracts related to commercial aircraft production. In fact, from 1991 to 1993, subcontractors actually became more dependent on defense contracts. Their level of defense dependency increased from 59 percent in 1991 to 65 per cent in 1993, largely because commercial aircraft sales declined even

more precipitously than defense sales. Commercial aircraft sales are now on the rebound, so it is likely that this dependency trend has been reversed in 1994 and 1995.

The conclusion that Los Angeles is benefiting from fewer jobs than it might expect based on the funding it received is confirmed by a Logistics Management Institute study showing that a million dollars in defense contracts creates 31 jobs in Philadelphia and 26 jobs in Seattle, but only 19 jobs in Los Angeles. Figure E-18 shows that Seattle, which is also a center of aerospace manufacturing, creates 37% more jobs per million dollars of defense funding than Los Angeles County.¹¹

If Los Angeles County captured all of the jobs created by contracts awarded to facilities within the county, as many as 12,882 more aerospace workers might have had jobs in 1994. Aerospace firms in the county receive roughly 65% of their revenue from defense sales. This means that of the 110,789 aerospace jobs in the county in 1994, approximately 72,013 were supported by defense funding. The information in Table E-1 shows that in 1994 aerospace firms in the county received \$8.564 billion dollars in reported defense funding, and an estimated additional \$2.997 billion for secret projects, for a total of \$11.561 billion. Given that in 1994 one aerospace job was created for every \$136,180 in current-year dollars, it can be estimated that defense contracts to firms in Los Angeles County produced approximately 84,895 jobs. Since the county had only an estimated 72,013 defense-supported aerospace jobs in 1994, this suggests there was a net loss of approximately 12,882 jobs to other regions.

The most obvious explanation for the apparent fact that Los Angeles County's share of U.S. aerospace jobs has declined, even though its share of reported defense dollars has increased, is that the county lost jobs because a disproportionate amount of local defense funds was subcontracted to other regions offering a less problematic business environment or stronger political support. The silver lining in this cloud is that effective efforts by communities to improve how aerospace firms perceive the local business environment might reverse this trend of out-sourcing work to other regions and even lead to recapturing lost jobs.

¹¹ Data from report by the Logistics Management Institute, *"Local Impacts of Cuts in Defense Spending."* Washington, D.C. 1992.

Figure E-16
LA Share of US Aerospace Industry

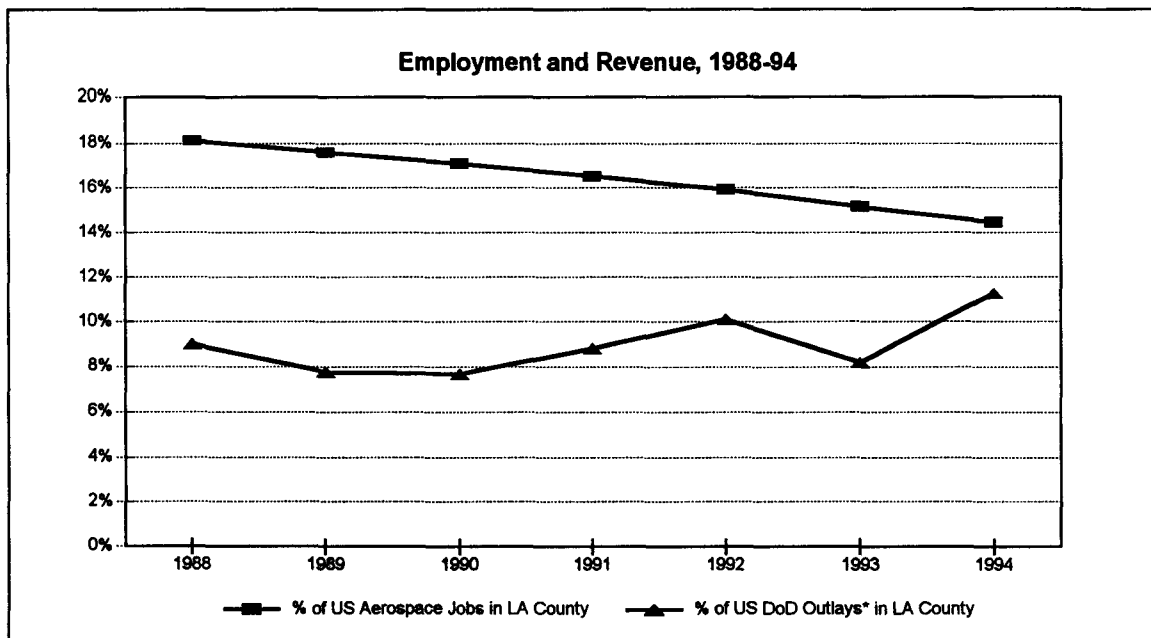


Figure E-17
Comparison of Aerospace Job Loss: County, State, Nation

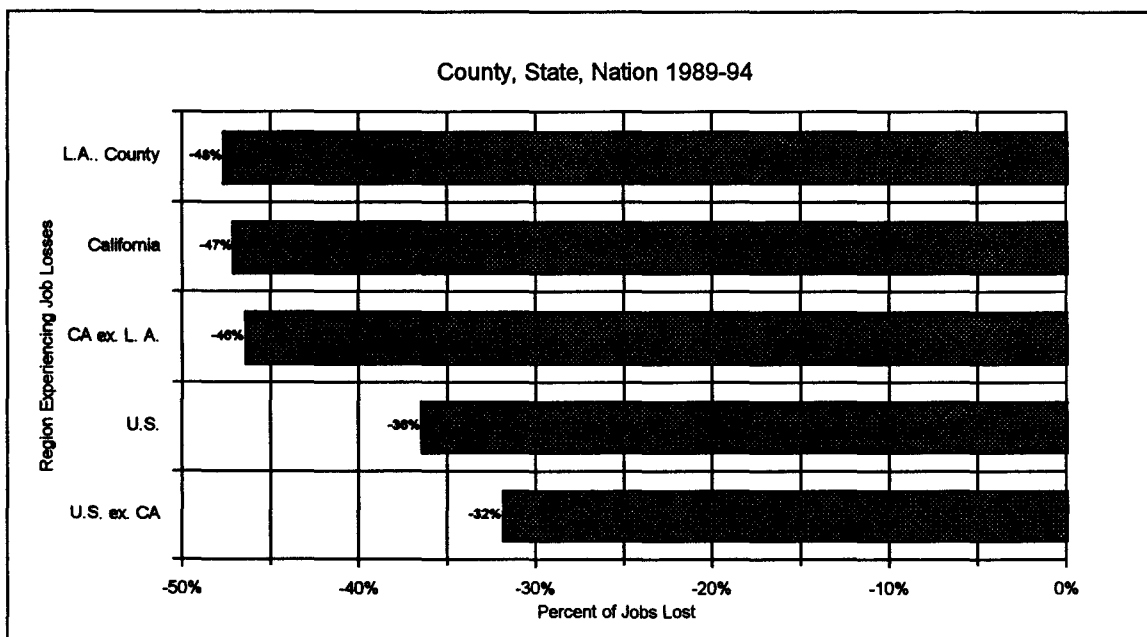
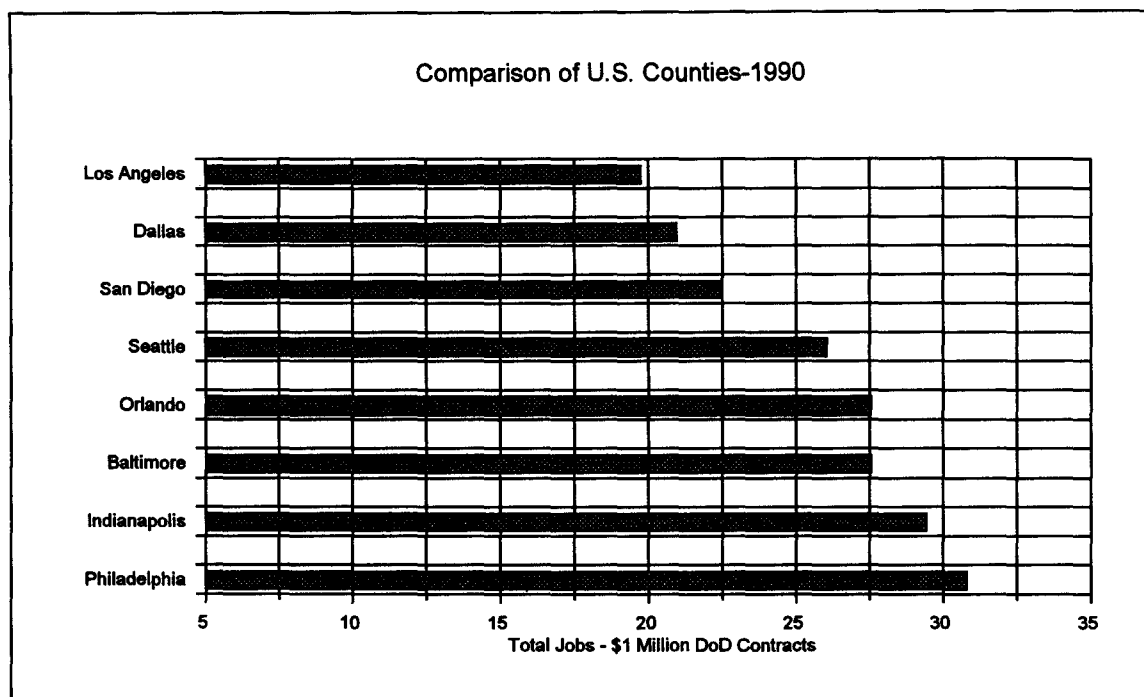


Figure E-18
Jobs Created By DoD Prime Contracts



Even though Los Angeles County's defense employment has declined precipitously, the aerospace industry is much more than yesterday's news. At the same time that they have been shrinking, major defense firms have become increasingly profitable. As discussed in the work force chapter of this study, firms have placed a high priority on retaining engineering and technical workers. Los Angeles County's major aerospace firms, its universities, and linked small and medium size research firms remain one of the nation's primary hubs of research, development and technical expertise. It is in the interests of the county and subregions such as SELAC to provide local support for retaining defense-linked employment, collaborate with firms to capture a greater share of jobs created by contracts awarded within the region, and develop ways of working together to transfer some of the cutting-edge technology created through the three-to-four billion dollars expended annually in the county for defense research and development to commercial markets.

Northrop Grumman's Pico Rivera facility deserves special attention in terms of opportunities for stronger ties with local government and commercialization of high technology products. As discussed earlier, since 1991 it has emerged as the site for \$3+ billion a year in contract awards for the B-2 program, and may be the site for additional secret work related to the \$2.8 in revenue for "other programs" noted in Northrop Grumman's 1995 Annual Report. This facility also houses Northrop Grumman's technology development center. Products developed, but not yet commercialized, at this center include:

- A ceramic engine that is able to operate at such high temperatures that it produces virtually no emissions;
- Ceramic brakes that tolerate very high temperatures with very little wear and last much longer than conventional brakes;

- An operating room of the future which has such features as a "heads up" visor for the surgeon that integrates all information from different sensors and instruments connected to the patient; and
- A mobile life support/triage pod that holds a patient during transportation, taking continuous readings of vital signs and providing oxygen and intravenous fluids as needed.

This facility is scheduled to close in 1999 and, unless Northrop Grumman and SELAC communities succeed in building a working relationship that helps each party solve important economic and political problems, it is possible that this closing will leave nothing behind other than a vacant site. Surrounding communities have a crucial stake in retaining existing jobs at the site, capturing some of the B-2 jobs currently being outsourced to other regions, and developing commercial spin-offs with technology developed for the B-2 program. Northrop Grumman has identified problems with utility rates, environmental bureaucracy, and faces major political battles in fighting for continuation of the B-2 program. Significant progress could be made on many if not all of these issues through regular (perhaps monthly) policy-level meetings, with Northrop Grumman representatives and city managers assigning follow-through tasks to appropriate staff and monitoring their progress. This process should begin immediately.

The four potentially commercial technologies listed above all have potential applications in local transportation fleets and health care systems. A collaborative strategy for commercializing these products and creating local jobs might be to create a buyers consortium of public sector entities in the region similar to the Los Angeles County Metropolitan Transportation Authority's Fuel Cell Buyers Consortium to create a start-up market for these products. This could be linked with use of SELAC economic development and worker training programs to support recycling of existing manufacturing sites to offer competitively priced facilities and job-ready workers for these new enterprises.

Lessons from Other Defense Conversion Impact Regions

A number of other regions across the United States are experiencing the same kinds of problems generated by cutbacks in defense spending that SELAC is facing. While it is still too early to identify clear "best practices", it is not too early to learn from some of the more innovative responses that are emerging.

East Tennessee

After 50 years of economic growth and prosperity driven in large part by Federal government spending, East Tennessee found itself in a new economic environment. No longer did government spending act as the driving force for economic growth and job creation. Policy initiatives and budget cutbacks in Washington rippled down to all regions in the country highly dependent on government spending and East Tennessee did not escape the impacts.

It was discovered that too little of the region's economy was built on, or linked to the significant scientific and technological resources in the area, even though the region is richly endowed with 20,000 scientists, engineers and technicians employed at the Oak Ridge complex, within the University and at TVA and other sources of R&D.

With the federal government funding changes now affecting Oak Ridge it became time for leaders to take the steps possible to capture more value added by linking sources of science and technology to the region's clusters.

Based on economic research and input from local leaders knowledgeable about the economy, the 21st Century Jobs Initiative set forth a strategic economic development plan for the region. The plan was designed to help guide policy makers and private sector leaders in their decisions about how and where to invest time and financial resources over the following several years, in order to build an economy less dependent on the Federal government and more competitive in the global marketplace.

The "21st Century Job Initiative" documented cluster challenges and opportunities and identified eight potential clusters of economic activity in East Tennessee. These were environmental services/devices, infotechnology products, medical products and like instruments and sensors. They developed five strategic action themes:

- Entrepreneurial Valley Initiative: enhance the climate for entrepreneurship.
- Technology Startups Initiative: East Tennessee Capital Network.
- Market-driven Technology Development: commercialization of local technologies.
- Resource Valley Connections: move people, goods and information in the valley and beyond.
- Market the Region: promote next generation economy.

Ventura County

Defense spending in Ventura County totaled over \$1 billion in 1993 and 1994. Approximately 60% of defense dollars reached Ventura County through payments to military and civilian personnel. The remaining 40% reached the private sector through contracts for goods and services.

While the bases are not closing, defense spending on bases will slow and probably decline over time, while defense contracts to firms based in Ventura will also diminish. The closure of just one of the bases would mean the indirect loss of thousands of jobs. The loss of both bases would take away more jobs than the County would generate in the foreseeable future.

This harsh reality meant that Ventura needed to take steps to balance and grow its economic base, to safeguard against the consequences of future downsizing in defense spending.

The Ventura Defense Partnership was proposed by the County's private and public sectors as a strategy to cope with the gradual downsizing of the defense economy in Ventura, and take steps to accelerate economic growth that will offset potential future losses.

The objectives of the Ventura Defense Partnership Strategy is to provide the economic inputs needed by defense contractors and employees, to successfully increase their participation in commercial markets. Although much progress has been made, the process is still in its early stages.

In Ventura there was support for formal institutional arrangements to address many of the same challenges facing SELAC.

Ventura Market Opportunity Network (VMON): Helps defense contractors and employees who have formed new enterprises identify, acquire and use market information, including forming partnerships to reach markets.

Ventura Skill Enhancement Alliance (VSEA): Identifies specific training needs, develops curricula and provides rapid-cycle training as the needs occur among existing firms, as well as newly formed enterprises.

Ventura Defense Technology Alliance (VDTA): Alliance between defense firms, commercial partners and laboratories, to select specific market needs and specific defense technologies, assess technology competency applications, develop proof of concepts, prototypes and beta test products for commercial markets.

Ventura Capital Market Connection (VCMC): Provide financial information, and brokering of capital.

Subcontractor Priorities and Opportunities

Aerospace layoffs and plant closings have reduced both the number of establishments operating in Los Angeles County and the average employment of remaining establishments. In 1989, *County Business Patterns* reported 312 establishments in the county's aerospace sector, with an average employment of 677 workers. Four years later, the number of establishments had declined 18 percent to 257, with average employment declining to 455. The number of large aerospace establishments with over 250 workers also declined, from 60 in 1989 to 44 in 1993.

Industry networks can be viewed as evolving ecosystems. Businesses and workers form a highly interconnected web that is dynamic and unstable. This web of workplace activities can undergo bursts of evolutionary change as well as extinction events similar to those of biological ecosystems. For example, when an industrial sector such as defense manufacturing goes into rapid decline some of the subnetworks of technologies and firms that depended upon it disintegrate. In this cycle of decline workers who previously had stable, highly productive jobs are jettisoned, the dwindling network of firms loses critical mass, and inter-firm synergies that made the region a center of gravity for the industry lose vitality. Continuing erosion of the county's aerospace industry base has brought it steadily closer to a final downward spiral in which recovery would be very difficult if not impossible.

A relatively succinct list of factors such as location, infrastructure, work force, facility costs, and access to suppliers and customers make communities attractive to industry. Problems that make communities unattractive to business are more diffuse and include public safety, government inefficiency, regulatory burdens, blight and deterioration, and loss of customer base. These problems tend to be inter-jurisdictional and need to be solved through long-term cooperative strategies.

The decline of aerospace and related durable manufacturing sectors and the stubborn recession that has accompanied it have introduced problems that require just such patient, cooperative

strategies. Preventing economic decline is an intricate, multi-faceted undertaking beyond the resources of any single unit of local government in Los Angeles County. It requires coordinated multi-city strategies achieved through public-private cooperation. The Gateway Cities Council of Governments being created in the SELAC region can be an important tool for multi-city initiatives such as retaining and creating high technology jobs linked to major aerospace programs and marketable technologies developed through those programs.

The needs of the region's Aerospace/Defense subcontractors were identified in a survey of durable manufacturing firms as well as a specific longitudinal survey of high technology firms. The findings of these surveys generally fall into five broad categories: technology issues, financing issues, human resource issues, tax and regulatory issues, and the role of government.

High technology firms were asked to indicate the value of different public sector services for helping them deal with defense cutbacks and become successful in new markets. Their responses produced the ranking of services shown in Table E-2.

Table E-2
High Technology Company Survey Results

	<i>High</i>	<i>Medium</i>	<i>Low</i>
1. Reliable assurances about future regulatory requirements	59%	27%	9%
2. Loans for product development, re-tooling, or expansion	43%	37%	17%
3. Information about product requirements for new markets	41%	37%	18%
4. High-risk capital for promising new businesses	41%	32%	23%
5. Help in finding new uses for surplus aerospace facilities	32%	38%	26%
6. Marketing and export services for small businesses	30%	42%	24%
7. Training programs to upgrade worker skills	29%	44%	22%
8. Expert help in improving manufacturing processes and products	29%	38%	28%
9. Government help in opening new markets	27%	29%	40%
10. Clearinghouse for sharing information about business opportunities	26%	45%	25%
11. Brokering assistance in linking manufacturers with customers	25%	38%	32%
12. Government assistance in helping key industries stay competitive	24%	29%	43%
13. Regional monitoring of problems in key industries	19%	36%	40%

These results are complemented by the survey of durable manufacturing firms which assigned the following ranking to factors in the business environment affecting their competitiveness:

- 1) Technology
- 2) Taxes and regulations
- 3) Education/workforce development
- 4) Financing
- 5) Infrastructure
- 6) Regional quality of life

The survey of durable manufacturing firms also provided the top five recommendations for improving the county's business climate which are as follows:

- 1) Reduce the regulatory burden on firms
- 2) Reduce business taxes and fees

- 3) Provide improved access to financing
- 4) Stimulate economic growth and creation of jobs
- 5) Provide assistance in recruiting and training workers

Technology Issues

The degree to which specific industries can acquire the scientific discoveries, develop technology applications and deploy products and practices they require is a key to success for SELAC's subcontractors. The durable manufacturing survey ranked this as the most important key to success and the high technology survey found support for the need to obtain expert help in improving manufacturing processes and products. Also, some of the needs linked to information on market requirements likely are related to requirements for information on accessing new technologies.

Financing Issues

The ability to obtain the right amount of financing at the right time for initiating, expanding or transforming a firm is a key requirement for a transforming region like SELAC. Subcontractors have cited a specific need for loans for product development, re-tooling and expansion. In addition, access to high-risk capital for promising new businesses was also ranked highly in the high technology survey.

Human Resources Issues

SELAC's subcontractors need improved abilities and support to prepare, advance and renew skills for specific and changing markets. Over half (54%) of firms responding to the durable manufacturing survey reported problems recruiting workers with needed skills. The high technology survey revealed a mid-level requirement for skills upgrading training. In addition, the following other high to mid-level ranked priorities have an important management and marketing skills component:

- Information about product requirements for new markets
- Marketing and export services for small businesses
- Expert help in improving manufacturing processes and products
- Government help in opening new markets
- Clearinghouse for sharing information about business opportunities

These priorities were generally put forward as items for government to assist with. Yet they also reflect a need on the part of subcontractors to acquire new management and marketing skills to cope with the requirements of moving from military markets to civilian commercial markets.

Tax and Regulatory Issues

Tax and regulatory issues were ranked highest by firms participating in the high technology and durable manufacturing surveys. The subcontractors are looking for more predictability and stability in the regulatory environment and any move towards reducing the burdens of regulation would be welcomed. The durable manufacturing survey also revealed dissatisfaction with the level of business taxes and fees. The high ranking of tax and regulatory issues by firms in the region is consistent with similar rankings in other regions facing defense adjustment and other challenges.

The Role of Government

In general, there is a widely shared perception among high technology firms that government participation is critical for coping with uncertainties of declining defense sales and untried new markets, but that the public sector has not yet hit its stride in providing this help. A survey conducted in late 1994 of 358 firms that directly employ approximately 85 percent of the Los Angeles region's aerospace and electronics workers found strong support for government participation in a regional industrial development strategy, along with an equally strong aversion to government's traditional command and control role in implementing such a strategy. Yet at the same time there is skepticism about the benefits of working with governments. In the durable manufacturing survey, only 16% of firms reported having worked with any public or private economic development agency.

The high technology survey offered firms three seemingly distinct visions about the proper role of government in dealing with defense cutbacks:

- 1) Government is part of the problem, not the solution—it can be most helpful by not intervening in the free market.
- 2) This is a complex region with a lot of people and infrastructure—we need current government programs to have a healthy business climate, the problem is how to get good services for our taxes.
- 3) To recover from defense cutbacks, Southern California needs an industrial development policy for guiding cooperative efforts by business and government to help regional industries become competitive in new markets.

Surprisingly, a majority of firms agreed with all three positions, suggesting that while government has created problems in the business environment and needs to become more effective in delivering public services, it is still an essential source of help for planning and implementing a strategy to deal with economic dislocations created by defense cutbacks.

The survey also asked firms to rate the effectiveness of each level of government in dealing with defense cutbacks. The responses were overwhelmingly critical. When asked how important it is for Southern California's economic future that defense-related industries diversify into new commercial markets, 84 percent responded either that it is important or critically important. At the same time, 88 percent rated efforts by every level of government to deal with defense cutbacks as ineffective.

The desire of firms for public leadership along with their critical assessment of current defense conversion efforts indicates a need for effective, strategy-driven programs to foster regional job creation in high technology industries. Three critical requirements emerge for the public sector:

- 1) It must support a strategic vision rather than simply the day-to-day grindings of bureaucracy;
- 2) It must collaborate rather than control; and
- 3) It must demonstrate competence in following through on commitments and getting things done.

The caveat expressed by most high technology businesses that the public sector should participate in, but not control, regional industrial development strategy reflects lessons about dangers of dependency that have been hard-learned in recent defense down-sizing. Build-to-print machine shops that depended on large system integrators to tell them how to apply their skills have plunged into economic free-fall. In contrast, firms that took command of their situation by understanding how market demands for innovation could be addressed through their core competencies have often succeeded in adapting, surviving, and even growing.

Priority Needs of Large High Technology Firms

High technology firms with over 1,000 employees have more impact on the economy than other businesses because of the large share of the region's skilled workforce they employ. They also stand apart because their responses to issues raised in the survey are in many instances different from other firms. The high concentration of big aerospace programs in the SELAC region makes it particularly important to understand their needs. Responses of these "giants" indicate that:

- 62% think their employment will decline over the next 5 years. This is the most pessimistic (or perhaps, realistic) outlook of any industry group.
- They are highly defense dependent, with 47% of an average firm's sales going to the defense market.
- In assessing possible programs for dealing with defense cutbacks, they see a high level of value in:
 - ♦ loans for product development, re-tooling, or expansion (52%)
 - ♦ high risk capital for promising new businesses (57% - highest of any group)
 - ♦ government help in opening new markets (48% - highest of any group)
 - ♦ finding new uses for surplus facilities (57% - highest of any group)
 - ♦ reliable assurances about future regulatory requirements (71%)

Large firms present themselves as being more open to consultation, and possibly coordination, than other industry groups, but also more insistent on maintaining autonomy. They are, for example more open to sharing information with other firms and possibly even collaborating with organized labor, but they are also unique in their interest in dominating their markets and avoiding increased government controls. They would like public assistance in a number of areas including help in recycling surplus real estate holdings, stabilizing the regulatory environment, and obtaining high risk capital.

Recommendations

The region's surviving Aerospace/Defense subcontractors are faced with a continued challenge to cope with falling defense expenditures and competition from other regions for production facilities. The Gateway Cities Partnership, discussed in Part A of this report, will have an important role to play in providing them with the support and facilitation they need to tackle this challenge. The Gateway Cities Partnership's efforts to connect these subcontractors with markets and technology will be the prime agents of this work. While it would be helpful to characterize categories of subcontractors in order to target efforts, this has proven to be difficult. Most firms want one-on-one help for their specific needs rather than assistance targeted to a group.

Cross-cutting Initiatives

The Gateway Cities Partnership (GCP) will have a strong mandate to increase the level of clustering activity taking place among the displaced subcontractors. In coordination with the Gateway Cities Council of Governments initiatives will need to be developed to improve how defense-linked firms perceive the local business environment, and to work cooperatively with firms to secure a greater share of work for local facilities and local subcontractors. For example, GCP could initiate monthly, policy-level meetings of major aerospace firms and adjacent cities to identify convergent political priorities, solve problems and act on opportunities to resolve problems affecting the viability of their businesses, retain aerospace jobs, and support growth.

In particular, defense adjustment assistance should differentiate between the priorities of large firms and those of small and medium size firms. All sizes of firms have indicated a need for regulatory relief, particularly in the forms of assistance in dealing with bureaucratic processes, and access to financing. Large firms indicate stronger interest in consultative process to reduce business risks and increase business efficiency, including government help in opening new markets and finding new uses for surplus facilities.

Market Transition Initiatives

The Gateway Cities Partnerships market transition mandate discussed in Part A will play a key role helping the subcontractors connect to new markets and other subcontractors in the region and throughout the county and Southern California.

Specific initiatives could also focus on key prime contractors. For example, the GCP could work with the city managers of Pico Rivera and neighboring cities to open discussions with Northrop Grumman Corporation to propose:

- Ongoing policy level consultations about retaining research, development and production programs at the Pico Rivera site.
- Economic development support for commercialization of promising new products emerging from the corporation's technology development center.

GCP could also explore the feasibility of establishing public sector buyers consortiums to create start-up markets for new high technology products developed by Northrop Grumman Corporation

and other high technology firms, and link these consortiums with economic development initiatives to recycle obsolete manufacturing sites into functional, competitively priced new facilities.

Similarly, a dialogue could be opened with aerospace prime contractors and members of the California congressional delegation regarding outsourcing of contract funds awarded to sites in Los Angeles County. The objective of this dialogue should be to understand and correct business environment problems that lead firms to move work outside the county, and also to build political support for keeping jobs in the Los Angeles region.

**Southeast Los Angeles County
Defense Adjustment Strategy:
*An Integrated Strategy for Action***

**Appendix to Part D:
Displaced Aerospace/Defense
Worker Strategies**

Notes on the Appendix to Part D

The appendix to Part D is organized in five sections:

- D1: Occupational Matrix for Aerospace Employment in Los Angeles County
- D2: Area of Residence of Workers Applying to EDD for Aerospace Jobs:
Fiscal Year 1994-95
- D3: Characteristics of Los Angeles County Residents in Aerospace Occupations
Served by EDD in Fiscal Year 1994-95
- D4: Employment Development Department Job Openings Received for Aerospace Jobs
in Los Angeles County: 1994-95
- D5: Employment Development Department Detailed Occupational Employment
Projections for Los Angeles County: Annual Averages for 1990, 1992, 1994 and
Projections for 1999.
- D6: Inventory of Worker Training Programs: Sorted by Occupational Area

Appendix D1

Occupational Matrix for Aerospace Employment in Los Angeles County

OCCUPATIONAL MATRIX FOR LOS ANGELES COUNTY AEROSPACE INDUSTRIES

EDD OES Survey 1992-94 - SIC 372, SIC 376, SIC 381

OES	TITLE OF OCCUPATION	1992 JOBS	1994 JOBS	CHANGE 1988-1994	% Aerospace Employment
MANAGERIAL AND ADMINISTRATIVE OCCUPATIONS					
1300200	FINANCIAL MANAGERS	757	538	-546	0.4814%
1300500	PERS, TRAINING, LABOR-REL MGRS	399	282	-298	0.2537%
1300800	PURCHASING MANAGERS	513	348	-433	0.3262%
1301100	MKTING, ADV, PUB-REL MANAGERS	546	379	-427	0.3472%
1301400	ADMINISTRATIVE SERVICES MANAGE	1946	1364	-1536	1.2375%
1301700	ENGINEER, MATH, AND NAT SCI MG	6326	4493	-4676	4.0228%
1501400	INDUSTRIAL PRODUCTION MANAGER	2445	1723	-1763	1.5548%
1900500	GENERAL MANAGERS, TOP EXECUTIV	1273	881	-1012	0.8095%
1999900	MANAGERS AND ADMINISTRATORS, N	1152	820	-844	0.7326%
<i>Subtotal-Managerial and Administrative Occupations</i>		15357	10828	-11537	9.7658%
PROFESSIONAL, PARAPROFESSIONAL AND TECHNICAL OCCUPATIONS					
MANAGEMENT SUPPORT OCCUPATIONS					
2111400	ACCOUNTANTS AND AUDITORS	1242	890	-880	0.7898%
2111700	BUDGET ANALYSTS	372	266	-261	0.2366%
2119900	FINANCIAL SPECIALISTS, NEC	738	549	-419	0.4693%
2151100	PERS, TRAINING, LAB-REL SPECS,	1124	803	-790	0.7148%
2190200	COST ESTIMATORS	777	552	-552	0.4941%
2199900	MANAGEMENT SUPPORT WORKERS,	6659	4906	-3982	4.2346%
ENGINEERS AND RELATED OCCUPATIONS					
2210200	AERONAUT, ASTRONAUTICAL ENGINE	9021	6614	-5398	5.7366%
2210500	METALLURGISTS, RELATED ENGINEE	78	55	-52	0.0496%
2211400	CHEMICAL ENGINEERS	62	45	-36	0.0394%
2212100	CIVIL ENGINEERS--INCLUDING TRA	117	88	-62	0.0744%
2212600	ELECT AND ELECTRONIC ENGINEERS	7695	5331	-6365	4.8934%
2212700	COMPUTER ENGINEERS	257	182	-200	0.1634%
2212800	INDUST ENGINEERS--EXCEPT SAFET	6227	4457	-4351	3.9599%
2213200	SAFETY ENGINEERS--EXCEPT MININ	91	66	-55	0.0579%
2213500	MECHANICAL ENGINEERS	2287	1593	-1768	1.4543%
2219900	ENGINEERS, NEC	8650	6451	-4936	5.5007%
2250200	CIVIL ENGINEERING TECHNICIANS	584	387	-495	0.3714%
2250500	ELECT, ELECTRONIC ENGINEERING	4122	2917	-3186	2.6213%
2250800	INDUST ENGINEERING TECHS	205	117	-254	0.1304%
2251100	MECHANICAL ENGINEERING TECHS	1297	907	-992	0.8248%
2251400	DRAFTERS	551	373	-466	0.3504%
2259900	ENGINEERING, RELATED TECHS, NE	1259	865	-991	0.8006%
NATURAL SCIENTISTS AND RELATED WORKERS					
2410500	CHEMISTS, EXCEPT BIOCHEMISTS	3	2	-2	0.0019%
2419900	PHYSICAL SCIENTISTS, NEC	1321	922	-1092	0.8400%
2450500	CHEM TECHS--EXCEPT HEALTH	5	3	-4	0.0032%
2459900	PHYSICAL, LIFE SCIENCE TECHS,	812	565	-692	0.5164%
COMPUTER, MATHEMATICAL, OPERATIONS RESEARCH, AND RELATED OCCUPATIONS					
2510200	SYSTEMS ANALYSTS--ELEC DATA PR	3353	2395	-2466	2.1322%
2510511	COMPUTER PROGRAMMERS	598	421	-426	0.3803%
2510512	COMPUTER PROGRAMMER AIDES	584	410	-467	0.3714%
2511100	NC TOOL, PROCESS PROGRAMMERS	88	62	-68	0.0560%
2519900	COMPUTER SCIENTISTS, REL WRKRS	596	447	-324	0.3790%
2530200	OPS, SYS RESEARCHERS--EX COMPU	705	519	-421	0.4483%
2531200	STATISTICIANS	11	8	-6	0.0070%
HEALTH PRACTITIONERS, TECHNOLOGISTS, TECHNICIANS, AND RELATED OCCUPATIONS					
3299900	HEALTH CARE PROFS, PARAPROFS,	220	163	-131	0.1399%

OCCUPATIONAL MATRIX FOR LOS ANGELES COUNTY AEROSPACE INDUSTRIES
EDD OES Survey 1992-94 - SIC 372, SIC 376, SIC 381

OES	TITLE OF OCCUPATION	1992 JOBS	1994 JOBS	CHANGE 1988-1994	% Aerospace Employment
WRITERS, ARTISTS AND RELATED OCCUPATIONS					
3400200	WRITERS AND EDITORS	247	172	-192	0.1571%
3400500	TECHNICAL WRITERS	749	557	-436	0.4763%
3403500	ARTISTS AND RELATED WORKERS	362	270	-202	0.2302%
3403821	DESIGNERS, EX INTERIOR AND FLO	217	139	-203	0.1380%
OTHER PROFESSIONAL, PARAPROFESSIONAL, AND TECHNICAL OCCUPATIONS					
3999900	OTHER PROF, PARAPROF, TECHNICA	3724	2641	-2786	2.3682%
<i>Subtotal-Professional, Paraprofessional, and Technical</i>		67010	48109	-46407	42.6129%
SALES AND RELATED OCCUPATIONS					
4100200	FIRST-LINE SUP/MGR-SALES	66	46	-53	0.0420%
4900200	SALES ENGINEERS	96	68	-74	0.0610%
4900500	SALES REPS, SCIENTIFIC-EX RET	301	214	-206	0.1914%
4900800	SALES REPS, NON-SCIENTIFIC EX	232	169	-137	0.1475%
4999900	SALES AND RELATED WORKERS, NEC	627	470	-341	0.3987%
<i>Subtotal-Sales and Related Occupations</i>		1322	967	-811	0.8407%
CLERICAL AND ADMINISTRATIVE SUPPORT OCCUPATIONS					
5100200	FIRST-LINE SUP/MGR, CLERL, ADM	1098	764	-874	0.6982%
5312300	ADJUSTMENT CLERKS	177	100	-216	0.1126%
SECRETARIAL AND GENERAL OFFICE OCCUPATIONS					
5510800	SECRETARIES,GENERAL	3378	2429	-2363	2.1481%
5530200	STENOGRAPHERS	11	8	-6	0.0070%
5530500	RECEPTIONISTS, INFORMATION CLE	61	42	-49	0.0388%
5530700	TYPISTS, INCLUDING WORD PROCES	129	91	-96	0.0820%
5531400	PERS CLERKS-EX PAYROLL	326	235	-226	0.2073%
5532100	FILE CLERKS	295	220	-166	0.1876%
5532300	ORDER CLERKS-MATERIALS, SERVI	63	42	-56	0.0401%
5532600	PROCUREMENT CLERKS	336	248	-198	0.2137%
5532800	STATISTICAL CLERKS	203	151	-112	0.1291%
5533800	BOOKKEEPING, ACCOUNTING CLERKS	652	461	-470	0.4146%
5534100	PAYROLL AND TIMEKEEPING CLERKS	153	106	-115	0.0973%
5534400	BILLING, COST, AND RATE CLERKS	106	75	-73	0.0674%
5534700	GENERAL OFFICE CLERKS	1113	777	-837	0.7078%
ELECTRONIC DATA PROCESSING AND OTHER OFFICE MACHINE OCCUPATIONS					
5600200	BILLING, POSTING, CALC MACHINE	5	3	-4	0.0032%
5601100	COMPUTER OPS-EX PERIPHERAL EQ	193	132	-158	0.1227%
5601400	PERIPHERAL EDP EQUIPMENT OPERA	156	117	-82	0.0992%
5601700	DATA ENTRY KEYERS-EX COMPOSIN	177	124	-138	0.1126%
5609900	OFFICE MACHINE OPERATORS, NEC	385	279	-265	0.2448%
COMMUNICATIONS EQUIPMENT OPERATORS					
5710200	SWITCHBOARD OPERATORS	83	57	-63	0.0528%
MATERIAL RECORDING, SCHEDULING, DISPATCHING, AND DISTRIBUTING OCCUPATIONS					
5800500	DISPATCH-EX POLICE, FIRE, AMB	178	132	-102	0.1132%
5800800	PROD, PLANNING, EXPEDITING CLE	3278	2384	-2129	2.0845%
5801700	WEIGHERS, MEASURERS-RECORDKE	81	61	-43	0.0515%
5802300	STOCK CLERKS-STOCKROOM, WARE	1994	1373	-1626	1.2680%
5802800	TRAFFIC, SHIPPING, RECEIVING C	639	437	-506	0.4064%
5809900	MATERIAL RECORDING, RELATED, N	579	400	-487	0.3682%
ALL OTHER CLERICAL AND ADMINISTRATIVE SUPPORT OCCUPATIONS					
5999900	CLERICAL & ADMIN SUP WRKERS, N	1893	1367	-1287	1.2038%
<i>Subtotal-Clerical and Administrative Support</i>		17742	12616	-12748	11.2825%
SERVICE OCCUPATIONS					

OCCUPATIONAL MATRIX FOR LOS ANGELES COUNTY AEROSPACE INDUSTRIES
EDD OES Survey 1992-94 - SIC 372, SIC 376, SIC 381

OES	TITLE OF OCCUPATION	1992 JOBS	1994 JOBS	CHANGE 1988-1994	% Aerospace Employment
6109900	FIRST-LINE SUP/MGR SERV WKRS,	277	192	-221	0.1761%
6304700	GUARDS AND WATCH GUARDS	1145	816	-801	0.7281%
6509900	FOOD SERVICE WORKERS, NEC	127	94	-71	0.0808%
6700500	JANITORS, CLEANERS-EXCEPT MAI	971	694	-670	0.6175%
6709900	CLEANING, BLDING SERV-EX PH,	74	56	-39	0.0471%
6999900	MISC SERVICE WORKERS	197	139	-141	0.1253%
<i>Subtotal-Service Occupations</i>		2791	1991	-1944	1.7748%
AGRICULTURAL, FORESTRY, FISHING, AND RELATED OCCUPATIONS					
7000000	AGRICULTURAL, FORESTRY, FISHIN	11	8	-8	0.0070%
<i>Subtotal-Agricultural, Forerstry and Related Occupation</i>		11	8	-8	0.0070%
PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE, AND MATERIAL HANDLING OC					
FIRST LINE SUPERVISORS/MANAGERS-PRODUCTION, CONSTRUCTION, AND MAINTENANC					
8100200	FIRST-LINE SUP/MGR-MECH, REPAI	273	188	-227	0.1736%
8100500	FIRST-LINE SUP/MGR-CONSTRUCTIO	21	11	-28	0.0134%
8100800	FIRST-LINE SUP/MGR-PRODUCTION	1668	1134	-1431	1.0607%
8101100	FIRST-LINE SUP/MGR-TRANSPORTAT	69	48	-52	0.0439%
8101700	FIRST-LINE SUP/MGR-HELP, LABOR	46	33	-31	0.0293%
8109900	FIRST-LINE SUP/MGR-BLUE COLLAR	68	45	-73	0.0432%
INSPECTORS AND RELATED OCCUPATIONS					
8300200	INSPECTORS, TESTERS, & GRADERS, P	3775	2689	-2705	2.4006%
8300500	PROD INSPECTORS, TESTERS, & GR	1453	989	-1111	0.9240%
8300800	TRANSPORTATION INSPECTORS	1	1	-0	0.0006%
MECHANICS, INSTALLERS AND REPAIRERS					
8511900	MACHINERY MAINT MECHANICS, NEC	866	633	-546	0.5507%
8512300	MILLWRIGHTS	50	31	-51	0.0318%
8512800	MACHINERY MAINTENANCE WORKER	48	30	-51	0.0305%
8513200	MAINT REPAIRERS, GENL UTILITY	228	161	-164	0.1450%
8530200	AUTOMOTIVE MECHANICS	68	48	-46	0.0432%
8531100	BUS AND TRUCK MECHANICS	6	4	-4	0.0038%
8532300	AIRCRAFT MECHANICS	1044	754	-650	0.6639%
8532600	AIRCRAFT ENGINE SPECIALISTS	106	77	-99	0.0674%
8551400	RADIO MECHANICS	15	11	-9	0.0095%
8571700	ELECT REPAIRERS-COMMERCIAL	257	170	-218	0.1634%
8572800	ELEC INSTALLERS-TRANS EQUIPME	375	280	-207	0.2385%
8590200	HEATING, AC, REFRIG MECHANICS	111	82	-64	0.0706%
8590500	INSTRUMENT REPAIRERS, PRECISIO	414	290	-338	0.2633%
8593500	RIGGERS	39	29	-21	0.0248%
8599900	MECHS, INSTALLERS, REPAIRERS,	1620	1180	-1071	1.0302%
CONSTRUCTION TRADES					
8710200	CARPENTERS	123	87	-90	0.0782%
8720200	ELECTRICIANS	332	240	-212	0.2111%
8740200	PAINTERS, PAPERHANGERS-CONST	110	75	-89	0.0700%
8750200	PLUMBERS, PIPEFITTERS, STEAMFI	384	283	-229	0.2442%
8780200	INSULATION WORKERS	23	16	-15	0.0146%
8799900	CONST, EXTRACTIVE-EX HELPERS,	37	24	-34	0.0235%
PRECISION PRODUCTION OCCUPATIONS					
8910200	TOOL AND DIE MAKERS	697	505	-442	0.4432%
8910500	INSTRUMENT MAKERS, PRECISION	10	7	-8	0.0064%
8910800	MACHINISTS	2857	2038	-1966	1.8168%
8911100	TOOL GRINDERS, FILERS, SHARPEN	133	91	-108	0.0846%
8911700	LAYOUT WORKERS-METAL, PRECISI	48	35	-30	0.0305%

OCCUPATIONAL MATRIX FOR LOS ANGELES COUNTY AEROSPACE INDUSTRIES

EDD OES Survey 1992-94 - SIC 372, SIC 376, SIC 381

OES	TITLE OF OCCUPATION	1992 JOBS	1994 JOBS	CHANGE 1988-1994	% Aerospace Employment
8913200	SHEET METAL WORKERS	1198	849	-784	0.7618%
8919900	METAL WORKERS, NEC--PRECISION	108	75	-87	0.0687%
8930200	PATTERN AND MODEL MAKERS--WOO	84	61	-51	0.0534%
8939900	WOODWORKERS, NEC--PRECISION	34	26	-18	0.0216%
8991700	OPTICAL GOODS WORKERS, PRECISI	16	11	-13	0.0102%
8999900	WORKERS, PRECISION--NEC	447	333	-250	0.2843%
MACHINE SETTERS, SET-UP OPERATORS, OPERATORS, AND TENDERS					
9110200	SAW MACH TOOL SETTERS--METAL, P	85	62	-51	0.0541%
9110500	LATHE MACH SETTERS--METAL, PLA	378	261	-303	0.2404%
9110800	DRILLING MACH SETTER--METAL, PL	332	239	-244	0.2111%
9111100	MILLING MACH SETTERS--METAL, PL	343	247	-215	0.2181%
9111400	GRINDING MACH SETTER--METAL, PL	447	308	-368	0.2843%
9111700	MACH TOOL CUTTING OPS--METAL, P	408	277	-345	0.2595%
9130200	PUNCH MACH SETTERS--METAL, PLA	5004	1929	-4231	3.1821%
9130500	PRESS MACH SETTERS--METAL, PLA	167	117	-115	0.1062%
9130800	SHEAR MACH SETTERS--METAL, PLA	3	2	-2	0.0019%
9131700	FORGING MACH SETTERS--METAL, P	37	27	-22	0.0235%
9132100	MACH FORMING OPS, TENDRS--MET,	110	80	-67	0.0700%
9150200	NUMERICAL MACH TOOL OPS--MET,	816	564	-669	0.5189%
9150500	COMB MACH TOOL SETTERS--MET, P	166	118	-107	0.1056%
9150800	COMB MACH TOOL OPS--METAL, PLA	75	52	-55	0.0477%
9170200	WELDING MACH SETTERS, SET-UP O	187	130	-176	0.1189%
9170500	WELDING MACH OPERATORS AND TE	87	61	-61	0.0553%
9190200	PLAST MOLDING, CASTING MACH SE	82	58	-54	0.0521%
9190500	PLASTIC MOLDING, CASTING MACH	51	37	-31	0.0324%
9190800	METAL MOLDING, MACH SETTER, SE	25	17	-20	0.0159%
9191100	METAL MOLDING MACH OPS AND TEN	37	26	-24	0.0235%
9191700	ELECTROLYTIC PLATING, MACH SET	46	29	-46	0.0293%
9192100	ELECTROLYTIC PLATING, MACH OPS	163	116	-145	0.1037%
9192800	HEATING EQUIP SETTERS-METAL, P	6	4	-6	0.0038%
9193200	HEAT TREATING MACH OPS, TENDER	68	48	-48	0.0432%
9219700	CUT, FORM, FAB, PROC MACH SETT	229	172	-124	0.1456%
9219800	CUT, FORM, FAB, PROCESS MACH O	114	80	-108	0.0725%
9272100	SEWING MACHINE OPS--NON-GARME	21	16	-11	0.0134%
9290200	ELECTRONIC SEMICONDUCTOR PROC	53	37	-44	0.0337%
9294700	PAINTERS, TRANSPORTATION EQUIP	777	583	-417	0.4941%
9295100	PAINT, COAT & SPRAY MACH SETTE	63	46	-40	0.0401%
9295300	PAINTING, REL MACH OPS, TENDER	137	85	-136	0.0871%
9295800	CLEANING, PICKLING EQUIP OPS, T	25	16	-22	0.0159%
9296500	CRUSHING, MIXING MACH OPS, TND	5	3	-4	0.0032%
9297400	PACKAGING, FILLING MACH OPS, T	94	70	-55	0.0598%
9299700	MACHINE SETTERS & SET-UP OPS,	228	146	-213	0.1450%
9299800	MACHINE OPERATORS AND TENDERS,	177	118	-156	0.1126%
HAND WORKING OCCUPATIONS, INCLUDING ASSEMBLERS AND FABRICATORS					
9310200	AIRCRAFT ASSEMBLERS--PRECISION	10586	7910	-5772	6.7318%
9310500	MACH BLDR, OTH PREC MACH ASSEM	51	36	-35	0.0324%
9311100	ELECTROMECH EQUIP ASSEMBLERS--	724	475	-663	0.4604%
9311400	ELECTRICAL EQUIP ASSEMBLERS--P	3246	2312	-2312	2.0642%
9319700	ASSEMBLERS, NEC--PRECISION	470	349	-265	0.2989%
9390200	MACHINE ASSEMBLERS	120	84	-85	0.0763%
9390500	ELECTRICAL, ELECTRONIC ASSEMBL	1505	1001	-1290	0.9571%

OCCUPATIONAL MATRIX FOR LOS ANGELES COUNTY AEROSPACE INDUSTRIES
EDD OES Survey 1992-94 - SIC 372, SIC 376, SIC 381

OES	TITLE OF OCCUPATION	1992 JOBS	1994 JOBS	CHANGE 1988-1994	% Aerospace Employment
9391400	WELDERS AND CUTTERS	817	601	-487	0.5195%
9391700	SOLDERERS AND BRAZERS	130	94	-97	0.0827%
9394700	PAINTING, COATING, DECORATING-	1	1	-1	0.0006%
9395300	GRINDING, POLISHING WORKERS--H	181	129	-137	0.1151%
9395600	ASSEMB, FABRICATORS--EX MACH,E	2703	1875	-2033	1.7189%
9399900	HAND WORKERS, NEC	131	91	-109	0.0833%
PLANT AND SYSTEM OCCUPATIONS					
9509900	PLANT AND SYSTEM OPERATORS, NE	50	34	-41	0.0318%
TRANSPORTATION AND MATERIAL MOVING MACHINE AND VEHICLE OPERATORS					
9710200	TRUCK DRIVERS, HEAVY	423	302	-306	0.2690%
9710500	TRUCK DRIVERS, LIGHT	177	129	-110	0.1126%
9719900	MOTOR VEHICLE OPERATORS, NEC	7	5	-5	0.0045%
9789900	TRANS AND RELATED WORKERS, NEC	100	72	-68	0.0636%
9794400	CRANE AND TOWER OPERATORS	49	37	-27	0.0312%
9794700	INDUSTRIAL TRUCK,TRACTOR OPERA	200	145	-131	0.1272%
9798900	MATERIAL MOVING EQUIP OPS, NEC	7	5	-4	0.0045%
HELPERS, LABORERS, AND MATERIAL MOVERS					
9850200	MACHINE FEEDERS AND OFFBEARER	96	70	-60	0.0610%
9879900	FREIGHT, MATERIAL MOVERS-HAND,	354	247	-301	0.2251%
9890200	HAND PACKERS AND PACKAGERS	167	112	-147	0.1062%
9890500	VEHICLE WASHERS, EQUIP CLEANER	26	19	-14	0.0165%
9899900	MISC HELPERS, LABORERS--HAND,	391	281	-262	0.2486%
<i>Subtotal-Production, Construction, Operating, Maint.</i>		<i>53020</i>	<i>36269.2</i>	<i>-42769</i>	<i>33.7164%</i>
TOTAL-ALL LOS ANGELES COUNTY AEROSPACE		157253	110789		100.0000%

Appendix D2

Area of Residence of Workers Applying to EDD for Aerospace Jobs: Fiscal Year 1994-95

—AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

			SOUTHEAST				SOUTHWEST				WILSHIRE HOLLYWOOD WEST/CENTRL LOS ANGELES				SAN GABRIEL VALLEY				S FERNANDO S CLARITA VALLEYS				ANTELOPE VALLEY			
OES	DOT CODE	DOT TITLE	TOTAL APPS	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	COUNTY APPS	PERCT	
MANAGERIAL AND ADMINISTRATIVE OCCUPATIONS																										
130170 ENGINEERING, MATHEMATICAL AND NATURAL SCIENCE MANAGERS																										
TOTALS FOR OES OCCUPATION			187	25	13%	36	19%	16	9%	41	22%	59	32%	10	5%											
	003.167-070	ENGINEERING MANAGER, ELE	31	3	10%	6	19%	5	16%	7	23%	8	26%	2	6%											
	007.167-014	PLANT ENGINEER	15	1	7%	2	13%	1	7%	4	27%	6	40%	1	7%											
	008.167-010	TECHNICAL DIRECTOR, CHEMI	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%											
	011.161-010	SUPERVISOR, METALLURGICA	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%											
	012.167-058	SAFETY MANAGER	11	1	9%	2	18%	1	9%	5	45%	1	9%	1	9%											
	019.167-014	PROJECT ENGINEER	68	10	15%	12	18%	4	6%	11	16%	26	38%	5	7%											
	022.161-010	CHEMICAL LABORATORY CHIE	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%											
	029.167-014	PROJECT MANAGER, ENVIRON	3	0	0%	0	0%	0	0%	3	100%	0	0%	0	0%											
	169.167-030	MANAGER, DATA PROCESSING	32	8	25%	5	16%	0	0%	5	16%	13	41%	1	3%											
	169.167-082	MANAGER, COMPUTER OPERA	21	1	5%	7	33%	5	24%	4	19%	4	19%	0	0%											
	189.117-014	DIRECTOR, RESEARCH AND D	3	1	33%	1	33%	0	0%	1	33%	0	0%	0	0%											
150140 INDUSTRIAL PRODUCTION MANAGERS																										
TOTALS FOR OES OCCUPATION			210	51	24%	21	10%	16	8%	49	23%	53	25%	20	10%											
	183.117-010	MANAGER, BRANCH	49	14	29%	6	12%	4	8%	7	14%	16	33%	2	4%											
	183.117-014	PRODUCTION SUPERINTENDE	127	30	24%	15	12%	10	8%	32	25%	33	26%	7	6%											
	183.167-018	GENERAL SUPERVISOR	32	7	22%	0	0%	2	6%	9	28%	4	13%	10	31%											
	189.117-042	DIRECTOR, QUALITY ASSURAN	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%											
	189.167-046	SUPERINTENDENT, MAINTENA	1	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%											
SUBTOTAL-MANAGERS & ADMINISTRATORS			397	76	19%	57	14%	32	8%	90	23%	112	28%	30	8%											
PROFESSIONAL, PARAPROFESSIONAL AND TECHNICAL OCCUPATIONS																										
Engineers and Related Occupations																										
221050 METALLURGISTS AND METALLURGICAL, CERAMIC, AND																										
TOTALS FOR OES OCCUPATION			16	1	6%	3	19%	3	19%	3	19%	5	31%	1	6%											
	006.061-022	CERAMICS TEST ENGINEER	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%											
	011.061-014	METALLOGRAPHER	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%											
	011.061-022	METALLURGIST, PHYSICAL	3	0	0%	1	33%	0	0%	1	33%	1	33%	0	0%											
	011.061-026	WELDING ENGINEER	6	1	17%	0	0%	2	33%	2	33%	0	0%	1	17%											
	019.061-014	MATERIALS ENGINEER	5	0	0%	2	40%	1	20%	0	0%	2	40%	0	0%											
221140 CHEMICAL ENGINEERS																										
TOTALS FOR OES OCCUPATION			54	12	22%	7	13%	6	11%	21	39%	5	9%	3	6%											
	008.061-014	CHEMICAL DESIGN ENGINEER,	2	0	0%	1	50%	0	0%	1	50%	0	0%	0	0%											
	008.061-018	CHEMICAL ENGINEER	52	12	23%	6	12%	6	12%	20	38%	5	10%	3	6%											
221210 CIVIL ENGINEERS, INCLUDING TRAFFIC																										
TOTALS FOR OES OCCUPATION			123	19	15%	15	12%	15	12%	40	33%	28	23%	6	5%											
	005.061-014	CIVIL ENGINEER	113	18	16%	14	12%	13	12%	36	32%	26	23%	6	5%											
	005.061-018	HYDRAULIC ENGINEER	2	0	0%	0	0%	0	0%	2	100%	0	0%	0	0%											
	005.061-022	IRRIGATION ENGINEER	1	0	0%	0	0%	1	100%	0	0%	0	0%	0	0%											
	005.061-026	RAILROAD ENGINEER	4	1	25%	0	0%	1	25%	1	25%	1	25%	0	0%											
	005.061-030	SANITARY ENGINEER	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%											
	005.061-038	TRANSPORTATION ENGINEER	2	0	0%	0	0%	0	0%	1	50%	1	50%	0	0%											
221270 COMPUTER ENGINEERS																										
TOTALS FOR OES OCCUPATION			242	40	17%	34	14%	22	9%	46	19%	73	30%	27	11%											
	030.062-010	SOFTWARE ENGINEER	91	11	12%	12	13%	9	10%	13	14%	36	40%	10	11%											
	033.167-010	COMPUTER SYSTEMS HARDW	151	29	19%	22	15%	13	9%	33	22%	37	25%	17	11%											

AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

OES	DOT CODE	DOT TITLE	WILSHIRE													
			TOTAL		SOUTHEAST		SOUTHWEST		HOLLYWOOD		SAN GABRIEL		S FERNANDO		ANTELOPE	
					APPS	PERCT	APPS	PERCT	LOS ANGELES	PERCT	VALLEY	PERCT	VALLEYS	PERCT	VALLEY	PERCT
221280 INDUSTRIAL ENGINEERS, EXCEPT SAFETY																
TOTALS FOR OES OCCUPATION			561	93	17%	94	17%	29	5%	101	18%	136	24%	108	19%	
	012.067-010	METROLOGIST	7	0	0%	0	0%	0	0%	2	29%	2	29%	3	43%	
	012.167-010	CONFIGURATION MANAGEMEN	25	3	12%	3	12%	0	0%	4	16%	7	28%	8	32%	
	012.167-014	MANAGER, QUALITY CONTROL	50	7	14%	4	8%	4	8%	14	28%	16	32%	5	10%	
	012.167-018	FACTORY LAY-OUT ENGINEER	3	0	0%	1	33%	0	0%	0	0%	1	33%	1	33%	
	012.167-030	INDUSTRIAL ENGINEER	70	13	19%	12	17%	6	9%	16	23%	11	16%	12	17%	
	012.167-038	LIAISON ENGINEER	2	0	0%	0	0%	0	0%	0	0%	1	50%	1	50%	
	012.167-042	MANUFACTURING ENGINEER	118	17	14%	20	17%	8	7%	28	24%	23	19%	22	19%	
	012.167-046	PRODUCTION ENGINEER	8	0	0%	1	13%	0	0%	2	25%	2	25%	3	38%	
	012.167-050	PRODUCTION PLANNER	112	28	25%	20	18%	2	2%	14	13%	20	18%	28	25%	
	012.167-054	QUALITY CONTROL ENGINEER	94	19	20%	15	16%	5	5%	14	15%	28	30%	13	14%	
	012.167-070	TIME-STUDY ENGINEER	2	0	0%	1	50%	0	0%	0	0%	0	0%	1	50%	
	012.167-074	TOOL PLANNER	3	0	0%	1	33%	0	0%	0	0%	0	0%	2	67%	
	012.167-078	DOCUMENTATION ENGINEER	6	0	0%	2	33%	0	0%	2	33%	2	33%	0	0%	
	012.167-082	MATERIAL SCHEDULER	61	6	10%	14	23%	4	7%	5	8%	23	38%	9	15%	
221320 SAFETY ENGINEERS, EXCEPT MINING																
TOTALS FOR OES OCCUPATION			18	2	11%	1	6%	1	6%	6	33%	3	17%	5	28%	
	012.061-014	SAFETY ENGINEER	12	2	17%	1	8%	0	0%	5	42%	1	8%	3	25%	
	012.167-022	FIRE-PREVENTION RESEARCH	1	0	0%	0	0%	1	100%	0	0%	0	0%	0	0%	
	012.167-026	FIRE-PROTECTION ENGINEER	3	0	0%	0	0%	0	0%	0	0%	2	67%	1	33%	
	012.167-034	INDUSTRIAL-HEALTH ENGINEE	2	0	0%	0	0%	0	0%	1	50%	0	0%	1	50%	
221350 MECHANICAL ENGINEERS																
TOTALS FOR OES OCCUPATION			347	56	16%	45	13%	33	10%	75	22%	107	31%	31	9%	
	007.061-014	MECHANICAL ENGINEER	252	38	15%	34	13%	24	10%	59	23%	77	31%	20	8%	
	007.061-018	MECHANICAL-DESIGN ENGINE	11	2	18%	1	9%	2	18%	2	18%	4	36%	0	0%	
	007.061-022	MECHANICAL-DESIGN ENGINE	17	2	12%	2	12%	2	12%	2	12%	9	53%	0	0%	
	007.061-026	TOOL DESIGNER	30	10	33%	1	3%	2	7%	8	27%	6	20%	3	10%	
	007.061-038	APPLICATIONS ENGINEER, MA	9	2	22%	2	22%	1	11%	2	22%	2	22%	0	0%	
	007.061-042	STRESS ANALYST	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	
	007.161-022	MECHANICAL RESEARCH ENGI	2	0	0%	0	0%	0	0%	0	0%	1	50%	1	50%	
	007.161-034	TEST ENGINEER, MECHANICAL	22	1	5%	5	23%	1	5%	2	9%	6	27%	7	32%	
	007.267-010	DRAWINGS CHECKER, ENGINE	3	1	33%	0	0%	1	33%	0	0%	1	33%	0	0%	
221990 ALL OTHER ENGINEERS																
TOTALS FOR OES OCCUPATION			54	6	11%	8	15%	4	7%	11	20%	9	17%	16	30%	
	019.061-010	BIOMEDICAL ENGINEER	6	1	17%	0	0%	1	17%	3	50%	0	0%	1	17%	
	019.061-018	OPTICAL ENGINEER	6	0	0%	2	33%	0	0%	2	33%	2	33%	0	0%	
	019.061-026	RELIABILITY ENGINEER	8	2	25%	2	25%	2	25%	0	0%	1	13%	1	13%	
	019.081-010	MAINTAINABILITY ENGINEER	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	
	019.081-014	PHOTOGRAPHIC ENGINEER	1	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%	
	019.081-018	POLLUTION-CONTROL ENGINE	2	0	0%	0	0%	0	0%	2	100%	0	0%	0	0%	
	019.167-010	LOGISTICS ENGINEER	27	1	4%	4	15%	1	4%	4	15%	4	15%	13	48%	
	019.187-010	PACKAGING ENGINEER	3	2	67%	0	0%	0	0%	0	0%	1	33%	0	0%	
225020 CIVIL ENGINEERING TECHNICIANS AND TECHNOLOGISTS																
TOTALS FOR OES OCCUPATION			35	7	20%	6	17%	4	11%	4	11%	11	31%	3	9%	
	005.261-014	CIVIL ENGINEERING TECHNIC	20	3	15%	4	20%	1	5%	3	15%	7	35%	2	10%	
	019.261-018	FACILITIES PLANNER	15	4	27%	2	13%	3	20%	1	7%	4	27%	1	7%	
225050 ELECTRICAL AND ELECTRONIC ENGINEERING TECHNICIANS AND TECHNOLOGISTS																
TOTALS FOR OES OCCUPATION			164	44	27%	15	9%	7	4%	28	17%	48	29%	22	13%	
	003.261-010	INSTRUMENTATION TECHNICI	31	7	23%	3	10%	0	0%	5	16%	1	3%	15	48%	
	019.281-010	CALIBRATION LABORATORY T	17	3	18%	2	12%	1	6%	5	29%	3	18%	3	18%	
	726.261-010	ELECTRONICS ASSEMBLER, D	115	34	30%	10	9%	6	5%	18	16%	43	37%	4	3%	

—AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

			WILSHIRE													
			HOLLYWOOD													
			S FERNANDO													
			SOUTHEAST			SOUTHWEST		WEST/CENTRL		SAN GABRIEL		S CLARITA		ANTELOPE		
			TOTAL	COUNTY		COUNTY		LOS ANGELES		VALLEY		VALLEYS		VALLEY		
OES	DOT CODE	DOT TITLE	APPS	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	
	726.261-014	ELECTRICIAN, RESEARCH	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	
225080 INDUSTRIAL ENGINEERING TECHNICIANS AND TECHNOLOGISTS																
TOTALS FOR OES OCCUPATION			99	20	20%	12	12%	14	14%	18	18%	24	24%	11	11%	
	012.261-014	QUALITY CONTROL TECHNICIA	92	19	21%	9	10%	11	12%	18	20%	24	26%	11	12%	
	012.267-010	INDUSTRIAL ENGINEERING TE	7	1	14%	3	43%	3	43%	0	0%	0	0%	0	0%	
225110 MECHANICAL ENGINEERING TECHNICIANS AND TECHNOLOGISTS																
TOTALS FOR OES OCCUPATION			81	16	20%	5	6%	6	7%	22	27%	25	31%	7	9%	
	007.161-026	MECHANICAL-ENGINEERING T	76	14	18%	5	7%	5	7%	21	28%	24	32%	7	9%	
	007.267-014	TOOL DESIGN CHECKER	5	2	40%	0	0%	1	20%	1	20%	1	20%	0	0%	
225140 DRAFTERS																
TOTALS FOR OES OCCUPATION			644	169	26%	67	10%	62	10%	155	24%	158	25%	33	5%	
	003.261-014	CONTROLS DESIGNER	3	1	33%	0	0%	0	0%	1	33%	1	33%	0	0%	
	003.261-022	PRINTED CIRCUIT DESIGNER	2	0	0%	0	0%	0	0%	1	50%	1	50%	0	0%	
	003.281-010	DRAFTER, ELECTRICAL	65	19	29%	8	12%	4	6%	13	20%	17	26%	4	6%	
	003.281-014	DRAFTER, ELECTRONIC	91	21	23%	12	13%	12	13%	28	31%	12	13%	6	7%	
	005.281-010	DRAFTER, CIVIL	51	14	27%	3	6%	7	14%	12	24%	15	29%	0	0%	
	005.281-014	DRAFTER, STRUCTURAL	19	5	26%	1	5%	0	0%	8	42%	5	26%	0	0%	
	007.161-010	DIE DESIGNER	2	1	50%	0	0%	0	0%	1	50%	0	0%	0	0%	
	007.161-018	ENGINEERING ASSISTANT, ME	42	10	24%	4	10%	3	7%	10	24%	13	31%	2	5%	
	007.261-022	DRAFTER, TOOL DESIGN	3	0	0%	2	67%	0	0%	1	33%	0	0%	0	0%	
	007.281-010	DRAFTER, MECHANICAL	187	40	21%	22	12%	22	12%	56	30%	38	20%	9	5%	
	017.261-014	DESIGN DRAFTER, ELECTROM	42	5	12%	2	5%	4	10%	6	14%	22	52%	3	7%	
	017.261-018	DETAILER	9	4	44%	0	0%	1	11%	0	0%	1	11%	3	33%	
	017.261-026	DRAFTER, COMMERCIAL	16	7	44%	2	13%	0	0%	4	25%	3	19%	0	0%	
	017.261-030	DRAFTER, DETAIL	13	4	31%	2	15%	1	8%	2	15%	4	31%	0	0%	
	017.261-034	DRAFTER, HEATING AND VENT	5	1	20%	0	0%	1	20%	1	20%	2	40%	0	0%	
	017.261-038	DRAFTER, PLUMBING	3	0	0%	0	0%	0	0%	1	33%	1	33%	1	33%	
	017.281-014	DRAFTER APPRENTICE	29	14	48%	1	3%	2	7%	5	17%	6	21%	1	3%	
	017.281-018	DRAFTER, ASSISTANT	33	14	42%	4	12%	2	6%	5	15%	6	18%	2	6%	
	017.281-034	TECHNICAL ILLUSTRATOR	29	9	31%	4	14%	3	10%	0	0%	11	38%	2	7%	
225990 ALL OTHER ENGINEERING AND RELATED TECHNICIANS AND TECHNOLOGISTS																
TOTALS FOR OES OCCUPATION			61	17	28%	9	15%	4	7%	15	25%	13	21%	3	5%	
	003.362-010	DESIGN TECHNICIAN, COMPUT	23	4	17%	3	13%	1	4%	8	35%	6	26%	1	4%	
	008.261-010	CHEMICAL-ENGINEERING TEC	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	
	011.261-010	METALLURGICAL TECHNICIAN	7	4	57%	0	0%	0	0%	2	29%	1	14%	0	0%	
	011.261-014	WELDING TECHNICIAN	3	2	67%	0	0%	0	0%	0	0%	0	0%	1	33%	
	011.261-018	NONDESTRUCTIVE TESTER	11	5	45%	2	18%	0	0%	1	9%	2	18%	1	9%	
	011.281-014	SPECTROSCOPIST	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	
	011.361-010	TESTER	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	
	019.161-014	TEST TECHNICIAN	8	2	25%	3	38%	1	13%	1	13%	1	13%	0	0%	
	019.261-034	LASER TECHNICIAN	5	0	0%	1	20%	2	40%	2	40%	0	0%	0	0%	
	869.261-026	WIND TUNNEL MECHANIC	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	
subtotal-engineers and related occupations			2,499	502	20%	321	13%	210	8%	545	22%	645	26%	276	11%	
Natural Scientists and Related Workers																
241050 CHEMISTS, EXCEPT BIOCHEMISTS																
TOTALS FOR OES OCCUPATION			60	13	22%	4	7%	7	12%	18	30%	18	30%	0	0%	
	022.061-010	CHEMIST	55	11	20%	4	7%	7	13%	18	33%	15	27%	0	0%	
	022.061-014	CHEMIST, FOOD	5	2	40%	0	0%	0	0%	0	0%	3	60%	0	0%	
241990 ALL OTHER PHYSICAL SCIENTISTS																
TOTALS FOR OES OCCUPATION			54	8	15%	9	17%	9	17%	13	24%	14	26%	1	2%	

AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

OES	DOT CODE	DOT TITLE	TOTAL APPS	SOUTHEAST COUNTY		SOUTHWEST COUNTY		WILSHIRE HOLLYWOOD WEST/CENTRL LOS ANGELES		SAN GABRIEL VALLEY		S FERNANDO S CLARITA VALLEYS		ANTELOPE VALLEY	
				APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT
	029.067-010	GEOGRAPHER	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
	029.081-010	ENVIRONMENTAL ANALYST	52	8	15%	8	15%	9	17%	13	25%	13	25%	1	2%
	029.081-014	MATERIALS SCIENTIST	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
245050 CHEMICAL TECHNICIANS AND TECHNOLOGISTS, EXCEPT HEALTH															
TOTALS FOR OES OCCUPATION			48	11	23%	3	6%	7	15%	9	19%	13	27%	5	10%
	022.161-014	COLORIST	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	022.261-010	CHEMICAL LABORATORY TEC	21	4	19%	2	10%	3	14%	3	14%	5	24%	4	19%
	022.261-018	CHEMIST, INSTRUMENTATION	6	1	17%	0	0%	2	33%	1	17%	2	33%	0	0%
	022.261-022	CHEMIST, WASTEWATER-TRE	6	1	17%	1	17%	1	17%	1	17%	2	33%	0	0%
	029.261-010	LABORATORY TESTER	10	3	30%	0	0%	1	10%	2	20%	3	30%	1	10%
	029.361-014	FOOD TESTER	4	1	25%	0	0%	0	0%	2	50%	1	25%	0	0%
245990 ALL OTHER PHYSICAL AND LIFE SCIENCE TECHNICIANS AND TECHNOLOGISTS															
TOTALS FOR OES OCCUPATION			57	23	40%	5	9%	3	5%	14	25%	9	16%	3	5%
	012.261-010	AIR ANALYST	4	2	50%	1	25%	0	0%	1	25%	0	0%	0	0%
	025.267-014	WEATHER OBSERVER	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	029.261-014	POLLUTION-CONTROL TECHNI	35	15	43%	3	9%	0	0%	10	29%	5	14%	2	6%
	029.261-026	CRIMINALIST	3	1	33%	0	0%	1	33%	1	33%	0	0%	0	0%
	199.364-014	SCIENTIFIC HELPER	14	4	29%	1	7%	2	14%	2	14%	4	29%	1	7%
subtotal-natural scientists and related workers			219	55	25%	21	10%	26	12%	54	25%	54	25%	9	4%
Computer, Mathematical, Operations Research, and Related Occupations															
251020 SYSTEMS ANALYSTS, ELECTRONIC DATA PROCESSING															
TOTALS FOR OES OCCUPATION			271	33	12%	48	18%	40	15%	59	22%	70	26%	21	8%
	030.162-014	PROGRAMMER-ANALYST	100	9	9%	17	17%	15	15%	25	25%	26	26%	8	8%
	030.162-022	SYSTEMS PROGRAMMER	19	3	16%	4	21%	6	32%	5	26%	1	5%	0	0%
	030.167-014	SYSTEMS ANALYST	127	16	13%	22	17%	19	15%	24	19%	35	28%	11	9%
	033.262-010	QUALITY ASSURANCE ANALYS	24	5	21%	5	21%	0	0%	4	17%	8	33%	2	8%
	109.067-010	INFORMATION SCIENTIST	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
251110 PROGRAMMERS- NUMERICAL, TOOL, AND PROCESS CONTROL															
TOTALS FOR OES OCCUPATION			36	9	25%	7	19%	4	11%	8	22%	5	14%	3	8%
	007.167-018	TOOL PROGRAMMER, NUMERI	17	2	12%	4	24%	3	18%	5	29%	2	12%	1	6%
	609.262-010	TOOL PROGRAMMER, NUMERI	19	7	37%	3	16%	1	5%	3	16%	3	16%	2	11%
251990 ALL OTHER COMPUTER SCIENTISTS															
TOTALS FOR OES OCCUPATION			133	41	31%	20	15%	4	3%	23	17%	37	28%	8	6%
	031.132-010	SUPERVISOR, NETWORK CON	5	1	20%	0	0%	0	0%	1	20%	1	20%	2	40%
	031.262-010	DATA COMMUNICATIONS ANAL	10	5	50%	1	10%	0	0%	1	10%	1	10%	2	20%
	031.262-014	NETWORK CONTROL OPERAT	53	21	40%	7	13%	3	6%	10	19%	12	23%	0	0%
	033.162-018	TECHNICAL SUPPORT SPECIA	65	14	22%	12	18%	1	2%	11	17%	23	35%	4	6%
253020 OPERATIONS AND SYSTEMS RESEARCHERS AND ANALYSTS, EXCEPT COMPUTER															
TOTALS FOR OES OCCUPATION			6	1	17%	3	50%	0	0%	1	17%	1	17%	0	0%
	020.067-018	OPERATIONS-RESEARCH ANA	6	1	17%	3	50%	0	0%	1	17%	1	17%	0	0%
253120 STATISTICIANS															
TOTALS FOR OES OCCUPATION			11	0	0%	3	27%	2	18%	2	18%	4	36%	0	0%
	020.067-022	STATISTICIAN, MATHEMATICA	4	0	0%	0	0%	1	25%	2	50%	1	25%	0	0%
	020.167-026	STATISTICIAN, APPLIED	7	0	0%	3	43%	1	14%	0	0%	3	43%	0	0%
subtotal-computer, mathematical, systems			457	84	18%	81	18%	50	11%	93	20%	117	26%	32	7%
SUBTOTAL-PROFESSIONAL, TECHNICAL			3,175	641	20%	423	13%	286	9%	692	22%	816	26%	317	10%

— AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

			WILSHIRE											
			SOUTHEAST				SOUTHWEST				HOLLYWOOD			
			S CLARITA				S FERNANDO				ANTELOPE			
			VALLEYS				VALLEY				VALLEY			
OES	DOT CODE	DOT TITLE	TOTAL	COUNTY	COUNTY	LOS ANGELES	SAN GABRIEL	S CLARITA	S FERNANDO	ANTELOPE	VALLEYS	VALLEY	VALLEY	VALLEY
			APPS	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS

— PRODUCTION, OPERATING, MAINTENANCE, AND MATERIAL HANDLING OCCUPATIONS

First Line Supervisors/Managers-Production and Maintenance

810020 FIRST LINE SUPERVISORS AND MANAGER/SUPERVISORS-REPAIR

TOTALS FOR OES OCCUPATION	95	23	24%	10	11%	13	14%	20	21%	19	20%	10	11%
633.131-010 OFFICE-MACHINE-SERVICE SU	2	0	0%	0	0%	0	0%	0	0%	1	50%	1	50%
638.131-010 FUEL-SYSTEM-MAINTENANCE	1	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%
638.131-022 MAINTENANCE-MECHANIC SU	21	8	38%	1	5%	2	10%	3	14%	4	19%	3	14%
638.131-026 MECHANICAL-MAINTENANCE S	6	0	0%	0	0%	1	17%	3	50%	2	33%	0	0%
638.131-030 MILLWRIGHT SUPERVISOR	1	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%
721.131-010 ELECTRIC MOTOR REPAIRING	2	1	50%	0	0%	0	0%	0	0%	0	0%	1	50%
823.131-010 COMMUNICATIONS ELECTRICI	8	1	13%	0	0%	0	0%	3	38%	2	25%	2	25%
891.137-010 MAINTENANCE SUPERVISOR	54	13	24%	9	17%	10	19%	11	20%	10	19%	1	2%

810080 FIRST LINE SUPERVISORS AND MANAGER/SUPERVISORS-PRODUCTION

TOTALS FOR OES OCCUPATION	466	153	33%	41	9%	23	5%	94	20%	126	27%	29	6%
504.131-010 HEAT-TREAT SUPERVISOR	4	2	50%	0	0%	0	0%	1	25%	1	25%	0	0%
529.137-014 SANITARIAN	6	2	33%	0	0%	0	0%	2	33%	2	33%	0	0%
590.130-010 SUPERVISOR, ELECTRONICS P	4	0	0%	0	0%	0	0%	1	25%	2	50%	1	25%
600.130-010 MACHINE-SHOP SUPERVISOR,	6	1	17%	2	33%	0	0%	2	33%	1	17%	0	0%
603.130-010 SUPERVISOR, GRINDING	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
609.130-010 MACHINE-SHOP SUPERVISOR,	4	0	0%	0	0%	1	25%	1	25%	2	50%	0	0%
609.131-010 INSPECTION SUPERVISOR	31	8	26%	3	10%	1	3%	8	26%	11	35%	0	0%
619.130-030 SUPERVISOR, LINE	9	5	56%	0	0%	0	0%	1	11%	3	33%	0	0%
619.130-034 SUPERVISOR, MACHINE SETTE	5	1	20%	0	0%	0	0%	1	20%	3	60%	0	0%
619.130-046 SUPERVISOR	2	1	50%	0	0%	0	0%	1	50%	0	0%	0	0%
699.130-010 PRODUCTION SUPERVISOR	67	18	27%	2	3%	1	1%	12	18%	28	42%	6	9%
706.131-010 LABORATORY SUPERVISOR	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
710.131-038 SUPERVISOR, INSTRUMENT A	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
726.130-010 SUPERVISOR, ELECTRONICS P	17	4	24%	1	6%	1	6%	2	12%	7	41%	2	12%
726.134-010 SUPERVISOR, PRINTED CIRCU	4	0	0%	2	50%	0	0%	1	25%	0	0%	1	25%
739.137-010 ASSEMBLY SUPERVISOR	16	7	44%	1	6%	2	13%	1	6%	4	25%	1	6%
780.131-014 SUPERVISOR, UPHOLSTERY D	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
781.134-010 SUPERVISOR, CUTTING DEPA	5	2	40%	0	0%	0	0%	2	40%	1	20%	0	0%
787.132-010 SEWING SUPERVISOR	5	3	60%	0	0%	1	20%	0	0%	1	20%	0	0%
801.131-014 SUPERVISOR, FITTING	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
806.131-038 SUPERVISOR, INSPECTION	5	4	80%	0	0%	0	0%	1	20%	0	0%	0	0%
806.131-042 SUPERVISOR, PRODUCTION D	12	2	17%	3	25%	0	0%	1	8%	0	0%	6	50%
809.130-014 SUPERVISOR, METAL FABRICA	6	3	50%	1	17%	0	0%	0	0%	2	33%	0	0%
899.133-010 SUPERVISOR, LABOR GANG	18	1	6%	0	0%	1	6%	0	0%	16	89%	0	0%
920.132-010 PACKAGING SUPERVISOR	8	0	0%	0	0%	0	0%	5	63%	3	38%	0	0%
929.137-022 WAREHOUSE SUPERVISOR	221	86	39%	23	10%	15	7%	48	22%	38	17%	11	5%
950.131-010 REFRIGERATING ENGINEER, H	1	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%
950.131-014 STATIONARY-ENGINEER SUPE	2	1	50%	0	0%	0	0%	1	50%	0	0%	0	0%
979.130-010 SUPERVISOR, BLUEPRINTING-	2	2	100%	0	0%	0	0%	0	0%	0	0%	0	0%
979.131-018 SUPERVISOR, SILK-SCREEN C	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%

subtotal-first line supervisors/managers 561 176 31% 51 9% 36 6% 114 20% 145 26% 39 7%

Inspectors and Related Occupations

830020 PRECISION INSPECTORS, TESTERS, AND GRADERS

TOTALS FOR OES OCCUPATION	548	126	23%	65	12%	36	7%	91	17%	137	25%	93	17%
504.281-010 HEAT-TREAT INSPECTOR	2	2	100%	0	0%	0	0%	0	0%	0	0%	0	0%
600.281-014 LAY-OUT INSPECTOR	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
601.261-010 INSPECTOR, SET-UP AND LAY	4	2	50%	0	0%	0	0%	2	50%	0	0%	0	0%
601.281-018 INSPECTOR, GAUGE AND INST	4	1	25%	0	0%	0	0%	1	25%	1	25%	1	25%

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—AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

			WILSHIRE HOLLYWOOD S FERNANDO													
			SOUTHEAST			SOUTHWEST			WEST/CENTRL		SAN GABRIEL		S CLARITA		ANTELOPE	
			COUNTY			COUNTY			LOS ANGELES		VALLEY		VALLEYS		VALLEY	
OES	DOT CODE	DOT TITLE	TOTAL APPS	APPS	PERCT	APPS	PERCT		APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT
—	630.281-018	PUMP SERVICER	6	3	50%	0	0%		2	33%	1	17%	0	0%	0	0%
—	630.381-010	CONVEYOR-MAINTENANCE ME	3	1	33%	0	0%		0	0%	1	33%	1	33%	0	0%
—	630.384-010	FIXTURE REPAIRER-FABRICAT	1	1	100%	0	0%		0	0%	0	0%	0	0%	0	0%
—	638.261-030	MACHINE REPAIRER, MAINTEN	13	5	38%	1	8%		3	23%	2	15%	2	15%	0	0%
—	638.281-014	MAINTENANCE MECHANIC	436	171	39%	25	6%		21	5%	113	26%	72	17%	34	8%
—	638.281-034	HYDRAULIC REPAIRER	8	3	38%	2	25%		0	0%	2	25%	1	13%	0	0%
851230 MILLWRIGHTS																
—	TOTALS FOR OES OCCUPATION		21	11	52%	5	24%		0	0%	3	14%	1	5%	1	5%
—	638.281-018	MILLWRIGHT	20	11	55%	5	25%		0	0%	2	10%	1	5%	1	5%
—	638.281-022	MILLWRIGHT APPRENTICE	1	0	0%	0	0%		0	0%	1	100%	0	0%	0	0%
851280 MACHINERY MAINTENANCE WORKERS																
—	TOTALS FOR OES OCCUPATION		5	4	80%	0	0%		1	20%	0	0%	0	0%	0	0%
—	699.687-018	OILER	5	4	80%	0	0%		1	20%	0	0%	0	0%	0	0%
853230 AIRCRAFT MECHANICS																
—	TOTALS FOR OES OCCUPATION		632	105	17%	79	13%		35	6%	46	7%	71	11%	296	47%
—	621.261-022	EXPERIMENTAL AIRCRAFT ME	11	0	0%	1	9%		0	0%	0	0%	1	9%	9	82%
—	621.281-014	AIRFRAME-AND-POWER-PLAN	586	102	17%	75	13%		34	6%	45	8%	67	11%	263	45%
—	806.384-038	PRESSURE SEALER-AND-TEST	17	1	6%	2	12%		1	6%	1	6%	2	12%	10	59%
—	807.381-014	BONDED STRUCTURES REPAI	14	0	0%	0	0%		0	0%	0	0%	1	7%	13	93%
—	807.684-018	AIRCRAFT SKIN BURNISHER	4	2	50%	1	25%		0	0%	0	0%	0	0%	1	25%
853260 AIRCRAFT ENGINE SPECIALISTS																
—	TOTALS FOR OES OCCUPATION		586	102	17%	75	13%		34	6%	45	8%	67	11%	263	45%
—	621.281-014	AIRFRAME-AND-POWER-PLAN	586	102	17%	75	13%		34	6%	45	8%	67	11%	263	45%
855140 RADIO MECHANICS																
—	TOTALS FOR OES OCCUPATION		93	34	37%	12	13%		6	6%	14	15%	22	24%	5	5%
—	726.381-014	ELECTRONIC EQUIPMENT REP	80	31	39%	9	11%		6	8%	11	14%	19	24%	4	5%
—	823.261-018	RADIO MECHANIC	4	1	25%	0	0%		0	0%	1	25%	1	25%	1	25%
—	823.281-014	ELECTRICIAN, RADIO	9	2	22%	3	33%		0	0%	2	22%	2	22%	0	0%
857170 ELECTRONICS REPAIRERS, COMMERCIAL AND INDUSTRIAL EQUIPMENT																
—	TOTALS FOR OES OCCUPATION		913	290	32%	85	9%		112	12%	140	15%	159	17%	127	14%
—	726.684-090	REWORKER, PRINTED CIRCUIT	2	1	50%	1	50%		0	0%	0	0%	0	0%	0	0%
—	823.261-026	AVIONICS TECHNICIAN	80	17	21%	8	10%		5	6%	5	6%	12	15%	33	41%
—	828.251-010	ELECTRONIC-SALES-AND-SER	25	7	28%	2	8%		5	20%	4	16%	3	12%	4	16%
—	828.261-014	FIELD SERVICE ENGINEER	24	7	29%	1	4%		3	13%	3	13%	6	25%	4	17%
—	828.261-022	ELECTRONICS MECHANIC	751	246	33%	71	9%		95	13%	121	16%	134	18%	84	11%
—	828.261-026	ELECTRONICS-MECHANIC APP	31	12	39%	2	6%		4	13%	7	23%	4	13%	2	6%
857280 ELECTRICAL INSTALLERS AND REPAIRERS, TRANSPORTATION EQUIPMENT																
—	TOTALS FOR OES OCCUPATION		151	12	8%	10	7%		5	3%	9	6%	15	10%	100	66%
—	825.261-018	ELECTRICIAN, AIRCRAFT	125	9	7%	5	4%		2	2%	4	3%	8	6%	97	78%
—	825.381-010	AIRCRAFT MECHANIC, ELECTR	22	1	5%	4	18%		3	14%	5	23%	6	27%	3	14%
—	828.381-010	EQUIPMENT INSTALLER	4	2	50%	1	25%		0	0%	0	0%	1	25%	0	0%
859020 HEATING, AIR CONDITIONING, AND REFRIGERATION MECHANICS AND INSTALLERS																
—	TOTALS FOR OES OCCUPATION		44	17	39%	4	9%		2	5%	4	9%	10	23%	7	16%
—	637.261-026	REFRIGERATION MECHANIC	41	15	37%	4	10%		2	5%	4	10%	10	24%	6	15%
—	869.281-010	FURNACE INSTALLER-AND-RE	3	2	67%	0	0%		0	0%	0	0%	0	0%	1	33%
859050 PRECISION INSTRUMENT REPAIRERS																
—	TOTALS FOR OES OCCUPATION		23	17	74%	1	4%		1	4%	2	9%	0	0%	2	9%
—	710.261-010	INSTRUMENT REPAIRER	1	0	0%	0	0%		0	0%	0	0%	0	0%	1	100%

AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

OES	DOT CODE	DOT TITLE	TOTAL APPS	SOUTHEAST		SOUTHWEST		WILSHIRE HOLLYWOOD WEST/CENTRL LOS ANGELES		SAN GABRIEL VALLEY		S FERNANDO S CLARITA VALLEYS		ANTELOPE VALLEY	
				COUNTY		COUNTY		COUNTY		COUNTY		COUNTY		COUNTY	
				APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT
	710.281-026	INSTRUMENT MECHANIC	7	5	71%	1	14%	0	0%	0	0%	0	0%	1	14%
	710.381-054	REPAIRER, GYROSCOPE	1	0	0%	0	0%	1	100%	0	0%	0	0%	0	0%
	711.281-014	INSTRUMENT MECHANIC, WEA	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	729.281-026	ELECTRICAL-INSTRUMENT RE	12	10	83%	0	0%	0	0%	2	17%	0	0%	0	0%
	823.281-018	METEOROLOGICAL-EQUIPMEN	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%

859350 RIGGERS

TOTALS FOR OES OCCUPATION			12	9	75%	1	8%	0	0%	0	0%	2	17%	0	0%
921.260-010	RIGGER		12	9	75%	1	8%	0	0%	0	0%	2	17%	0	0%

859990 ALL OTHER MECHANICS, INSTALLERS, AND REPAIRERS

TOTALS FOR OES OCCUPATION			57	14	25%	5	9%	5	9%	12	21%	16	28%	5	9%
632.281-010	GUNSMITH		7	1	14%	1	14%	0	0%	2	29%	3	43%	0	0%
638.261-022	PINSETTER MECHANIC, AUTO		2	0	0%	0	0%	0	0%	0	0%	1	50%	1	50%
638.281-026	PARTS SALVAGER		3	2	67%	0	0%	0	0%	1	33%	0	0%	0	0%
638.381-010	FUEL-SYSTEM-MAINTENANCE		5	1	20%	1	20%	0	0%	0	0%	1	20%	2	40%
709.384-010	FIRE-EXTINGUISHER REPAIRE		4	1	25%	1	25%	0	0%	2	50%	0	0%	0	0%
732.684-122	SPORTS-EQUIPMENT REPAIRE		1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
739.484-014	FIRE-EQUIPMENT INSPECTOR		1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
809.684-034	REPAIRER, FINISHED METAL		1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
891.684-018	SWIMMING-POOL SERVICER		24	4	17%	1	4%	4	17%	5	21%	9	38%	1	4%
899.261-010	DIVER		7	2	29%	1	14%	1	14%	1	14%	1	14%	1	14%
899.684-042	WINDOW REPAIRER		1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
977.684-010	BOOK REPAIRER		1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%

subtotal-mechanics, installers, and repairers 3,018 804 27% 307 10% 228 8% 396 13% 442 15% 841 28%

Precision Production Occupations

891020 TOOL AND DIE MAKERS

TOTALS FOR OES OCCUPATION			139	46	33%	15	11%	5	4%	32	23%	32	23%	9	6%
601.260-010	TOOL-AND-DIE MAKER		41	16	39%	5	12%	1	2%	12	29%	7	17%	0	0%
601.260-014	TOOL-AND-DIE-MAKER APPRE		2	1	50%	0	0%	0	0%	0	0%	1	50%	0	0%
601.280-010	DIE MAKER, STAMPING		3	0	0%	1	33%	0	0%	1	33%	1	33%	0	0%
601.280-022	DIE SINKER		2	1	50%	0	0%	0	0%	1	50%	0	0%	0	0%
601.280-030	MOLD MAKER, DIE-CASTING A		32	10	31%	0	0%	2	6%	12	38%	7	22%	1	3%
601.280-042	TOOL MAKER		45	13	29%	6	13%	1	2%	6	13%	13	29%	6	13%
601.281-010	DIE MAKER, BENCH, STAMPIN		5	2	40%	0	0%	0	0%	0	0%	2	40%	1	20%
601.281-026	TOOL MAKER, BENCH		3	1	33%	1	33%	0	0%	0	0%	1	33%	0	0%
601.381-026	PLASTIC TOOL MAKER		5	1	20%	2	40%	1	20%	0	0%	0	0%	1	20%
601.381-030	PLASTIC-FIXTURE BUILDER		1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%

891050 PRECISION INSTRUMENT MAKERS

TOTALS FOR OES OCCUPATION			6	1	17%	0	0%	1	17%	3	50%	1	17%	0	0%
600.280-010	INSTRUMENT MAKER		5	1	20%	0	0%	1	20%	2	40%	1	20%	0	0%
600.280-018	INSTRUMENT-MAKER APPREN		1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%

891080 MACHINISTS

TOTALS FOR OES OCCUPATION			1,121	394	35%	109	10%	69	6%	251	22%	230	21%	68	6%
600.260-022	MACHINIST, EXPERIMENTAL		9	0	0%	2	22%	2	22%	1	11%	3	33%	1	11%
600.280-022	MACHINIST		986	340	34%	96	10%	60	6%	223	23%	202	20%	65	7%
600.280-026	MACHINIST APPRENTICE		52	21	40%	3	6%	1	2%	9	17%	17	33%	1	2%
600.280-042	MAINTENANCE MACHINIST		74	33	45%	8	11%	6	8%	18	24%	8	11%	1	1%

891110 TOOL GRINDERS, FILERS, SHARPENERS, AND OTHER PRECISION GRINDERS

TOTALS FOR OES OCCUPATION			49	11	22%	10	20%	1	2%	17	35%	9	18%	1	2%
603.280-010	GRINDER OPERATOR, EXTERN		5	2	40%	2	40%	0	0%	0	0%	1	20%	0	0%
603.280-014	GRINDER OPERATOR, SURFAC		5	2	40%	0	0%	0	0%	3	60%	0	0%	0	0%

—AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

			WILSHIRE												
			HOLLYWOOD				S FERNANDO								
			SOUTHEAST		SOUTHWEST		WEST/CENTRL		SAN GABRIEL		S CLARITA		ANTELOPE		
			COUNTY		COUNTY		LOS ANGELES		VALLEY		VALLEYS		VALLEY		
OES	DOT CODE	DOT TITLE	TOTAL APPS	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT
—	603.280-018	GRINDER OPERATOR, TOOL	5	3	60%	0	0%	0	0%	1	20%	1	20%	0	0%
—	603.280-022	GRINDER SET-UP OPERATOR,	3	0	0%	1	33%	0	0%	2	67%	0	0%	0	0%
	603.280-030	GRINDER SET-UP OPERATOR,	3	0	0%	1	33%	0	0%	2	67%	0	0%	0	0%
	603.280-038	TOOL-GRINDER OPERATOR	25	4	16%	5	20%	1	4%	8	32%	6	24%	1	4%
—	701.381-018	TOOL GRINDER I	3	0	0%	1	33%	0	0%	1	33%	1	33%	0	0%
891170 PRECISION LAYOUT WORKERS, METAL															
TOTALS FOR OES OCCUPATION			5	3	60%	1	20%	0	0%	0	0%	1	20%	0	0%
—	600.281-018	LAY-OUT WORKER	2	2	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	809.281-010	LAY-OUT WORKER I	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
	809.381-014	LAY-OUT WORKER II													
—	891320 SHEET METAL WORKERS		0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
TOTALS FOR OES OCCUPATION			439	155	35%	66	15%	25	6%	81	18%	80	18%	32	7%
	804.281-010	SHEET-METAL WORKER	434	154	35%	66	15%	25	6%	78	18%	79	18%	32	7%
—	804.281-014	SHEET-METAL-WORKER APPR	5	1	20%	0	0%	0	0%	3	60%	1	20%	0	0%
891990 ALL OTHER PRECISION METAL WORKERS															
TOTALS FOR OES OCCUPATION			9	6	67%	2	22%	0	0%	0	0%	1	11%	0	0%
—	619.361-010	FORMER, HAND	3	3	100%	0	0%	0	0%	0	0%	0	0%	0	0%
—	704.381-014	CHEMICAL-ETCHING PROCESS	6	3	50%	2	33%	0	0%	0	0%	1	17%	0	0%
899990 ALL OTHER PRECISION WORKERS															
—	TOTALS FOR OES OCCUPATION		22	6	27%	0	0%	3	14%	1	5%	4	18%	8	36%
	754.381-018	PLASTICS FABRICATOR	22	6	27%	0	0%	3	14%	1	5%	4	18%	8	36%
subtotal-precision production occupations			1,790	622	35%	203	11%	104	6%	385	22%	358	20%	118	7%
Machine Setters, Set-Up Operators, Operators, and Tenders															
911020 SAWING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC															
TOTALS FOR OES OCCUPATION			11	8	73%	2	18%	0	0%	0	0%	0	0%	1	9%
—	607.382-014	SAW OPERATOR	7	4	57%	2	29%	0	0%	0	0%	0	0%	1	14%
	607.682-010	CUT-OFF-SAW OPERATOR, ME	4	4	100%	0	0%	0	0%	0	0%	0	0%	0	0%
911050 LATHE AND TURNING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC															
TOTALS FOR OES OCCUPATION			60	24	40%	5	8%	4	7%	16	27%	11	18%	0	0%
	604.280-010	ENGINE-LATHE SET-UP OPERA	5	1	20%	0	0%	1	20%	0	0%	3	60%	0	0%
	604.280-014	SCREW-MACHINE SET-UP OPE	11	5	45%	1	9%	1	9%	1	9%	3	27%	0	0%
—	604.280-018	SCREW-MACHINE SET-UP OPE	8	2	25%	0	0%	0	0%	3	38%	3	38%	0	0%
—	604.280-022	TURRET-LATHE SET-UP OPER	4	2	50%	0	0%	0	0%	2	50%	0	0%	0	0%
	604.380-010	CHUCKING-MACHINE SET-UP	2	0	0%	1	50%	0	0%	1	50%	0	0%	0	0%
	604.380-018	ENGINE-LATHE SET-UP OPERA	11	6	55%	1	9%	1	9%	2	18%	1	9%	0	0%
—	604.380-022	SCREW-MACHINE SET-UP OPE	6	4	67%	0	0%	0	0%	2	33%	0	0%	0	0%
	604.380-026	TURRET-LATHE SET-UP OPER	8	1	13%	2	25%	1	13%	4	50%	0	0%	0	0%
—	604.682-014	THREADING-MACHINE OPERAT	4	2	50%	0	0%	0	0%	1	25%	1	25%	0	0%
—	619.362-018	SPINNER, HAND	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
911080 DRILLING AND BORING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC															
TOTALS FOR OES OCCUPATION			23	10	43%	3	13%	1	4%	4	17%	5	22%	0	0%
—	606.280-010	BORING-MACHINE SET-UP OPE	2	0	0%	0	0%	0	0%	0	0%	2	100%	0	0%
—	606.280-014	BORING-MILL SET-UP OPERAT	4	2	50%	0	0%	0	0%	1	25%	1	25%	0	0%
	606.380-010	DRILL-PRESS SET-UP OPERAT	8	5	63%	1	13%	0	0%	2	25%	0	0%	0	0%
	606.380-014	DRILL-PRESS SET-UP OPERAT	4	1	25%	1	25%	0	0%	1	25%	1	25%	0	0%
—	606.382-022	BORING-MACHINE OPERATOR	2	1	50%	0	0%	1	50%	0	0%	0	0%	0	0%
	606.682-018	DRILL-PRESS SET-UP OPERAT	3	1	33%	1	33%	0	0%	0	0%	1	33%	0	0%
911110 MILLING AND PLANING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC															

AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

		WILSHIRE													
		HOLLYWOOD						S FERNANDO							
		SOUTHEAST		SOUTHWEST		WEST/CENTRL		SAN GABRIEL		S CLARITA		ANTELOPE			
		COUNTY		COUNTY		LOS ANGELES		VALLEY		VALLEYS		VALLEY			
OES	DOT CODE	DOT TITLE	TOTAL APPS	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT
TOTALS FOR OES	OCCUPATION		61	23	38%	9	15%	3	5%	12	20%	11	18%	3	5%
	605.280-010	MILLING-MACHINE SET-UP OP	37	12	32%	5	14%	3	8%	8	22%	6	16%	3	8%
	605.280-014	PROFILING-MACHINE SET-UP	4	3	75%	1	25%	0	0%	0	0%	0	0%	0	0%
	605.282-010	MILLING-MACHINE SET-UP OP	8	3	38%	1	13%	0	0%	1	13%	3	38%	0	0%
	605.282-018	PLANER-TYPE-MILLING-MACHI	7	2	29%	1	14%	0	0%	3	43%	1	14%	0	0%
	605.382-034	ROUTER OPERATOR	3	3	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	605.382-038	SHAPER SET-UP OPERATOR, T	2	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
911140 GRINDING, LAPPING, AND BUFFING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC															
TOTALS FOR OES	OCCUPATION		99	44	44%	8	8%	8	8%	16	16%	22	22%	1	1%
	603.260-010	GRINDER SET-UP OPERATOR,	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
	603.360-010	BUFFING-LINE SET-UP WORKE	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	603.380-010	GRINDER MACHINE SETTER	42	14	33%	5	12%	4	10%	4	10%	15	36%	0	0%
	603.382-010	BUFFING-MACHINE OPERATOR	2	1	50%	0	0%	0	0%	0	0%	0	0%	1	50%
	603.382-014	GRINDER SET-UP OPERATOR,	10	6	60%	1	10%	1	10%	2	20%	0	0%	0	0%
	603.382-018	HONING-MACHINE SET-UP OP	7	2	29%	1	14%	1	14%	1	14%	2	29%	0	0%
	603.382-026	LAPPING-MACHINE SET-UP OP	2	1	50%	1	50%	0	0%	0	0%	0	0%	0	0%
	603.382-034	GRINDER SET-UP OPERATOR	9	6	67%	0	0%	0	0%	3	33%	0	0%	0	0%
	603.382-038	KNIFE GRINDER	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	603.482-034	HONING-MACHINE OPERATOR,	2	0	0%	0	0%	1	50%	1	50%	0	0%	0	0%
	603.682-026	POLISHING-MACHINE OPERAT	21	12	57%	0	0%	1	5%	4	19%	4	19%	0	0%
	603.682-030	DRILL-BIT SHARPENER	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
911170 MACHINE TOOL CUTTING OPERATORS AND TENDERS, METAL AND PLASTIC															
TOTALS FOR OES	OCCUPATION		241	95	39%	22	9%	19	8%	47	20%	54	22%	4	2%
	603.664-010	TOOL GRINDER II	4	2	50%	0	0%	0	0%	0	0%	2	50%	0	0%
	603.665-010	BUFFING-MACHINE TENDER	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
	603.685-062	GRINDING MACHINE TENDER	17	10	59%	0	0%	3	18%	0	0%	3	18%	1	6%
	603.685-070	LAPPING-MACHINE OPERATOR	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
	604.382-010	SCREW-MACHINE OPERATOR,	2	0	0%	0	0%	0	0%	1	50%	1	50%	0	0%
	604.382-014	SCREW-MACHINE OPERATOR,	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
	604.685-026	LATHE TENDER	48	19	40%	3	6%	5	10%	7	15%	13	27%	1	2%
	604.685-034	SCREW-MACHINE TENDER	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	605.682-014	BROACHING-MACHINE OPERA	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	605.685-030	MILLING-MACHINE TENDER	30	7	23%	4	13%	4	13%	7	23%	8	27%	0	0%
	606.682-014	DRILL-PRESS OPERATOR	58	15	26%	12	21%	1	2%	9	16%	20	34%	1	2%
	606.685-010	BORING-MACHINE OPERATOR,	3	1	33%	0	0%	0	0%	1	33%	1	33%	0	0%
	606.685-026	DRILL PRESS TENDER	19	7	37%	1	5%	3	16%	8	42%	0	0%	0	0%
	607.685-010	CUT-OFF SAW TENDER, META	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	699.685-046	PINNER, PRINTED CIRCUIT B	1	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%
	699.685-054	TRIMMER, PRINTED CIRCUIT	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	705.684-010	BENCH GRINDER	4	2	50%	1	25%	0	0%	0	0%	1	25%	0	0%
	705.684-014	BUFFER I	5	3	60%	0	0%	0	0%	0	0%	2	40%	0	0%
	705.684-058	POLISHER	42	24	57%	0	0%	3	7%	13	31%	2	5%	0	0%
	705.684-066	POLISHER APPRENTICE	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
913020 PUNCHING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC															
TOTALS FOR OES	OCCUPATION		84	39	46%	6	7%	5	6%	22	26%	12	14%	0	0%
	615.382-010	PUNCH-PRESS OPERATOR I	56	24	43%	3	5%	4	7%	16	29%	9	16%	0	0%
	615.482-014	DUPLICATOR-PUNCH OPERAT	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
	615.482-018	IRONWORKER-MACHINE OPER	2	2	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	615.482-026	PUNCH-PRESS OPERATOR, AU	17	9	53%	2	12%	0	0%	3	18%	3	18%	0	0%
	619.380-014	PUNCH-PRESS SETTER	8	4	50%	0	0%	1	13%	3	38%	0	0%	0	0%
913050 PRESS AND PRESS BRAKE MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC															
TOTALS FOR OES	OCCUPATION		59	27	46%	9	15%	4	7%	10	17%	9	15%	0	0%
	616.682-026	KICK-PRESS OPERATOR I	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%

— AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

			WILSHIRE													
			HOLLYWOOD				S FERNANDO									
			SOUTHEAST		SOUTHWEST		WEST/CENTRL		SAN GABRIEL		S CLARITA		ANTELOPE			
			TOTAL	COUNTY	COUNTY	LOS ANGELES	VALLEY	VALLEYS	VALLEY	VALLEYS	VALLEY	VALLEYS	VALLEY	VALLEYS	VALLEY	
OES	DOT CODE	DOT TITLE	APPS	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	
	617.260-010	PRESS OPERATOR, HEAVY DU	28	11	39%	4	14%	4	14%	5	18%	4	14%	0	0%	
	617.360-010	BRAKE OPERATOR I	24	11	46%	5	21%	0	0%	4	17%	4	17%	0	0%	
	617.482-010	BENDING-MACHINE OPERATO	6	4	67%	0	0%	0	0%	1	17%	1	17%	0	0%	
913080 SHEAR AND SLITTER MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC																
	TOTALS FOR OES OCCUPATION		19	7	37%	1	5%	1	5%	2	11%	8	42%	0	0%	
	615.380-010	SHEAR SETTER	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
	615.662-010	SLITTING-MACHINE OPERATO	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
	615.682-018	SHEAR OPERATOR I	17	5	29%	1	6%	1	6%	2	12%	8	47%	0	0%	
913170 FORGING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC																
	TOTALS FOR OES OCCUPATION		4	2	50%	0	0%	0	0%	2	50%	0	0%	0	0%	
	610.362-010	DROPHAMMER OPERATOR	3	2	67%	0	0%	0	0%	1	33%	0	0%	0	0%	
	612.462-010	MULTI-OPERATION-MACHINE O	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	
913210 MACHINE FORMING OPERATORS AND TENDERS, METAL AND PLASTIC																
	TOTALS FOR OES OCCUPATION		221	99	45%	16	7%	8	4%	62	28%	34	15%	2	1%	
	613.662-022	STRAIGHTENING-ROLL OPERA	4	4	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
	614.682-010	DRAW-BENCH OPERATOR	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	
	615.682-014	PUNCH-PRESS OPERATOR III	10	5	50%	1	10%	0	0%	3	30%	0	0%	1	10%	
	615.685-030	PUNCH-PRESS OPERATOR II	185	78	42%	12	6%	7	4%	55	30%	32	17%	1	1%	
	615.685-034	SHEAR OPERATOR II	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
	617.482-026	STRAIGHTENING-PRESS OPER	3	3	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
	617.685-010	BENDING-MACHINE OPERATO	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	
	617.685-026	POWER-PRESS TENDER	2	1	50%	0	0%	1	50%	0	0%	0	0%	0	0%	
	619.362-014	ROLL OPERATOR I	4	2	50%	1	25%	0	0%	1	25%	0	0%	0	0%	
	619.685-026	BRAKE OPERATOR II	9	5	56%	1	11%	0	0%	2	22%	1	11%	0	0%	
	619.685-034	DRUM STRAIGHTENER I	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%	
915020 NUMERICAL CONTROL MACHINE TOOL OPERATORS AND TENDERS, METAL AND PLASTIC																
	TOTALS FOR OES OCCUPATION		307	102	33%	42	14%	17	6%	65	21%	65	21%	16	5%	
	604.362-010	LATHE OPERATOR, NUMERICA	53	23	43%	7	13%	3	6%	9	17%	10	19%	1	2%	
	605.360-010	ROUTER SET-UP OPERATOR,	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	
	605.380-010	MILLING-MACHINE SET-UP OP	154	52	34%	20	13%	9	6%	30	19%	33	21%	10	6%	
	605.382-046	NUMERICAL-CONTROL ROUTE	3	1	33%	0	0%	0	0%	1	33%	1	33%	0	0%	
	606.362-010	DRILL-PRESS OPERATOR, NU	3	3	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
	606.382-014	JIG-BORING MACHINE OPERAT	2	1	50%	0	0%	0	0%	1	50%	0	0%	0	0%	
	606.382-018	NUMERICAL-CONTROL DRILL	2	1	50%	0	0%	0	0%	0	0%	1	50%	0	0%	
	609.360-010	NUMERICAL CONTROL MACHI	13	2	15%	1	8%	2	15%	4	31%	4	31%	0	0%	
	609.362-010	NUMERICAL CONTROL MACHI	75	19	25%	14	19%	3	4%	19	25%	15	20%	5	7%	
	617.280-010	SHOT-PEENING OPERATOR	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	
915050 COMBINATION MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC																
	TOTALS FOR OES OCCUPATION		995	384	39%	93	9%	55	6%	275	28%	166	17%	22	2%	
	600.360-014	MACHINE SETTER	7	3	43%	0	0%	1	14%	1	14%	2	29%	0	0%	
	600.380-018	MACHINE SET-UP OPERATOR	192	61	32%	14	7%	13	7%	57	30%	41	21%	6	3%	
	601.280-054	TOOL-MACHINE SET-UP OPER	62	16	26%	9	15%	6	10%	14	23%	14	23%	3	5%	
	602.280-010	GEAR-CUTTING-MACHINE SET-	2	1	50%	0	0%	0	0%	0	0%	1	50%	0	0%	
	602.382-018	GEAR-GENERATOR SET-UP OP	2	2	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
	616.380-018	MACHINE OPERATOR I	730	301	41%	70	10%	35	5%	203	28%	108	15%	13	2%	
915080 COMBINATION MACHINE TOOL OPERATORS AND TENDERS, METAL AND PLASTIC																
	TOTALS FOR OES OCCUPATION		402	194	48%	50	12%	20	5%	86	21%	47	12%	5	1%	
	609.685-018	PRODUCTION MACHINE TEND	138	58	42%	15	11%	10	7%	39	28%	15	11%	1	1%	
	619.685-062	MACHINE OPERATOR II	264	136	52%	35	13%	10	4%	47	18%	32	12%	4	2%	
919020 PLASTIC MOLDING AND CASTING MACHINE SETTERS AND SET-UP OPERATORS																

AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

		WILSHIRE HOLLYWOOD S FERNANDO													
		SOUTHEAST			SOUTHWEST			WEST/CENTRL		SAN GABRIEL		S CLARITA		ANTELOPE	
		COUNTY			COUNTY			LOS ANGELES		VALLEY		VALLEYS		VALLEY	
OES	DOT CODE	DOT TITLE	TOTAL APPS	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT
TOTALS FOR OES OCCUPATION			20	6	30%	1	5%	4	20%	4	20%	5	25%	0	0%
	556.380-010	MOLD SETTER	20	6	30%	1	5%	4	20%	4	20%	5	25%	0	0%
919210 ELECTROLYTIC PLATING AND COATING MACHINE OPERATORS AND TENDERS, METAL AND PLASTIC															
TOTALS FOR OES OCCUPATION			10	5	50%	0	0%	0	0%	2	20%	2	20%	1	10%
	500.682-010	ANODIZER	3	2	67%	0	0%	0	0%	1	33%	0	0%	0	0%
	500.684-026	PLATER, PRINTED CIRCUIT B	5	2	40%	0	0%	0	0%	1	20%	1	20%	1	20%
	500.684-034	PLATER	2	1	50%	0	0%	0	0%	0	0%	1	50%	0	0%
919320 HEAT TREATING, ANNEALING, AND TEMPERING MACHINE OPERATORS AND TENDERS, METAL AND PLASTIC															
TOTALS FOR OES OCCUPATION			24	13	54%	6	25%	1	4%	3	13%	1	4%	0	0%
	504.382-014	HEAT TREATER I	19	10	53%	5	26%	1	5%	2	11%	1	5%	0	0%
	504.682-018	HEAT TREATER II	5	3	60%	1	20%	0	0%	1	20%	0	0%	0	0%
921970 ALL OTHER METAL AND PLASTIC (CUT,FORM, FABRICATE, OR PROCESS) MACHINE SETTERS AND SET-UP OPERATORS															
TOTALS FOR OES OCCUPATION			22	9	41%	1	5%	0	0%	6	27%	5	23%	1	5%
	553.382-026	METAL-BONDING PRESS OPER	3	2	67%	0	0%	0	0%	0	0%	1	33%	0	0%
	609.380-010	ELECTRICAL-DISCHARGE-MAC	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
	616.280-014	MULTI-OPERATION-FORMING-	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
	616.360-026	MULTI-OPERATION-FORMING-	5	1	20%	0	0%	0	0%	3	60%	1	20%	0	0%
	616.682-010	ARBOR-PRESS OPERATOR I	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	699.482-010	RIVETING-MACHINE OPERATO	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
	726.380-010	ELECTRONIC EQUIPMENT SET-	9	4	44%	1	11%	0	0%	1	11%	2	22%	1	11%
	806.380-010	RIVETING MACHINE OPERATO	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
921980 ALL OTHER METAL AND PLASTIC (CUT,FORM, FABRICATE, OR PROCESS) MACHINE OPERATORS AND TENDERS															
TOTALS FOR OES OCCUPATION			16	4	25%	4	25%	0	0%	4	25%	4	25%	0	0%
	503.685-042	SANDBLAST-OR-SHOTBLAST-E	4	2	50%	1	25%	0	0%	0	0%	1	25%	0	0%
	590.685-082	STRIPPER-ETCHER, PRINTED	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
	609.462-010	BALANCING-MACHINE OPERAT	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
	609.482-010	ELECTRICAL-DISCHARGE-MAC	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
	619.685-066	METAL FABRICATOR HELPER	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	690.685-154	ELECTRIC-SEALING-MACHINE	1	0	0%	1	100%	0	0%	0	0%	0	0%	0	0%
	709.684-050	KEY CUTTER	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
	728.685-010	WIRE PREPARATION MACHINE	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
	800.662-010	RIVETER, HYDRAULIC	2	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%
	809.684-018	DRILLER, HAND	3	1	33%	0	0%	0	0%	1	33%	1	33%	0	0%
929020 ELECTRONIC SEMICONDUCTOR PROCESSORS															
TOTALS FOR OES OCCUPATION			30	5	17%	4	13%	4	13%	5	17%	10	33%	2	7%
	590.362-018	GROUP LEADER, SEMICONDU	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
	590.362-022	MICROELECTRONICS TECHNIC	9	1	11%	1	11%	1	11%	3	33%	3	33%	0	0%
	590.684-014	ELECTRONIC-COMPONENT PR	13	3	23%	2	15%	0	0%	1	8%	6	46%	1	8%
	590.684-022	SEMICONDUCTOR PROCESSO	4	0	0%	1	25%	2	50%	1	25%	0	0%	0	0%
	590.684-042	INTEGRATED CIRCUIT FABRIC	1	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%
	590.685-078	ETCHER	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	920.587-026	MARKER, SEMICONDUCTOR W	1	0	0%	0	0%	1	100%	0	0%	0	0%	0	0%
929470 PAINTERS, TRANSPORTATION EQUIPMENT															
TOTALS FOR OES OCCUPATION			96	31	32%	12	13%	6	6%	17	18%	17	18%	13	14%
	845.381-010	PAINTER APPRENTICE, TRANS	8	1	13%	2	25%	0	0%	1	13%	3	38%	1	13%
	845.381-014	PAINTER, TRANSPORTATION E	88	30	34%	10	11%	6	7%	16	18%	14	16%	12	14%
929510 COATING, PAINTING, AND SPRAYING MACHINE SETTERS AND SET-UP OPERATOR															
TOTALS FOR OES OCCUPATION			9	3	33%	2	22%	3	33%	0	0%	1	11%	0	0%
	599.382-010	PAINT-SPRAYER OPERATOR, A	9	3	33%	2	22%	3	33%	0	0%	1	11%	0	0%

— AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

			WILSHIRE												
			HOLLYWOOD				S FERNANDO								
			SOUTHEAST		SOUTHWEST		WEST/CENTRL		SAN GABRIEL		S CLARITA		ANTELOPE		
			TOTAL	COUNTY	COUNTY	LOS ANGELES	VALLEY	VALLEYS	VALLEY						
OES	DOT CODE	DOT TITLE	APPS	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT
929530 COATING, PAINTING, AND SPRAYING MACHINE OPERATORS AND TENDERS															
TOTALS FOR OES OCCUPATION			16	7	44%	0	0%	3	19%	2	13%	4	25%	0	0%
	599.685-074	PAINTING-MACHINE OPERATO	9	3	33%	0	0%	2	22%	1	11%	3	33%	0	0%
	741.685-010	SPRAY-PAINTING-MACHINE OP	7	4	57%	0	0%	1	14%	1	14%	1	14%	0	0%
929580 CLEANING, WASHING, AND PICKLING EQUIPMENT OPERATORS AND TENDERS															
TOTALS FOR OES OCCUPATION			3	0	0%	1	33%	0	0%	1	33%	1	33%	0	0%
	503.685-030	METAL-CLEANER, IMMERSION	3	0	0%	1	33%	0	0%	1	33%	1	33%	0	0%
929650 CRUSHING, GRINDING, MIXING, AND BLENDING MACHINE OPERATORS AND TENDERS															
TOTALS FOR OES OCCUPATION			25	15	60%	0	0%	1	4%	7	28%	2	8%	0	0%
	550.382-022	MIXING-MACHINE OPERATOR	2	1	50%	0	0%	0	0%	1	50%	0	0%	0	0%
	550.485-018	PAINT MIXER, MACHINE	11	7	64%	0	0%	1	9%	3	27%	0	0%	0	0%
	550.685-062	GLUE MIXER	1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%
	599.685-058	MILL OPERATOR	7	4	57%	0	0%	0	0%	2	29%	1	14%	0	0%
	599.685-110	TUMBLER OPERATOR	2	2	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	673.685-094	POLISHING MACHINE TENDER	2	1	50%	0	0%	0	0%	0	0%	1	50%	0	0%
929740 PACKAGING AND FILLING MACHINE OPERATORS AND TENDERS															
TOTALS FOR OES OCCUPATION			188	66	35%	19	10%	5	3%	44	23%	50	27%	4	2%
	920.685-010	BALING-MACHINE TENDER	6	3	50%	0	0%	1	17%	2	33%	0	0%	0	0%
	920.685-074	PACKAGE SEALER, MACHINE	7	2	29%	3	43%	0	0%	0	0%	0	0%	2	29%
	920.685-078	PACKAGER, MACHINE	175	61	35%	16	9%	4	2%	42	24%	50	29%	2	1%
929970 ALL OTHER MACHINE SETTERS AND SET-UP OPERATORS															
TOTALS FOR OES OCCUPATION			1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	809.382-010	BALANCING-MACHINE SET-UP	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
929980 ALL OTHER MACHINE OPERATORS AND TENDERS															
TOTALS FOR OES OCCUPATION			55	18	33%	4	7%	9	16%	14	25%	8	15%	2	4%
	554.685-034	PHOTORESIST LAMINATOR, P	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
	583.685-082	PLEATING-MACHINE OPERATO	3	2	67%	0	0%	1	33%	0	0%	0	0%	0	0%
	599.685-122	WATER TENDER	1	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%
	641.685-022	CARTON-FORMING-MACHINE	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	690.685-014	ASSEMBLY-PRESS OPERATOR	21	5	24%	4	19%	1	5%	7	33%	4	19%	0	0%
	699.685-018	EYELET-MACHINE OPERATOR	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	726.685-014	INSERTION MACHINE TENDER,	3	1	33%	0	0%	0	0%	1	33%	1	33%	0	0%
	726.685-062	PROGRAMMING EQUIPMENT O	1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%
	781.685-010	SPREADER, MACHINE	20	8	40%	0	0%	7	35%	4	20%	1	5%	0	0%
	950.685-010	AIR-COMPRESSOR OPERATOR	3	0	0%	0	0%	0	0%	2	67%	0	0%	1	33%
subtotal-machine setters, operators, tenders			3,101	1,241	40%	320	10%	181	6%	728	23%	554	18%	77	2%
Hand Working Occupations, Including Assemblers and Fabricators															
931020 AIRCRAFT STRUCTURE, SURFACES, RIGGING, AND SYSTEM ASSEMBLERS-PRECISION															
TOTALS FOR OES OCCUPATION			525	114	22%	46	9%	16	3%	38	7%	51	10%	260	50%
	693.261-014	DEVELOPMENT MECHANIC	34	13	38%	3	9%	1	3%	2	6%	5	15%	10	29%
	806.361-014	ASSEMBLER-INSTALLER, GEN	77	28	36%	6	8%	3	4%	12	16%	17	22%	11	14%
	806.361-030	AIRCRAFT MECHANIC, ARMAM	15	5	33%	3	20%	3	20%	1	7%	1	7%	2	13%
	806.381-014	AIRCRAFT MECHANIC, ENVIRO	5	2	40%	0	0%	1	20%	2	40%	0	0%	0	0%
	806.381-018	AIRCRAFT MECHANIC, RIGGIN	25	8	32%	9	36%	2	8%	0	0%	4	16%	2	8%
	806.381-026	ASSEMBLER, AIRCRAFT, STRU	288	38	13%	19	7%	5	2%	10	3%	15	5%	201	70%
	806.381-034	ASSEMBLER, TUBING	6	1	17%	0	0%	0	0%	0	0%	1	17%	4	67%
	806.381-042	CABLE ASSEMBLER AND SWA	2	1	50%	0	0%	0	0%	0	0%	1	50%	0	0%
	806.381-066	AIRCRAFT MECHANIC, PLUMBI	60	15	25%	4	7%	1	2%	7	12%	4	7%	29	48%
	806.381-082	PRECISION ASSEMBLER	12	2	17%	2	17%	0	0%	4	33%	3	25%	1	8%
	809.261-010	ASSEMBLER, GROUND SUPPO	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%

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			WILSHIRE													
			HOLLYWOOD													
			S FERNANDO													
			SOUTHEAST			SOUTHWEST		WEST/CENTRL		SAN GABRIEL		S CLARITA		ANTELOPE		
			TOTAL	COUNTY		COUNTY		LOS ANGELES		VALLEY		VALLEYS		VALLEY		
OES	DOT CODE	DOT TITLE	APPS	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	
931050 MACHINE BUILDERS AND OTHER PRECISION MACHINE ASSEMBLERS																
TOTALS FOR OES OCCUPATION			58	17	29%	10	17%	3	5%	6	10%	6	10%	16	28%	
806.381-022	ASSEMBLER, AIRCRAFT POWE		58	17	29%	10	17%	3	5%	6	10%	6	10%	16	28%	
931110 ELECTROMECHANICAL EQUIPMENT ASSEMBLERS- PRECISION																
TOTALS FOR OES OCCUPATION			107	28	26%	9	8%	5	5%	18	17%	44	41%	3	3%	
706.381-050	PRECISION ASSEMBLER, BENC		18	9	50%	1	6%	0	0%	3	17%	2	11%	3	17%	
710.281-018	ELECTROMECHANICAL TECHN		35	11	31%	2	6%	2	6%	9	26%	11	31%	0	0%	
828.381-018	ASSEMBLER, ELECTROMECHA		54	8	15%	6	11%	3	6%	6	11%	31	57%	0	0%	
931140 ELECTRICAL AND ELECTRONIC EQUIPMENT ASSEMBLER																
TOTALS FOR OES OCCUPATION			1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
729.381-022	WIRER, CABLE		1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
931970 ALL OTHER PRECISION ASSEMBLERS																
TOTALS FOR OES OCCUPATION			50	20	40%	13	26%	1	2%	5	10%	7	14%	4	8%	
806.381-078	INSTALLER, INTERIOR ASSEM		23	10	43%	5	22%	1	4%	0	0%	4	17%	3	13%	
809.381-010	FABRICATOR-ASSEMBLER, ME		27	10	37%	8	30%	0	0%	5	19%	3	11%	1	4%	
939050 ELECTRICAL AND ELECTRONIC ASSEMBLERS																
TOTALS FOR OES OCCUPATION			1,191	313	26%	133	11%	81	7%	281	24%	327	27%	56	5%	
726.364-018	ELECTRONICS UTILITY WORKE		9	3	33%	1	11%	1	11%	3	33%	1	11%	0	0%	
726.684-018	ELECTRONICS ASSEMBLER		1,056	264	25%	116	11%	72	7%	260	25%	312	30%	32	3%	
726.684-034	ASSEMBLER, SEMICONDUCTO		11	2	18%	2	18%	3	27%	2	18%	2	18%	0	0%	
726.684-070	PRINTED CIRCUIT BOARD ASS		15	4	27%	1	7%	1	7%	3	20%	6	40%	0	0%	
726.684-086	PRINTED CIRCUIT BOARD ASS		5	2	40%	0	0%	0	0%	1	20%	2	40%	0	0%	
729.384-026	ELECTRICAL ASSEMBLER		76	28	37%	10	13%	2	3%	11	14%	2	3%	23	30%	
729.684-026	ELECTRICAL-CONTROL ASSEM		19	10	53%	3	16%	2	11%	1	5%	2	11%	1	5%	
939140 WELDERS AND CUTTERS																
TOTALS FOR OES OCCUPATION			2	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%	
709.684-086	TORCH-STRAIGHTENER-AND H		2	0	0%	1	50%	0	0%	0	0%	1	50%	0	0%	
939530 GRINDING AND POLISHING WORKERS, HAND																
TOTALS FOR OES OCCUPATION			60	30	50%	5	8%	2	3%	16	27%	7	12%	0	0%	
519.684-018	MOLD DRESSER		3	2	67%	0	0%	0	0%	1	33%	0	0%	0	0%	
705.484-014	FINAL FINISHER, FORGING D		3	1	33%	1	33%	0	0%	1	33%	0	0%	0	0%	
705.684-026	GRINDER I		15	5	33%	0	0%	1	7%	7	47%	2	13%	0	0%	
705.684-030	GRINDER-CHIPPER I		2	1	50%	0	0%	0	0%	1	50%	0	0%	0	0%	
705.684-034	METAL FINISHER		19	10	53%	4	21%	0	0%	2	11%	3	16%	0	0%	
705.684-062	POLISHER AND BUFFER II		7	5	71%	0	0%	0	0%	1	14%	1	14%	0	0%	
705.687-014	LABORER, GRINDING AND POL		10	6	60%	0	0%	1	10%	2	20%	1	10%	0	0%	
809.684-026	GRINDER-CHIPPER II		1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	
939560 ASSEMBLERS AND FABRICATORS- EXCEPT MACHINE, EELECTRICAL, ELECTRONIC AND PRECISION																
TOTALS FOR OES OCCUPATION			1677	479	29%	79	5%	66	4%	572	34%	428	26%	53	3%	
706.684-018	ASSEMBLER, PRODUCT		160	54	34%	20	13%	7	4%	31	19%	45	28%	3	2%	
706.684-022	ASSEMBLER, SMALL PRODUCT		276	54	20%	16	6%	6	2%	92	33%	106	38%	2	1%	
706.684-054	FITTER II		2	1	50%	0	0%	0	0%	0	0%	0	0%	1	50%	
706.687-010	ASSEMBLER, PRODUCTION		936	282	30%	25	3%	34	4%	399	43%	179	19%	17	2%	
710.684-046	INSTRUMENT ASSEMBLER		1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	
712.687-010	ASSEMBLER, PLASTIC HOSPIT		5	1	20%	0	0%	0	0%	2	40%	2	40%	0	0%	
725.384-010	TUBE ASSEMBLER, ELECTRON		1	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	
725.684-022	TUBE ASSEMBLER, CATHODE		2	2	100%	0	0%	0	0%	0	0%	0	0%	0	0%	
726.684-042	DIE ATTACHER		3	2	67%	0	0%	0	0%	0	0%	1	33%	0	0%	
726.687-026	LAMINATION ASSEMBLER, PRI		1	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	

— AREA OF RESIDENCE OF WORKERS APPLYING TO EDD FOR AEROSPACE JOBS - FISCAL YEAR 1994-5

OES	DOT CODE	DOT TITLE	TOTAL APPS	SOUTHEAST		SOUTHWEST		WILSHIRE HOLLYWOOD WEST/CENTRL LOS ANGELES		SAN GABRIEL VALLEY		S FERNANDO S CLARITA VALLEYS		ANTELOPE VALLEY	
				COUNTY		COUNTY		COUNTY		COUNTY		COUNTY		COUNTY	
				APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT	APPS	PERCT
—	739.687-030	ASSEMBLER, SMALL PRODUCT	164	33	20%	7	4%	15	9%	38	23%	66	40%	5	3%
—	754.684-042	PLASTICS WORKER	46	11	24%	4	9%	1	2%	1	2%	9	20%	20	43%
	762.684-050	NAILER, HAND	1	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%
	780.684-062	FABRICATOR, FOAM RUBBER	16	7	44%	0	0%	1	6%	1	6%	7	44%	0	0%
—	794.684-014	BOX MAKER, PAPERBOARD	6	5	83%	0	0%	0	0%	0	0%	1	17%	0	0%
	795.687-014	GLUER	4	3	75%	0	0%	0	0%	0	0%	1	25%	0	0%
	806.384-030	ASSEMBLER, METAL BONDING	6	2	33%	2	33%	0	0%	1	17%	1	17%	0	0%
	806.384-034	ASSEMBLER, SUBASSEMBLY	41	18	44%	4	10%	2	5%	3	7%	9	22%	5	12%
—	979.684-042	PRINTING SCREEN ASSEMBLE	6	3	50%	1	17%	0	0%	2	33%	0	0%	0	0%
	<i>subtotal-hand working occupations</i>		3,671	1,002	27%	296	8%	174	5%	936	25%	871	24%	392	11%
—	SUBTOTAL-PRODUCTION AND OPERATIONS		13,044	4,117	32%	1,263	10%	818	6%	2,712	21%	2,567	20%	1,567	12%
	TOTAL AEROSPACE JOB SEEKERS		16,616	4,834	29%	1,743	10%	1,136	7%	3,494	21%	3,495	21%	1,914	12%

Appendix D3

Characteristics of Los Angeles County Residents in Aerospace Occupations Served by EDD in Fiscal Year 1994-95

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	% Wht										% Amr			% Asn			AGE			YEARS OF EDUCATION							% UI					
			% Fe-		Non-		Black		Hisp		% Ind,		% Alsk		% Pac		% 18		% 31		% 1		% 12		% 13		% 14		% 15		% 16		% 17+	
			TOTAL	Male	%	male	%	Hispanic	%	Black	%	Hispanic	%	Alsk	%	Ind,	%	Pac	%	18	%	31	%	1	%	12	%	13	%	14	%	15	%	16

MANAGERIAL AND ADMINISTRATIVE OCCUPATIONS

130170 ENGINEERING, MATHEMATICAL AND NATURAL SCIENCE MANAGERS

TOTALS FOR OES OCCUPATION		187	89%	11%	57%	13%	15%	1%	14%	5%	35%	60%	0%	16%	15%	37%	32%	60%
		number	166	21	107	24	28	2	26	9	65	112	0	30	28	69	60	112
003.167-070	ENGINEERING MANAGER, EL	31	100%	0%	90%	3%	3%	0%	7%	0%	10%	90%	0%	10%	6%	48%	35%	58%
007.167-014	PLANT ENGINEER	15	100%	0%	67%	7%	13%	0%	13%	13%	0%	87%	0%	13%	20%	60%	7%	80%
008.167-010	TECHNICAL DIRECTOR, CHEM	1	100%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	100%
011.161-010	SUPERVISOR, METALLURGIC	11	100%	0%	55%	9%	27%	0%	9%	0%	55%	45%	0%	18%	27%	27%	27%	0%
012.167-068	SAFETY MANAGER	68	96%	4%	72%	9%	6%	0%	13%	1%	25%	74%	0%	6%	12%	53%	29%	68%
019.167-014	PROJECT ENGINEER	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%
022.161-010	CHEMICAL LABORATORY CHI	3	67%	33%	33%	0%	67%	0%	0%	0%	0%	100%	0%	0%	33%	33%	33%	33%
029.167-014	PROJECT MANAGER, ENVIRO	32	72%	28%	50%	25%	16%	6%	3%	6%	31%	63%	3%	19%	28%	34%	16%	47%
169.167-030	MANAGER, DATA PROCESSIN	21	67%	33%	62%	19%	5%	5%	10%	0%	29%	71%	0%	6%	38%	48%	10%	48%
169.167-082	MANAGER, COMPUTER OPER	3	100%	0%	0%	67%	33%	0%	0%	33%	33%	33%	0%	100%	0%	0%	0%	67%
189.117.014	DIRECTOR, RESEARCH AND D																	

150140 INDUSTRIAL PRODUCTION MANAGERS

TOTALS FOR OES OCCUPATION		210	86%	14%	71%	6%	19%	0%	0%	4%	65%	31%	4%	23%	11%	39%	22%	63%
		number	181	29	149	13	40	0	0	8	137	65	8	48	23	82	46	132
183.117-010	MANAGER, BRANCH	49	90%	10%	55%	13%	28%	0%	9%	9%	45%	47%	6%	35%	10%	41%	8%	59%
183.117-014	PRODUCTION SUPERINTEND	127	83%	17%	48%	10%	36%	0%	7%	6%	37%	57%	6%	37%	19%	34%	4%	65%
183.167-018	GENERAL SUPERVISOR	32	88%	13%	53%	9%	31%	0%	6%	6%	44%	50%	9%	44%	28%	19%	0%	59%
189.117-042	DIRECTOR, QUALITY ASSURA	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	100%
189.167-046	SUPERINTENDENT, MAINTEN	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%
SUBTOTAL-MANAGERS & ADMINISTRATORS		397	347	50	256	37	68	2	26	18	202	177	8	78	51	151	106	245
		%	100%	87%	64%	9%	17%	0%	7%	4%	51%	45%	2%	20%	13%	38%	27%	62%

PROFESSIONAL, PARAPROFESSIONAL AND TECHNICAL OCCUPATIONS

Engineers and Related Occupations

221050 METALLURGISTS AND METALLURGICAL, CERAMIC AND MATERIALS ENGINEERS

TOTALS FOR OES OCCUPATION		16	100%	0%	65%	18%	7%	3%	0%	11%	33%	56%	3%	17%	0%	49%	31%	50%
		number	16	0	10	3	1	0	0	2	5	9	0	3	0	8	5	8
006.061-022	CERAMICS TEST ENGINEER	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%
011.061-014	METALLOGRAPHER	1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	100%
011.061-022	METALLURGIST, PHYSICAL	3	100%	0%	67%	0%	0%	0%	33%	0%	33%	67%	0%	0%	0%	67%	33%	100%
011.061-026	WELDING ENGINEER	6	100%	0%	0%	50%	33%	0%	0%	33%	33%	33%	17%	83%	0%	0%	0%	0%

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht		% Black	% Hisp	% Amr		% Asn	AGE		YEARS OF EDUCATION						% UI Climnt	% 80%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
						Non- Hisp	%			Ind, Alsk	%		% 18 - 30	% 31 - 44	% 45+ 80%	% 1 - 11	% 12	% 13 - 15	% 16	% 17+																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
019.061-014	MATERIALS ENGINEER		5	100%	0%	60%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht		% Black		% Hisp		% Amr Ind, Alsk		% Asn Pac IsInd		AGE		YEARS OF EDUCATION						% UI Cimt
						% Non-Hisp	% Black	% Black	% Hisp	% Ind, Alsk	% Pac IsInd	% 18 - 30	% 31 - 44	% 45+	% 1 - 11	% 12	% 13 - 15	% 16	% 17+					
012.167-082	MATERIAL SCHEDULER		61	69%	31%	59%	10%	25%	0%	7%	0%	0%	51%	2%	54%	28%	13%	3%	72%					
221320 SAFETY ENGINEERS, EXCEPT MINING																								
TOTALS FOR OES OCCUPATION				18	83%	17%	50%	38%	0%	13%	0%	63%	38%	0%	8%	6%	69%	17%	56%					
number				15	3	9	7	0	0	2	0	11	7	0	1	1	12	3	10					
012.061-014	SAFETY ENGINEER		12	75%	25%	83%	17%	0%	0%	0%	17%	83%	0%	0%	0%	25%	58%	17%	58%					
012.167-022	FIRE-PREVENTION RESEARC		1	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	100%					
012.167-026	FIRE-PROTECTION ENGINEER		3	100%	0%	67%	33%	0%	0%	0%	33%	67%	0%	33%	0%	67%	0%	67%						
012.167-034	INDUSTRIAL-HEALTH ENGINE		2	100%	0%	50%	0%	0%	0%	50%	100%	0%	0%	0%	0%	50%	0%	0%						
221350 MECHANICAL ENGINEERS																								
TOTALS FOR OES OCCUPATION				347	93%	7%	72%	6%	10%	13%	12%	35%	53%	0%	15%	18%	57%	9%	59%					
number				323	24	250	21	35	0	45	42	121	164	0	52	62	198	31	205					
007.061-014	MECHANICAL ENGINEER		252	93%	7%	61%	6%	10%	0%	21%	12%	40%	48%	0%	10%	10%	58%	23%	53%					
007.061-018	MECHANICAL-DESIGN ENGIN		11	73%	27%	45%	9%	9%	0%	36%	9%	27%	64%	0%	0%	18%	55%	27%	82%					
007.061-022	MECHANICAL-DESIGN ENGIN		17	100%	0%	75%	0%	6%	0%	25%	0%	13%	88%	0%	0%	35%	53%	12%	76%					
007.061-026	TOOL DESIGNER		30	97%	3%	80%	0%	10%	0%	10%	0%	33%	67%	0%	43%	23%	23%	10%	77%					
007.061-038	APPLICATIONS ENGINEER, M		9	100%	0%	75%	0%	25%	0%	13%	0%	25%	75%	0%	22%	22%	44%	11%	56%					
007.061-042	STRESS ANALYST		1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%					
007.161-022	MECHANICAL RESEARCH EN		2	100%	0%	100%	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	100%	0%	0%					
007.161-034	TEST ENGINEER, MECHANICA		22	95%	5%	82%	5%	0%	0%	14%	0%	45%	55%	0%	27%	23%	50%	0%	77%					
007.267-010	DRAWINGS CHECKER, ENGIN		3	100%	0%	33%	33%	33%	0%	0%	33%	33%	33%	0%	33%	33%	33%	0%	67%					
221990 ALL OTHER ENGINEERS																								
TOTALS FOR OES OCCUPATION				54	89%	11%	83%	5%	9%	14%	10%	32%	58%	0%	27%	19%	42%	12%	67%					
number				48	6	45	3	5	0	8	5	17	31	0	15	10	23	6	36					
019.061-010	BIOMEDICAL ENGINEER		6	67%	33%	33%	0%	17%	0%	50%	50%	50%	0%	0%	0%	50%	50%	67%						
019.061-018	OPTICAL ENGINEER		6	100%	0%	67%	17%	0%	0%	17%	17%	50%	33%	0%	0%	17%	50%	83%						
019.061-026	RELIABILITY ENGINEER		8	88%	13%	75%	13%	13%	0%	0%	13%	13%	75%	0%	0%	25%	63%	63%						
019.081-010	MAINTAINABILITY ENGINEER		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%						
019.081-014	PHOTOGRAPHIC ENGINEER		1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%						
019.081-018	POLLUTION-CONTROL ENGIN		2	100%	0%	200%	0%	0%	0%	0%	0%	100%	0%	0%	50%	50%	0%	100%						
019.167-010	LOGISTICS ENGINEER		27	89%	11%	59%	15%	11%	0%	15%	0%	41%	59%	0%	30%	41%	26%	4%	67%					
019.187-010	PACKAGING ENGINEER		3	100%	0%	33%	0%	33%	0%	33%	0%	0%	100%	0%	33%	67%	0%	33%						
225020 CIVIL ENGINEERING TECHNICIANS AND TECHNOLOGISTS																								
TOTALS FOR OES OCCUPATION				35	94%	6%	55%	18%	18%	10%	13%	30%	58%	0%	14%	57%	29%	0%	43%					
number				33	2	19	6	6	0	4	5	11	20	0	5	20	10	0	15					
005.261-014	CIVIL ENGINEERING TECHNIC		20	95%	5%	30%	15%	35%	0%	20%	25%	40%	35%	0%	15%	40%	45%	0%	25%					
019.261-018	FACILITIES PLANNER		15	93%	7%	80%	20%	0%	0%	0%	0%	20%	80%	0%	13%	73%	13%	0%	67%					

OES	DOT CODE	DOT TITLE	TOTAL	% Male			% Fe-			% Wht			% Amr			AGE			YEARS OF EDUCATION						
				%	% Male	% Fe-	% Non-	% Hisp	% Black	% Hisp	% Alsk	% Ind,	% Pac	% 18	% 31	% 45+	% 1	% 12	% 13	% 16	% 17+	% UI	% Cimt		
225050 ELECTRICAL AND ELECTRONIC ENGINEERING TECHNICIANS AND TECHNOLOGISTS																									
TOTALS FOR OES OCCUPATION				164	62%	38%	56%	15%	22%	0%	7%	11%	54%	35%	8%	35%	50%	8%	0%	55%					
		number		102	62	92	25	36	0	11	18	89	57	13	57	82	13	0	90						
	003.261-010	INSTRUMENTATION TECHNICI	31	97%	3%	55%	23%	23%	0%	0%	13%	35%	52%	0%	42%	42%	16%	0%	74%						
	019.281-010	CALIBRATION LABORATORY T	17	94%	6%	47%	18%	24%	0%	12%	12%	35%	53%	6%	41%	41%	12%	0%	59%						
	726.261-010	ELECTRONICS ASSEMBLER, D	115	48%	52%	23%	18%	43%	0%	15%	19%	45%	36%	25%	57%	15%	4%	0%	50%						
	726.261-014	ELECTRICIAN, RESEARCH	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%						
225080 INDUSTRIAL ENGINEERING TECHNICIANS AND TECHNOLOGISTS																									
TOTALS FOR OES OCCUPATION				99	86%	14%	27%	35%	27%	1%	10%	26%	34%	40%	3%	35%	28%	26%	8%	64%					
		number		85	14	27	35	27	1	10	26	34	40	3	35	28	26	8	63						
	012.261-014	QUALITY CONTROL TECHNICI	92	85%	15%	39%	13%	40%	2%	5%	9%	54%	37%	5%	57%	27%	10%	1%	64%						
	012.267-010	INDUSTRIAL ENGINEERING T	7	100%	0%	14%	57%	14%	0%	14%	43%	14%	43%	0%	14%	29%	43%	14%	57%						
225110 MECHANICAL ENGINEERING TECHNICIANS AND TECHNOLOGISTS																									
TOTALS FOR OES OCCUPATION				81	91%	9%	54%	9%	26%	2%	10%	7%	24%	68%	0%	32%	36%	28%	4%	58%					
		number		74	7	44	7	21	2	8	6	19	55	0	26	29	23	3	47						
	007.161-026	MECHANICAL-ENGINEERING	76	91%	9%	47%	17%	12%	4%	20%	14%	49%	37%	0%	24%	33%	36%	8%	58%						
	007.267-014	TOOL DESIGN CHECKER	5	100%	0%	60%	0%	40%	0%	0%	0%	0%	100%	0%	40%	40%	20%	0%	60%						
225140 DRAFTERS																									
TOTALS FOR OES OCCUPATION				644	86%	14%	44%	13%	25%	3%	15%	18%	32%	50%	5%	31%	37%	23%	4%	51%					
		number		554	90	283	84	161	19	97	116	206	322	32	200	238	148	26	328						
	003.261-014	CONTROLS DESIGNER	3	67%	33%	33%	0%	33%	0%	33%	0%	0%	100%	0%	33%	0%	33%	33%	100%						
	003.261-022	PRINTED CIRCUIT DESIGNER	2	100%	0%	0%	0%	50%	0%	50%	0%	50%	50%	0%	0%	0%	50%	0%	50%						
	003.281-010	DRAFTER, ELECTRICAL	65	80%	20%	37%	18%	29%	2%	14%	26%	42%	32%	2%	48%	31%	15%	5%	60%						
	003.281-014	DRAFTER, ELECTRONIC	91	87%	13%	43%	10%	28%	1%	20%	20%	45%	35%	2%	33%	45%	18%	2%	53%						
	005.281-010	DRAFTER, CIVIL	51	86%	14%	33%	18%	24%	2%	24%	16%	59%	25%	4%	24%	43%	27%	2%	49%						
	005.281-014	DRAFTER, STRUCTURAL	19	89%	11%	47%	21%	11%	0%	21%	11%	21%	68%	0%	32%	47%	11%	11%	58%						
	007.161-010	DIE DESIGNER	2	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	50%	50%	0%	100%						
	007.161-018	ENGINEERING ASSISTANT, M	42	86%	14%	54%	10%	17%	5%	17%	17%	29%	54%	2%	19%	36%	36%	7%	48%						
	007.261-022	DRAFTER, TOOL DESIGN	3	100%	0%	67%	33%	0%																	

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male		% Wht Non-Hisp		% Black Hisp		% Amr Ind, Alsk		% Asn Pac Islnd		AGE		YEARS OF EDUCATION						% UI Clmnt
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
	017.281-014	DRAFTER APPRENTICE	29	86%	14%	29%	11%	54%	0%	11%	32%	14%	3%	31%	59%	7%	0%	34%					
	017.281-018	DRAFTER, ASSISTANT	33	70%	30%	22%	6%	72%	0%	3%	28%	19%	6%	36%	48%	9%	0%	45%					
	017.281-034	TECHNICAL ILLUSTRATOR	29	79%	21%	66%	14%	7%	0%	7%	31%	55%	3%	21%	69%	7%	0%	69%					

225990 ALL OTHER ENGINEERING AND RELATED TECHNICIANS AND TECHNOLOGISTS

TOTALS FOR OES OCCUPATION			61	89%	11%	46%	6%	30%	3%	14%	11%	39%	50%	11%	7	35	12%	19%	0%	69%
number				54	7	28	4	18	2	9	7	24	31	7			7	12	0	42
003.362-010	DESIGN TECHNICIAN, COMPU		23	91%	9%	48%	13%	35%	0%	4%	9%	30%	61%	4%		26%	43%	22%	4%	65%
008.261-010	CHEMICAL-ENGINEERING TE		1	0%	100%	100%	0%	0%	0%	0%	0%	0%	100%	0%		0%	0%	100%	0%	0%
011.261-010	METALLURGICAL TECHNICIAN		7	86%	14%	0%	29%	71%	0%	0%	14%	43%	43%	29%		43%	29%	0%	0%	71%
011.261-014	WELDING TECHNICIAN		3	100%	0%	67%	0%	33%	0%	9%	36%	55%	9%	27%		67%	0%	0%	0%	100%
011.261-018	NONDESTRUCTIVE TESTER		11	91%	9%	64%	9%	18%	0%	0%	0%	0%	100%	0%		45%	27%	0%	0%	91%
011.281-014	SPECTROSCOPIST		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%		100%	0%	0%	0%	0%
011.361-010	TESTER		1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%		100%	0%	0%	0%	100%
019.161-014	TEST TECHNICIAN		8	100%	0%	25%	13%	25%	13%	25%	13%	63%	25%	0%		50%	0%	50%	0%	75%
019.261-034	LASER TECHNICIAN		5	60%	40%	60%	0%	20%	20%	0%	0%	100%	0%	20%		40%	20%	20%	0%	20%
869.261-026	WIND TUNNEL MECHANIC		1	100%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%		100%	0%	0%	0%	100%

Natural Scientists and Related Workers

241050 CHEMISTS, EXCEPT BIOCHEMISTS		TOTALS FOR OES OCCUPATION		60	55%	45%	35%	1%	23%	3%	39%	4%	40%	56%	1%	14%	4%	47%	35%	58%
		number			33	27	21	1	14	2	23	2	24	34	1	8	2	28	21	35
022.061-010	CHEMIST	55	58%	42%	50%	2%	6%	6%	39%	7%	41%	52%	2%	7%	7%	55%	29%	58%		
022.061-014	CHEMIST, FOOD	5	20%	80%	20%	0%	40%	0%	40%	0%	40%	60%	0%	20%	0%	40%	40%	60%		

241990 ALL OTHER PHYSICAL SCIENTISTS

TOTALS FOR OES OCCUPATION			54	65%	35%	53%	4%	3%	1%	39%	43%	13%	44%	0%	4%	1%	51%	44%	52%
<i>number</i>				35	19	29	2	2	1	21	23	7	24	0	2	1	28	24	28
029.067-010	GEOGRAPHER		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%
029.081-010	ENVIRONMENTAL ANALYST		52	65%	35%	60%	12%	10%	2%	17%	29%	38%	33%	0%	12%	4%	52%	33%	54%
029.081-014	MATERIALS SCIENTIST		1	0%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	100%	0%

245050 CHEMICAL TECHNICIANS AND TECHNOLOGISTS, EXCEPT HEALTH

TOTALS FOR OES OCCUPATION			48	71%	29%	37%	8%	30%	0%	24%	15%	53%	32%	2%	14%	18%	52%	14%	48%
<i>number</i>				34	14	18	4	14	0	12	7	25	15	1	7	9	25	7	23
022.161-014	COLORIST		1	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%
022.261-010	CHEMICAL LABORATORY TEC		21	71%	29%	29%	19%	19%	0%	33%	14%	57%	29%	0%	14%	48%	38%	0%	57%

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht			% Amr			% Asn	AGE			YEARS OF EDUCATION										% UI Cimnt
						Non- Hisp	Black	Hisp	Ind, Alsk	Pac	% 18 -30		% 31 -44	% 45+	% 1 -11	% 12 -15	% 16	% 17+								
	022.261-018	CHEMIST, INSTRUMENTATION	6	83%	17%	83%	0%	0%	0%	0%	17%	17%	17%	67%	0%	33%	17%	17%	33%	33%	33%	33%				
	022.261-022	CHEMIST, WASTEWATER-TRE	6	67%	33%	67%	0%	0%	0%	0%	17%	0%	33%	67%	0%	0%	17%	67%	17%	50%	50%	50%				
	029.261-010	LABORATORY TESTER	10	90%	10%	20%	30%	20%	0%	30%	30%	10%	60%	30%	10%	10%	30%	40%	10%	30%	30%	50%				
	029.361-014	FOOD TESTER	4	25%	75%	25%	0%	25%	0%	50%	50%	50%	50%	0%	0%	25%	0%	50%	25%	50%	50%	50%				

245990 ALL OTHER PHYSICAL AND LIFE SCIENCE TECHNICIANS AND TECHNOLOGISTS

TOTALS FOR OES OCCUPATION	number	57	67%	33%	43%	15%	8%	1%	32%	50%	37%	13%	1%	36%	11%	35%	18%	40%
012.261-010	AIR ANALYST	4	75%	25%	50%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	25%	50%	75%
025.267-014	WEATHER OBSERVER	1	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
029.261-014	POLLUTION-CONTROL TECHN	35	77%	23%	43%	20%	26%	0%	11%	26%	51%	23%	3%	40%	14%	31%	11%	43%
029.261-026	CRIMINALIST	3	33%	67%	67%	0%	0%	0%	33%	67%	0%	33%	0%	33%	0%	67%	0%	0%
199.364-014	SCIENTIFIC HELPER	14	43%	57%	57%	7%	14%	7%	14%	57%	36%	7%	0%	7%	14%	50%	29%	36%
subtotal-natural scientists & related workers		219	140%	79%	92%	15%	34%	3%	74%	61%	78%	80%	2%	38%	18%	101%	62%	109%
TOTALS FOR OES OCCUPATION	%	100%	64%	36%	42%	7%	16%	1%	34%	28%	35%	37%	1%	17%	8%	46%	28%	50%

Computer, Mathematical, Operations Research, and Related Occupations

251020 SYSTEMS ANALYSTS, ELECTRONIC DATA PROCESSING

TOTALS FOR OES OCCUPATION	number	271	73%	27%	53%	31%	10%	0%	6%	7%	30%	63%	0%	18%	22%	49%	10%	64%
030.162-014	PROGRAMMER-ANALYST	100	73%	27%	57%	14%	7%	0%	20%	10%	44%	46%	0%	17%	26%	42%	15%	61%
030.162-022	SYSTEMS PROGRAMMER	19	100%	0%	68%	11%	21%	0%	0%	5%	42%	53%	0%	16%	26%	42%	16%	53%
030.167-014	SYSTEMS ANALYST	127	70%	30%	59%	22%	8%	0%	12%	12%	37%	51%	1%	17%	20%	45%	17%	67%
033.262-010	QUALITY ASSURANCE ANALY	24	63%	38%	79%	8%	13%	0%	0%	8%	25%	67%	0%	42%	38%	17%	4%	67%
109.067-010	INFORMATION SCIENTIST	1	100%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%

251110 PROGRAMMERS- NUMERICAL, TOOL, AND PROCESS CONTROL

TOTALS FOR OES OCCUPATION	number	36	100%	0%	46%	12%	29%	0%	17%	12%	51%	38%	6%	39%	36%	17%	3%	75%
007.167-018	TOOL PROGRAMMER, NUMBER	17	100%	0%	44%	13%	31%	0%	19%	13%	44%	44%	12%	41%	29%	18%	0%	71%
609.262-010	TOOL PROGRAMMER, NUMBER	19	100%	0%	47%	11%	26%	0%	16%	11%	58%	32%	0%	37%	42%	16%	5%	79%

251990 ALL OTHER COMPUTER SCIENTISTS

TOTALS FOR OES OCCUPATION	number	133	86%	14%	70%	11%	9%	1%	13%	17%	46%	37%	1%	32%	28%	33%	6%	60%
031.132-010	SUPERVISOR, NETWORK CON	5	80%	20%	100%	0%	0%	0%	0%	0%	60%	40%	0%	40%	20%	40%	0%	60%
031.262-010	DATA COMMUNICATIONS ANA	10	70%	30%	67%	0%	11%	0%	33%	33%	33%	33%	0%	20%	30%	40%	10%	40%
031.262-014	NETWORK CONTROL OPERAT	53	94%	6%	70%	19%	4%	0%	8%	13%	42%	45%	4%	40%	28%	25%	4%	53%
033.162-018	TECHNICAL SUPPORT SPECIA	65	83%	17%	44%	23%	20%	3%	11%	20%	48%	31%	0%	29%	32%	28%	11%	69%

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES DOT CODE	DOT TITLE	TOTAL	% Wht			% Amr			AGE			YEARS OF EDUCATION					% UI	
			% Male	% Fe- male	% Non-Hisp	% Black	% Hisp	% Ind, Alsk	% Pac Islnd	% 18 -30	% 31 -44	% 45+	% -11	% 12	% 13	% 14		% 15
253020 OPERATIONS AND SYSTEMS RESEARCHERS AND ANALYSTS, EXCEPT COMPUTER																		
TOTALS FOR OES OCCUPATION		6	67%	33%	50%	50%	0%	0%	0%	50%	50%	0%	0%	67%	17%	17%	33%	2
number			4	2	3	3	0	0	0	3	3	0	0	4	1	1	2	
020.067-018	OPERATIONS-RESEARCH AN	6	67%	33%	50%	50%	0%	0%	0%	50%	50%	0%	0%	67%	17%	17%	33%	
0		0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
0		0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
253120 STATISTICIANS																		
TOTALS FOR OES OCCUPATION		11	55%	45%	43%	0%	13%	0%	45%	32%	41%	27%	0%	0%	46%	54%	55%	6
number			6	5	5	0	1	0	5	4	5	3	0	0	5	6	6	
020.067-022	STATISTICIAN, MATHEMATICA	4	50%	50%	0%	0%	25%	0%	75%	50%	25%	25%	0%	0%	50%	50%	25%	
020.167-026	STATISTICIAN, APPLIED	7	57%	43%	86%	0%	0%	0%	14%	14%	57%	29%	0%	0%	43%	57%	71%	
subtotal-computer, mathematical, systems		446	353	94	257	106	50	1	40	46	164	237	3	105	114	184	38	283
%		100%	79%	21%	58%	24%	11%	0%	9%	10%	37%	53%	1%	24%	26%	41%	8%	63%
SUBTOTAL-PROFESSIONAL, TECHNICAL		3,175	2,614	561	1,772	436	485	36	440	406	1,155	1,614	66	849	858	1,078	327	1,864
%		100%	82%	18%	56%	14%	15%	1%	14%	13%	36%	51%	2%	27%	27%	34%	10%	59%

PRODUCTION, OPERATING, MAINTENANCE, AND MATERIAL HANDLING OCCUPATIONS

First Line Supervisors/Managers-Production and Maintenance

810020 FIRST LINE SUPERVISORS-REPAIR																	
TOTALS FOR OES OCCUPATION			95	98%	2%	64%	8%	26%	0%	3%	6%	54%	39%	9%	75%	6%	47%
number				93	2	61	8	25	0	3	6	51	37	9	71	6	45
633.131-010	OFFICE-MACHINE-SERVICE S	2	100%	0%	0%	50%	0%	50%	0%	0%	0%	50%	50%	0%	100%	0%	100%
638.131-010	FUEL-SYSTEM-MAINTENANCE	1	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%
638.131-022	MAINTENANCE-MECHANIC SU	21	100%	0%	0%	60%	10%	30%	0%	5%	15%	30%	55%	10%	76%	5%	38%
638.131-026	MECHANICAL-MAINTENANCE	6	100%	0%	0%	50%	17%	17%	0%	17%	0%	50%	50%	0%	17%	17%	67%
638.131-030	MILLWRIGHT SUPERVISOR	1	100%	0%	0%	100%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%
721.131-010	ELECTRIC MOTOR REPAIRING	2	100%	0%	0%	50%	0%	50%	0%	0%	0%	100%	0%	50%	0%	0%	50%
823.131-010	COMMUNICATIONS ELECTRIC	8	100%	0%	0%	63%	13%	25%	0%	0%	25%	63%	13%	0%	63%	25%	63%
891.137-010	MAINTENANCE SUPERVISOR	54	96%	4%	38%	27%	33%	0%	0%	6%	12%	40%	48%	13%	57%	15%	46%
810080 FIRST LINE SUPERVISORS-PRODUCTION																	
TOTALS FOR OES OCCUPATION			466	87%	13%	39%	9%	44%	1%	7%	10%	31%	58%	21%	47%	17%	62%
number				405	61	182	42	205	5	33	47	144	270	98	219	79	289
504.131-010	HEAT-TREAT SUPERVISOR	4	100%	0%	0%	25%	25%	50%	0%	0%	0%	0%	100%	0%	25%	25%	75%

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Wht			% Amr			% Asn			AGE			YEARS OF EDUCATION					% UI
				% Male	% Fe- male	Non- Hisp	% Black	% Hisp	Ind, Alsk	% Pac IsInd	% 18 - 30	% 31 - 44	% 45+	% 1 - 11	% 12	% 13	% 14	% 15	% 16	% 17+	
529.137-014	SANITARIAN		6	83%	17%	33%	0%	50%	0%	17%	17%	50%	33%	0%	50%	33%	0%	50%	33%	0%	67%
590.130-010	SUPERVISOR, ELECTRONICS		4	100%	0%	75%	0%	0%	25%	0%	0%	50%	50%	0%	50%	50%	0%	50%	50%	0%	50%
600.130-010	MACHINE-SHOP SUPERVISOR		6	100%	0%	33%	17%	33%	0%	17%	0%	50%	50%	0%	67%	0%	0%	17%	83%	0%	83%
603.130-010	SUPERVISOR, GRINDING		1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%
609.130-010	MACHINE-SHOP SUPERVISOR		4	100%	0%	75%	0%	25%	0%	0%	0%	25%	75%	0%	50%	50%	0%	0%	0%	50%	50%
609.131-010	INSPECTION SUPERVISOR		31	87%	13%	52%	14%	34%	0%	7%	14%	31%	55%	10%	42%	42%	6%	61%	0%	61%	
619.130-030	SUPERVISOR, LINE		9	100%	0%	33%	22%	33%	0%	11%	11%	22%	67%	22%	33%	22%	22%	0%	60%	0%	56%
619.130-034	SUPERVISOR, MACHINE SETT		5	100%	0%	60%	20%	20%	0%	0%	0%	20%	80%	20%	60%	20%	0%	0%	60%	0%	60%
619.130-046	SUPERVISOR		2	0%	100%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	50%	0%	50%	50%
699.130-010	PRODUCTION SUPERVISOR		67	84%	16%	42%	9%	45%	1%	3%	6%	43%	51%	10%	57%	19%	12%	1%	63%	0%	63%
706.131-010	LABORATORY SUPERVISOR		1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%	0%	100%
710.131-038	SUPERVISOR, INSTRUMENT A		1	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%
726.130-010	SUPERVISOR, ELECTRONICS		17	88%	12%	53%	6%	35%	0%	6%	0%	35%	65%	6%	35%	41%	12%	6%	76%	0%	76%
726.134-010	SUPERVISOR, PRINTED CIRC		4	25%	75%	25%	25%	25%	0%	25%	0%	50%	50%	0%	75%	25%	0%	0%	0%	0%	0%
739.137-010	ASSEMBLY SUPERVISOR		16	81%	19%	25%	25%	44%	0%	6%	0%	50%	50%	31%	31%	13%	19%	6%	56%	0%	56%
780.131-014	SUPERVISOR, UPHOLSTERY		1	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%	0%	100%
781.134-010	SUPERVISOR, CUTTING DEPA		5	100%	0%	0%	20%	80%	0%	0%	0%	20%	80%	40%	40%	20%	0%	80%	0%	80%	80%
787.132-010	SEWING SUPERVISOR		5	20%	80%	40%	0%	60%	0%	0%	20%	20%	60%	60%	40%	0%	0%	0%	80%	0%	80%
801.131-014	SUPERVISOR, FITTING		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%	0%	100%
806.131-038	SUPERVISOR, INSPECTION		5	80%	20%	40%	20%	40%	0%	0%	20%	20%	60%	0%	60%	20%	20%	0%	40%	0%	40%
806.131-042	SUPERVISOR, PRODUCTION		12	75%	25%	67%	17%	17%	0%	0%	0%	33%	67%	0%	50%	8%	33%	8%	67%	0%	67%
809.130-014	SUPERVISOR, METAL FABRIC		6	100%	0%	0%	17%	33%	0%	50%	0%	33%	67%	17%	0%	50%	33%	0%	50%	0%	50%
899.133-010	SUPERVISOR, LABOR GANG		18	67%	33%	22%	22%	50%	0%	6%	83%	11%	6%	33%	61%	6%	0%	0%	50%	0%	50%
920.132-010	PACKAGING SUPERVISOR		8	38%	63%	0%	0%	88%	0%	13%	25%	25%	50%	50%	50%	0%	0%	0%	50%	0%	50%
929.137-022	WAREHOUSE SUPERVISOR		221	94%	6%	31%	21%	45%	0%	4%	19%	48%	33%	8%	67%	19%	5%	0%	63%	0%	63%
950.131-010	REFRIGERATING ENGINEER,		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%	0%	100%
950.131-014	STATIONARY-ENGINEER SUP		2	100%	0%	50%	0%	0%	0%	50%	0%	0%	100%	0%	100%	0%	0%	0%	50%	0%	50%
979.130-010	SUPERVISOR, BLUEPRINTING		2	50%	50%	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
979.131-018	SUPERVISOR, SILK-SCREEN C		1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%
subtotal-first line supervisors/managers			561	499	62	243	50	230	5	35	52	196	307	106	290	85	72	8	334	59%	59%
			100%	89%	11%	43%	9%	41%	1%	6%	9%	35%	55%	19%	52%	15%	13%	1%			

Inspectors and Related Occupations

830020 PRECISION INSPECTORS, TESTERS, AND GRADERS																	
TOTALS FOR OES OCCUPATION																	
	548	76%	24%	48%	13%	35%	0%	4%	9%	39%	52%	13%	53%	29%	5%	0%	61%
		416	132	263	71	192	0	22	49	214	285	71	290	159	27	0	334
	<i>number</i>																
504.281-010	HEAT-TREAT INSPECTOR	2	100%	0%	0%	50%	0%	0%	0%	50%	50%	50%	0%	50%	0%	0%	50%
600.281-014	LAY-OUT INSPECTOR	1	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%
601.261-010	INSPECTOR, SET-UP AND LAY	4	75%	25%	0%	100%	0%	0%	0%	50%	50%	25%	50%	25%	0%	0%	75%

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male		% Fe- male		% Wht		% Amr			% Asn		AGE			YEARS OF EDUCATION										% UI Cimnt	
				%	Male	%	male	%	Non- Hisp	%	Black	%	Hisp	%	Ind, Alsk	%	Pac IsInd	%	18 -30	%	31 -44	%	45+	%	1 -11	%	12		%
	726.684-026	ELECTRONICS TESTER	45	82%	18%	27%	18%	27%	13%	36%	2%	22%	13%	51%	36%	9%	56%	29%	7%	0%	53%								
	726.684-050	FILM TOUCH-UP INSPECTOR	1	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%								
	726.684-062	INSPECTOR, PRINTED CIRCUI	10	70%	30%	10%	30%	10%	20%	50%	10%	10%	0%	50%	50%	20%	70%	10%	0%	0%	50%								
	726.684-078	PRINTED CIRCUIT BOARD CO	1	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%								
	726.684-102	TESTER, SEMICONDUCTOR W	1	100%	0%	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%								
	741.687-010	PAINT-SPRAY INSPECTOR	2	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%								
	789.587-014	INSPECTOR, FABRIC	18	6%	94%	0%	94%	0%	0%	100%	0%	0%	0%	100%	0%	67%	33%	0%	0%	0%	100%								
	789.687-070	GARMENT INSPECTOR	147	10%	90%	0%	90%	0%	1%	97%	0%	2%	18%	57%	25%	80%	15%	2%	1%	61%									
	862.687-018	HYDRO-PNEUMATIC TESTER	4	75%	25%	25%	25%	50%	25%	50%	0%	0%	0%	50%	50%	0%	75%	25%	0%	25%									
	922.687-054	LABORATORY-SAMPLE CARRI	3	100%	0%	33%	0%	67%	0%	0%	0%	0%	0%	67%	33%	33%	0%	67%	0%	33%									
	929.687-062	WEIGHER, PRODUCTION	1	100%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%									
subtotal-Inspectors			903	558	345	330	142	384	4	43	78	423	402	156	468	230	31	18	544										
			100%	62%	38%	37%	16%	42%	0%	5%	9%	47%	45%	17%	52%	25%	3%	2%	60%										

Mechanics, Installers and Repairers

851190 ALL OTHER MACHINERY MAINTENANCE MECHANICS

TOTALS FOR OES OCCUPATION			481	99%	1%	39%	19%	35%	1%	6%	16%	36%	48%	21%	57%	18%	1%	2%	58%
number																			
620.281-018	AUTOMOTIVE-MAINTENANCE-		11	100%	0%	45%	18%	36%	0%	0%	45%	36%	18%	27%	45%	27%	0%	0%	64%
629.261-022	ELECTRONIC-PRODUCTION-LI		3	100%	0%	0%	100%	0%	0%	0%	0%	33%	67%	0%	33%	67%	0%	0%	33%
630.281-018	PUMP SERVICER		6	100%	0%	33%	0%	67%	0%	0%	0%	83%	17%	0%	67%	17%	0%	17%	67%
630.381-010	CONVEYOR-MAINTENANCE M		3	100%	0%	0%	0%	67%	0%	33%	33%	33%	33%	0%	100%	0%	0%	0%	0%
630.384-010	FIXTURE REPAIRER-FABRICA		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%
638.261-030	MACHINE REPAIRER, MAINT		13	100%	0%	46%	23%	15%	8%	8%	15%	31%	54%	8%	77%	8%	8%	0%	62%
638.281-014	MAINTENANCE MECHANIC		436	99%	1%	36%	12%	43%	1%	9%	10%	49%	42%	21%	60%	15%	3%	1%	58%
638.281-034	HYDRAULIC REPAIRER		8	100%	0%	50%	0%	50%	0%	0%	25%	25%	50%	13%	75%	13%	0%	0%	50%

851230 MILLWRIGHTS

TOTALS FOR OES OCCUPATION																		
number																		
21	95%	5%	83%	13%	3%	0%	3%	75%	23%	0%	85%	13%	3%	0%	57%			
638.281-018	MILLWRIGHT	20	95%	5%	65%	25%	5%	0%	0%	5%	50%	45%	0%	70%	25%	5%	0%	12
638.281-022	MILLWRIGHT APPRENTICE	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%

851280 MACHINERY MAINTENANCE WORKERS

TOTALS FOR OES OCCUPATION			number	5	100%	0%	0%	40%	2%	0%	0%	20%	60%	20%	80%	0%	0%	0%	40%
699.687-018 OILER				5	100%	0%	0%	40%	2%	0%	0%	20%	60%	20%	80%	0%	0%	0%	40%

853230 AIRCRAFT MECHANICS

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht	% Black	% Hisp	% Ind,	% Amr	% Asn	AGE	% 18	% 31	% 45+	% 1	% 12	% 13	% 16	% 17+	% UI
TOTALS FOR OES OCCUPATION		632	95%	5%	Non- Hisp	Black	Hisp	Alsk	Ind,	Pac	% 31	% 18	% 31	% 45+	% 1	% 12	% 13	% 16	% 17+	% UI
621.261-022	EXPERIMENTAL AIRCRAFT ME	11	91%	9%	32	392	82	0	32	25	367	240	367	240	63	411	126	25	0	436
621.281-014	AIRFRAME-AND-POWER-PLAN	586	97%	3%	55%	17%	20%	1%	7%	19%	51%	19%	51%	31%	3%	65%	28%	4%	1%	69%
806.384-038	PRESSURE SEALER-AND-TES	17	82%	18%	53%	18%	18%	0%	12%	0%	53%	0%	53%	47%	6%	71%	24%	0%	0%	71%
807.381-014	BONDED STRUCTURES REPAI	14	50%	50%	79%	7%	7%	0%	7%	0%	50%	0%	50%	50%	7%	86%	7%	0%	0%	57%
807.684-018	AIRCRAFT SKIN BURNISHER	4	100%	0%	50%	50%	0%	0%	0%	0%	75%	0%	75%	25%	25%	50%	25%	0%	0%	75%
853260 AIRCRAFT ENGINE SPECIALISTS																				
TOTALS FOR OES OCCUPATION		586	97%	3%	55%	17%	20%	1%	7%	19%	51%	19%	51%	31%	3%	65%	28%	4%	1%	69%
621.281-014	AIRFRAME-AND-POWER-PLAN	586	97%	3%	55%	17%	20%	1%	7%	19%	51%	19%	51%	31%	3%	65%	28%	4%	1%	69%
855140 RADIO MECHANICS																				
TOTALS FOR OES OCCUPATION		93	89%	11%	32%	24%	33%	4%	7%	34%	43%	34%	43%	24%	23%	49%	13%	15%	1%	47%
726.381-014	ELECTRONIC EQUIPMENT RE	80	88%	13%	25%	24%	41%	9%	9%	31%	45%	31%	45%	24%	11%	51%	28%	8%	3%	44%
823.261-018	RADIO MECHANIC	4	100%	0%	50%	25%	25%	0%	0%	25%	50%	25%	50%	25%	25%	50%	0%	25%	0%	75%
823.281-014	ELECTRICIAN, RADIO	9	100%	0%	22%	22%	33%	11%	11%	44%	33%	44%	33%	22%	33%	44%	11%	11%	0%	33%
857170 ELECTRONICS REPAIRERS, COMMERCIAL AND INDUSTRIAL EQUIPMENT																				
TOTALS FOR OES OCCUPATION		913	94%	6%	35%	29%	27%	2%	7%	39%	41%	39%	41%	20%	5%	57%	31%	5%	2%	57%
726.684-090	REWORKER, PRINTED CIRCUI	2	50%	50%	0%	50%	50%	0%	0%	50%	50%	50%	50%	0%	0%	100%	0%	0%	0%	50%
823.261-026	AVIONICS TECHNICIAN	80	90%	10%	65%	13%	13%	1%	9%	28%	46%	28%	46%	26%	4%	50%	36%	9%	1%	69%
828.251-010	ELECTRONIC-SALES-AND-SE	25	88%	12%	46%	25%	17%	8%	8%	38%	42%	38%	42%	21%	8%	36%	48%	4%	4%	40%
828.261-014	FIELD SERVICE ENGINEER	24	96%	4%	38%	42%	13%	0%	8%	21%	46%	21%	46%	33%	4%	38%	42%	13%	4%	79%
828.261-022	ELECTRONICS MECHANIC	751	95%	5%	37%	25%	27%	2%	10%	29%	46%	29%	46%	25%	4%	52%	36%	7%	1%	56%
828.261-026	ELECTRONICS-MECHANIC AP	31	94%	6%	23%	23%	45%	3%	6%	68%	19%	68%	19%	13%	13%	65%	23%	0%	0%	55%
857280 ELECTRICAL INSTALLERS AND REPAIRERS, TRANSPORTATION EQUIPMENT																				
TOTALS FOR OES OCCUPATION		151	75%	25%	41%	28%	26%	1%	4%	36%	37%	36%	37%	27%	3%	66%	25%	7%	0%	74%
825.261-018	ELECTRICIAN, AIRCRAFT	125	70%	30%	66%	14%	15%	2%	2%	10%	46%	10%	46%	45%	9%	67%	22%	2%	0%	112
825.381-010	AIRCRAFT MECHANIC, ELECT	22	95%	5%	32%	45%	14%	0%	9%	23%	41%	23%	41%	36%	0%	55%	27%	18%	0%	75%
828.381-010	EQUIPMENT INSTALLER	4	100%	0%	25%	25%	50%	0%	0%	75%	25%	75%	25%	0%	0%	75%	25%	0%	0%	50%
859020 HEATING, AIR CONDITIONING, AND REFRIGERATION MECHANICS AND INSTALLERS																				
TOTALS FOR OES OCCUPATION		44	98%	2%	68%	5%	25%	0%	4%	25%	43%	25%	43%	32%	7%	80%	10%	2%	0%	41%
825.381-010	EQUIPMENT INSTALLER	4	100%	0%	25%	25%	50%	0%	0%	75%	25%	75%	25%	0%	0%	75%	25%	0%	0%	50%

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht		% Amr			% Asn			AGE			YEARS OF EDUCATION							% UI Cimnt
						Non- Hisp	Black	% Hisp	% Ind, Alsk	% Pac IsInd	% 18 -30	% 31 -44	% 45+	% 1 -11	% 12	% 13	% 14	% 15	% 16	% 17+				
637.261-026	REFRIGERATION MECHANIC		41	98%	2%	35%	10%	50%	0%	8%	18%	53%	30%	15%	61%	20%	5%	0%	39%					
869.281-010	FURNACE INSTALLER-AND-RE		3	100%	0%	100%	0%	0%	0%	0%	33%	33%	33%	0%	100%	0%	0%	0%	67%					
859050 PRECISION INSTRUMENT REPAIRERS																								
TOTALS FOR OES OCCUPATION				23	91%	9%	53%	2%	43%	0%	2%	27%	50%	23%	6%	37%	23%	33%	0%	65%				
					21	2	12	0	10	0	0	6	12	5	1	9	5	8	0	15				
710.261-010	INSTRUMENT REPAIRER	number	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%					
710.281-026	INSTRUMENT MECHANIC		7	83%	17%	57%	14%	14%	0%	14%	29%	57%	14%	29%	57%	14%	0%	0%	71%					
710.381-054	REPAIRER, GYROSCOPE		1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%					
711.281-014	INSTRUMENT MECHANIC, WE		1	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%					
729.281-026	ELECTRICAL-INSTRUMENT RE		12	92%	8%	58%	0%	42%	0%	0%	33%	42%	25%	8%	67%	25%	0%	0%	58%					
823.281-018	METEOROLOGICAL-EQUIPME		1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%					
859350 RIGGERS																								
TOTALS FOR OES OCCUPATION				12	100%	0%	50%	42%	0%	0%	8%	8%	50%	42%	25%	67%	8%	0%	0%	83%				
					12	0	6	5	0	0	1	6	5	3	8	1	0	0	0	10				
921.260-010	RIGGER	number	12	100%	0%	50%	42%	0%	0%	8%	8%	50%	42%	25%	67%	8%	0%	0%	83%					
859990 ALL OTHER MECHANICS, INSTALLERS, AND REPAIRERS																								
TOTALS FOR OES OCCUPATION				57	96%	4%	56%	21%	17%	0%	6%	33%	32%	35%	23%	59%	16%	2%	1%	53%				
					55	2	32	12	10	0	3	19	18	20	13	34	9	1	1	30				
632.281-010	GUNSMITH	number	7	100%	0%	29%	14%	43%	0%	14%	57%	29%	14%	29%	57%	14%	0%	0%	86%					
638.261-022	PINSETTER MECHANIC, AUTO		2	100%	0%	0%	50%	0%	0%	50%	50%	50%	0%	0%	100%	0%	0%	0%	0%					
638.281-026	PARTS SALVAGER		3	100%	0%	33%	33%	33%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	33%					
638.381-010	FUEL-SYSTEM-MAINTENANCE		5	100%	0%	100%	0%	0%	0%	0%	40%	40%	20%	0%	80%	0%	20%	0%	40%					
709.384-010	FIRE-EXTINGUISHER REPAIR		4	100%	0%	25%	75%	0%	0%	0%	25%	25%	50%	0%	75%	25%	0%	0%	50%					
732.684-122	SPORTS-EQUIPMENT REPAIR		1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%					
739.484-014	FIRE-EQUIPMENT INSPECTOR		1	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%					
809.684-034	REPAIRER, FINISHED METAL		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%					
891.684-018	SWIMMING-POOL SERVICER		24	96%	4%	46%	17%	33%	0%	4%	42%	42%	17%	29%	63%	4%	4%	0%	42%					
899.261-010	DIVER		7	100%	0%	43%	57%	0%	0%	0%	86%	0%	14%	14%	29%	43%	0%	14%	71%					
899.684-042	WINDOW REPAIRER		1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%					
977.684-010	BOOK REPAIRER		1	0%	100%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%					
subtotal-mechanics, installers, and repairers				3,018	2,855	163	1,410	671	717	34	185	694	1,380	951	275	1,839	732	134	35	1,882				
				%	100%	5%	47%	22%	24%	1%	6%	23%	46%	31%	9%	61%	24%	4%	1%	62%				

Precision Production Occupations

891020	TOOL AND DIE MAKERS																			
TOTALS FOR OES OCCUPATION		139	96%	4%	39%	10%	40%	1%	11%	10%	58%	33%	17%	63%	19%	1%	0%	61%		

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht Non- Hisp	% Black	% Hisp	% Amr Ind, Alsk	% Asn Pac Isind	% 18 -30	% 31 -44	% 45+ -11	% 12 -15	% 16 -17	% 17+	% UI Cimnt
		number														
601.260-010	TOOL-AND-DIE MAKER	41	100%	0%	37%	12%	39%	2%	10%	2%	41%	56%	24%	51%	24%	0%
601.260-014	TOOL-AND-DIE-MAKER APPRE	2	50%	50%	50%	0%	0%	0%	50%	0%	100%	0%	100%	0%	0%	0%
601.280-010	DIE MAKER, STAMPING	3	100%	0%	0%	0%	100%	0%	0%	33%	67%	0%	0%	33%	0%	67%
601.280-022	DIE SINKER	2	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	50%	0%	100%
601.280-030	MOLD MAKER, DIE-CASTING A	32	94%	6%	31%	6%	56%	0%	6%	16%	38%	47%	25%	47%	6%	72%
601.280-042	TOOL MAKER	45	98%	2%	58%	7%	22%	4%	9%	4%	27%	69%	16%	58%	2%	64%
601.281-010	DIE MAKER, BENCH, STAMPIN	5	100%	0%	20%	0%	80%	0%	0%	20%	40%	20%	80%	0%	0%	80%
601.281-026	TOOL MAKER, BENCH	3	100%	0%	33%	33%	0%	0%	33%	0%	67%	33%	0%	33%	0%	33%
601.381-026	PLASTIC TOOL MAKER	5	80%	20%	60%	40%	0%	0%	0%	20%	0%	80%	0%	0%	0%	80%
601.381-030	PLASTIC-FIXTURE BUILDER	1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%
891050 PRECISION INSTRUMENT MAKERS																
TOTALS FOR OES OCCUPATION																
600.280-010	INSTRUMENT MAKER	5	100%	0%	40%	40%	0%	0%	20%	20%	20%	60%	40%	40%	20%	0%
600.280-018	INSTRUMENT-MAKER APPRE	1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%
891080 MACHINISTS																
TOTALS FOR OES OCCUPATION																
600.280-022	MACHINIST, EXPERIMENTAL	9	100%	0%	67%	11%	11%	11%	0%	11%	11%	78%	0%	56%	33%	0%
600.280-022	MACHINIST	986	97%	3%	30%	16%	47%	1%	7%	13%	46%	41%	22%	63%	13%	2%
600.280-026	MACHINIST APPRENTICE	52	100%	0%	23%	13%	52%	2%	10%	48%	35%	17%	25%	60%	13%	2%
600.280-042	MAINTENANCE MACHINIST	74	97%	3%	32%	14%	41%	1%	14%	19%	40%	41%	23%	59%	15%	3%
891110 TOOL GRINDERS, FILERS, SHARPENERS, AND OTHER PRECISION GRINDERS																
TOTALS FOR OES OCCUPATION																
603.280-010	GRINDER OPERATOR, EXTER	5	80%	20%	40%	20%	20%	0%	20%	20%	40%	40%	40%	40%	0%	20%
603.280-014	GRINDER OPERATOR, SURFA	5	100%	0%	20%	20%	40%	0%	20%	20%	40%	40%	40%	40%	0%	60%
603.280-018	GRINDER OPERATOR, TOOL	5	80%	20%	0%	20%	80%	0%	0%	0%	60%	40%	60%	0%	0%	40%
603.280-022	GRINDER SET-UP OPERATOR,	3	100%	0%	0%	0%	67%	0%	33%	33%	33%	67%	33%	33%	0%	100%
603.280-030	GRINDER SET-UP OPERATOR,	3	100%	0%	33%	0%	33%	0%	33%	0%	100%	33%	33%	33%	0%	33%
603.280-038	TOOL-GRINDER OPERATOR	25	92%	8%	42%	8%	46%	4%	4%	4%	38%	58%	28%	48%	4%	60%
701.381-018	TOOL GRINDER I	3	100%	0%	33%	33%	33%	0%	0%	0%	0%	100%	0%	67%	33%	33%
891170 PRECISION LAYOUT WORKERS, METAL																
TOTALS FOR OES OCCUPATION																
600.280-010	GRINDER OPERATOR, EXTER	5	80%	20%	33%	0%	67%	0%	0%	17%	33%	50%	17%	67%	17%	0%
600.280-018	GRINDER OPERATOR, SURFA	5	80%	20%	0%	20%	80%	0%	0%	0%	60%	40%	60%	0%	0%	100%

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht			% Amr			% Asn	AGE			YEARS OF EDUCATION						% UI	
						Non- Hisp	Black	Hisp	% Ind, Alsk	% Pac	% 18 -30		% 31 -44	% 45+	% 1 -11	% 12 -15	% 16	% 17+					
891320 SHEET METAL WORKERS																							
TOTALS FOR OES OCCUPATION				439	97%	3%	32%	21%	45%	0%	2%	16%	64%	20%	21%	71%	6%	1%	0%	57%			
number					426	13	140	92	198	0	9	70	281	88	92	312	26	4	0	250			
804.281-010	SHEET-METAL WORKER		434	97%	3%	25%	23%	49%	1%	3%	11%	49%	40%	23%	62%	12%	3%	0%	57%				
804.281-014	SHEET-METAL-WORKER APP		5	100%	0%	40%	20%	40%	0%	0%	20%	80%	0%	20%	80%	0%	0%	0%	40%				
891990 ALL OTHER PRECISION METAL WORKERS																							
TOTALS FOR OES OCCUPATION				9	89%	11%	50%	0%	50%	0%	0%	8%	42%	50%	33%	50%	17%	0%	0%	78%			
number					8	1	5	0	5	0	0	1	4	5	3	5	2	0	7				
619.361-010	FORMER, HAND		3	100%	0%	33%	0%	67%	0%	0%	0%	67%	33%	33%	33%	33%	0%	0%	100%				
704.381-014	CHEMICAL-ETCHING PROCES		6	83%	17%	67%	0%	33%	0%	0%	17%	17%	67%	33%	67%	0%	0%	0%	67%				
899990 ALL OTHER PRECISION WORKERS																							
TOTALS FOR OES OCCUPATION				22	55%	45%	32%	27%	41%	0%	0%	5%	41%	55%	27%	55%	18%	0%	0%	86%			
number					12	10	7	6	9	0	0	1	9	12	6	12	4	0	19				
754.381-018	PLASTICS FABRICATOR		22	55%	45%	32%	27%	41%	0%	0%	5%	41%	55%	27%	55%	18%	0%	0%	86%				
subtotal-precision production occupations				1,790	1,722	68	647	266	722	47	122	351	768	673	331	1,110	280	65	0	1,013			
%				100%	96%	4%	36%	15%	40%	3%	7%	20%	43%	38%	18%	62%	16%	4%	0%	57%			
Machine Setters, Set-Up Operators, Operators, and Tenders																							
911020 SAWING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC																							
TOTALS FOR OES OCCUPATION				11	100%	0%	13%	63%	33%	0%	0%	25%	46%	29%	32%	68%	0%	0%	0%	36%			
number					11	0	1	7	4	0	0	3	5	3	4	7	0	0	4				
607.382-014	SAW OPERATOR		7	100%	0%	0%	100%	17%	0%	0%	0%	67%	33%	14%	86%	0%	0%	0%	43%				
607.682-010	CUT-OFF-SAW OPERATOR, M		4	100%	0%	25%	25%	50%	0%	0%	50%	25%	25%	50%	50%	0%	0%	0%	25%				
911050 LATHE AND TURNING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC																							
TOTALS FOR OES OCCUPATION				60	88%	12%	27%	3%	61%	1%	8%	6%	49%	45%	42%	45%	13%	0%	0%	58%			
number					53	7	16	2	37	1	5	4	29	27	25	27	8	0	35				
604.280-010	ENGINE-LATHE SET-UP OPER		5	100%	0%	40%	0%	60%	0%	0%	0%	80%	20%	20%	60%	20%	0%	0%	80%				
604.280-014	SCREW-MACHINE SET-UP OP		11	73%	27%	9%	27%	64%	0%	0%	9%	55%	36%	45%	45%	9%	0%	0%	64%				
604.280-018	SCREW-MACHINE SET-UP OP		8	88%	13%	25%	0%	75%	0%	0%	0%	38%	63%	63%	38%	0%	0%	0%	25%				
604.280-022	TURRET-LATHE SET-UP OPER		4	100%	0%	25%	0%	75%	0%	0%	0%	25%	75%	75%	75%	25%	0%	0%	75%				
604.380-010	CHUCKING-MACHINE SET-UP		2	100%	0%	0%	0%	50%	0%	0%	50%	100%	0%	50%	50%	0%	0%	0%	100%				
604.380-018	ENGINE-LATHE SET-UP OPER		11	100%	0%	0%	0%	82%	9%	9%	9%	36%	55%	55%	36%	9%	0%	0%	45%				

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male			% Fe- male			% Wht			% Amr			% Asn			AGE			YEARS OF EDUCATION					% UI																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
				%	Male	%	Black	Hisp	%	Ind,	Pac	%	Non-Hisp	%	Black	Hisp	%	Ind,	Pac	%	18-30	%	31-44	%	45+	%		1-11	%	12	%	13-15	%	16	%	17+	%	Cmnt																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
				6	83%	17%	33%	0%	67%	0%	0%	0%	83%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%

911080 DRILLING AND BORING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC

TOTALS FOR OES OCCUPATION		23	100%	0%	43%	20%	37%	0%	8%	2%	24%	74%	17%	53%	31%	0%	0%	70%
			23	0	10	5	9	0	2	0	6	17	4	12	7	0	0	16
number																		
606.280-010	BORING-MACHINE SET-UP OP	2	100%	0%	100%	0%	0%	0%	0%	0%	50%	50%	0%	0%	100%	0%	0%	100%
606.280-014	BORING-MILL SET-UP OPERA	4	100%	0%	50%	0%	50%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	75%
606.380-010	DRILL-PRESS SET-UP OPERA	8	100%	0%	0%	38%	63%	0%	0%	13%	38%	50%	50%	50%	0%	0%	0%	63%
606.380-014	DRILL-PRESS SET-UP OPERA	4	100%	0%	25%	0%	75%	0%	0%	0%	25%	75%	50%	50%	0%	0%	0%	50%
606.382-022	BORING-MACHINE OPERATO	2	100%	0%	50%	50%	0%	0%	0%	0%	0%	100%	0%	50%	50%	0%	0%	100%
606.682-018	DRILL-PRESS SET-UP OPERA	3	100%	0%	33%	33%	33%	0%	0%	0%	33%	67%	0%	67%	33%	0%	0%	67%

911110 MILLING AND PLANING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC

TOTALS FOR OES OCCUPATION																								
		number	61	98%	2%	19%	19%	54%	0%	8%	11%	25%	64%	40%	46%	14%	0%	0%	0%	0%	0%	67%	67%	
				60	1	12	12	33	0	5	7	15	39	24	28	9	0	0	0	0	0	41	41	
605.280-010	MILLING-MACHINE SET-UP OP	37	97%	3%	30%	16%	49%	0%	0%	5%	3%	38%	59%	33%	58%	8%	0%	0%	0%	0%	0%	62%	62%	
605.280-014	PROFILING-MACHINE SET-UP	4	100%	0%	25%	50%	25%	0%	0%	0%	0%	0%	100%	25%	25%	50%	0%	0%	0%	0%	0%	75%	75%	
605.282-010	MILLING-MACHINE SET-UP OP	8	100%	0%	13%	0%	75%	0%	0%	13%	0%	38%	63%	50%	38%	13%	0%	0%	0%	0%	0%	88%	88%	
605.282-018	PLANER-TYPE-MILLING-MACH	7	100%	0%	14%	14%	43%	0%	0%	29%	14%	43%	43%	14%	71%	14%	0%	0%	0%	0%	0%	43%	43%	
605.382-034	ROUTER OPERATOR	3	100%	0%	33%	33%	33%	0%	0%	0%	0%	33%	67%	67%	33%	0%	0%	0%	0%	0%	0%	100%	100%	
605.382-038	SHAPER SET-UP OPERATOR.	2	100%	0%	0%	0%	100%	0%	0%	0%	50%	0%	50%	50%	50%	0%	0%	0%	0%	0%	0%	100%	100%	

911140 GRINDING, LAPPING, AND BUFFING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC

TOTALS FOR OES OCCUPATION		99	96%	4%	20%	3%	67%	0%	10%	2%	59%	40%	53%	40%	7%	0%	0%	0%	0%	0%	58%
	number																				
603.260-010	GRINDER SET-UP OPERATOR,	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	40%	40%	0%	0%	0%	0%	0%	57%
603.360-010	BUFFING-LINE SET-UP WORK	1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
603.380-010	GRINDER MACHINE SETTER	42	95%	5%	33%	10%	50%	0%	7%	2%	48%	50%	45%	43%	10%	2%	0%	0%	0%	57%	
603.382-010	BUFFING-MACHINE OPERATO	2	100%	0%	0%	0%	100%	0%	0%	0%	50%	50%	50%	50%	0%	0%	0%	0%	0%	100%	
603.382-014	GRINDER SET-UP OPERATOR,	10	100%	0%	30%	0%	70%	0%	0%	0%	10%	90%	40%	60%	0%	0%	0%	0%	0%	50%	
603.382-018	HONING-MACHINE SET-UP OP	7	100%	0%	29%	0%	57%	0%	14%	0%	43%	57%	71%	29%	0%	0%	0%	0%	0%	43%	
603.382-026	LAPPING-MACHINE SET-UP O	2	100%	0%	0%	0%	100%	0%	0%	0%	50%	50%	50%	50%	0%	0%	0%	0%	0%	50%	
603.382-034	GRINDER SET-UP OPERATOR	9	78%	22%	0%	11%	89%	0%	0%	0%	56%	44%	56%	22%	22%	0%	0%	0%	0%	56%	
603.382-038	KNIFE GRINDER	1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	
603.482-034	HONING-MACHINE OPERATO	2	100%	0%	50%	0%	50%	0%	0%	0%	100%	0%	50%	0%	50%	0%	0%	0%	0%	50%	
603.682-026	POLISHING-MACHINE OPERA	21	100%	0%	0%	14%	86%	0%	0%	19%	48%	33%	76%	24%	0%	0%	0%	0%	0%	62%	
603.682-030	DRILL-BIT SHARPENER	1	100%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	100%	

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Wht			% Amr			AGE			YEARS OF EDUCATION							% UI
				% Male	% Fe- male	% Non- Hisp	% Black	% Hisp	% Ind, Alsk	% Pac Isld	% 18 - 30	% 31 - 44	% 45+	% 1 - 11	% 12	% 13	% 14	% 15	% 16	
911170 MACHINE TOOL CUTTING OPERATORS AND TENDERS, METAL AND PLASTIC																				
TOTALS FOR OES OCCUPATION				241	91%	9%	27%	13%	56%	0%	3%	20%	39%	41%	41%	55%	3%	1%	0%	53%
					219	22	65	31	135	0	7	48	94	99	99	133	7	2	0	128
603.684-010	TOOL GRINDER II		4	100%	0%	50%	25%	25%	0%	0%	25%	25%	50%	50%	75%	0%	0%	0%	50%	
603.685-010	BUFFING-MACHINE TENDER		1	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	
603.685-062	GRINDING MACHINE TENDER		17	94%	6%	12%	12%	65%	0%	12%	29%	41%	29%	35%	29%	24%	12%	0%	65%	
603.685-070	LAPPING-MACHINE OPERATOR		1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	
604.382-010	SCREW-MACHINE OPERATOR		2	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	
604.382-014	SCREW-MACHINE OPERATOR		1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%	
604.685-026	LATHE TENDER		48	96%	4%	31%	0%	63%	2%	4%	10%	46%	44%	40%	50%	8%	2%	0%	65%	
604.685-034	SCREW-MACHINE TENDER		1	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
605.682-014	BROACHING-MACHINE OPER		1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%	
605.685-030	MILLING-MACHINE TENDER		30	93%	7%	30%	13%	40%	0%	17%	17%	33%	50%	27%	63%	7%	3%	0%	40%	
606.682-014	DRILL-PRESS OPERATOR		58	81%	19%	19%	16%	59%	0%	7%	10%	43%	47%	51%	42%	7%	0%	0%	48%	
606.685-010	BORING-MACHINE OPERATOR		3	100%	0%	33%	0%	67%	0%	0%	0%	33%	67%	33%	67%	0%	0%	0%	0%	
606.685-026	DRILL PRESS TENDER		19	89%	11%	16%	0%	84%	0%	0%	32%	47%	21%	63%	32%	5%	0%	0%	58%	
607.685-010	CUT-OFF SAW TENDER, META		1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%	
699.685-046	PINNER, PRINTED CIRCUIT B		1	0%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	100%	
699.685-054	TRIMMER, PRINTED CIRCUIT		1	0%	100%	0%	100%	0%	0%	0%	25%	25%	50%	25%	75%	0%	0%	0%	75%	
705.684-010	BENCH GRINDER		4	100%	0%	50%	0%	25%	0%	25%	20%	40%	40%	60%	40%	0%	0%	0%	20%	
705.684-014	BUFFER I		5	100%	0%	0%	0%	100%	0%	0%	24%	44%	32%	71%	27%	2%	0%	0%	52%	
705.684-058	POLISHER		42	98%	2%	5%	0%	90%	2%	5%	0%	100%	0%	100%	0%	0%	0%	0%	100%	
705.684-066	POLISHER APPRENTICE		1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%	

913020 PUNCHING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC

TOTALS FOR OES OCCUPATION			84	89%	11%	23%	13%	62%	0%	2%	5%	42%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%
				75	9	19	11	52	0	2	4	35	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
615.382-010	PUNCH-PRESS OPERATOR I		56	89%	11%	13%	11%	71%	2%	4%	7%	36%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%
615.482-014	DUPLICATOR-PUNCH OPERAT		1	0%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
615.482-018	IRONWORKER-MACHINE OPE		2	100%	0%	0%	50%	50%	0%	0%	0%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
615.482-026	PUNCH-PRESS OPERATOR, A		17	88%	12%	0%	6%	88%	0%	6%	6%	76%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%
619.380-014	PUNCH-PRESS SETTER		8	100%	0%	0%	0%	100%	0%	0%	13%	50%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%

913050 PRESS AND PRESS BRAKE MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC

TOTALS FOR OES OCCUPATION			59	92%	8%	8%	14%	77%	0%	1%	6%	65%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%
				54	5	5	8	45	0	1	4	38	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
616.682-026	KICK-PRESS OPERATOR I		1	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
617.260-010	PRESS OPERATOR, HEAVY D		28	96%	4%	18%	29%	54%	0%	0%	21%	43%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
617.360-010	BRAKE OPERATOR I		24	92%	8%	13%	13%	71%	0%	4%	4%	50%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%	46%

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht		% Amr			% Asn	AGE			YEARS OF EDUCATION					% UI		
						Non-Hisp	Black	%	Ind,	%		% 18 -30	% 31 -44	% 45+	% 1 -11	% 12 -15	% 16	% 17+				
617.482-010	BENDING-MACHINE OPERATOR		6	83%	17%	0%	17%	83%	0%	0%	0%	0%	0%	67%	33%	67%	0%	0%	0%	0%	0%	83%
913080 SHEAR AND SLITTER MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC																						
TOTALS FOR OES OCCUPATION				19	95%	5%	69%	8%	24%	0%	0%	2%	82%	16%	14%	49%	35%	0%	2%	0%	53%	
				number																		
615.380-010	SHEAR SETTER		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	
615.662-010	SLITTING-MACHINE OPERATOR		1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	
615.682-018	SHEAR OPERATOR I		17	94%	6%	6%	6%	24%	71%	0%	0%	6%	47%	47%	41%	47%	6%	6%	0%	53%		
913170 FORGING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC																						
TOTALS FOR OES OCCUPATION				4	100%	0%	17%	17%	67%	0%	0%	0%	67%	33%	17%	83%	0%	0%	0%	0%	75%	
				number																		
610.362-010	DROPHAMMER OPERATOR		3	100%	0%	33%	33%	33%	33%	0%	0%	0%	33%	67%	33%	67%	0%	0%	0%	67%		
612.462-010	MULTI-OPERATION-MACHINE		1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%		
913210 MACHINE FORMING OPERATORS AND TENDERS, METAL AND PLASTIC																						
TOTALS FOR OES OCCUPATION				221	84%	16%	9%	7%	77%	1%	6%	2%	57%	41%	52%	42%	6%	0%	0%	53%		
				number																		
613.662-022	STRAIGHTENING-ROLL OPER		4	75%	25%	50%	50%	50%	50%	0%	0%	2%	25%	75%	50%	25%	25%	0%	0%	75%		
614.682-010	DRAW-BENCH OPERATOR		1	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%		
615.682-014	PUNCH+PRESS OPERATOR III		10	80%	20%	0%	0%	90%	90%	10%	0%	0%	60%	40%	100%	0%	0%	0%	0%	80%		
615.685-030	PUNCH+PRESS OPERATOR II		185	83%	17%	9%	9%	77%	77%	2%	3%	11%	48%	41%	63%	34%	3%	1%	0%	49%		
615.685-034	SHEAR OPERATOR II		1	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%		
617.482-026	STRAIGHTENING-PRESS OPE		3	100%	0%	0%	0%	100%	100%	0%	0%	0%	67%	33%	33%	67%	0%	0%	0%	67%		
617.685-010	BENDING-MACHINE OPERATOR		1	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%		
617.685-026	POWER-PRESS TENDER		2	50%	50%	0%	0%	50%	50%	0%	0%	0%	50%	50%	50%	50%	0%	0%	0%	50%		
619.362-014	ROLL OPERATOR I		4	100%	0%	0%	25%	0%	75%	0%	0%	0%	25%	75%	25%	50%	25%	0%	0%	100%		
619.685-026	BRAKE OPERATOR II		9	100%	0%	11%	11%	22%	56%	0%	11%	11%	56%	33%	56%	33%	11%	0%	0%	56%		
619.685-034	DRUM STRAIGHTENER I		1	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%		
915020 NUMERICAL CONTROL MACHINE TOOL OPERATORS																						
TOTALS FOR OES OCCUPATION				307	96%	4%	26%	13%	56%	1%	5%	18%	39%	43%	14%	49%	36%	1%	0%	57%		
				number																		
604.362-010	LATHE OPERATOR, NUMERIC		53	98%	2%	11%	15%	58%	58%	0%	15%	19%	58%	23%	28%	62%	9%	0%	0%	55%		
605.360-010	ROUTER SET-UP OPERATOR,		1	100%	0%	0%	0%	100%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%		
605.380-010	MILLING-MACHINE SET-UP OP		154	95%	5%	30%	12%	51%	51%	0%	8%	19%	49%	31%	24%	61%	12%	3%	0%	55%		
605.382-046	NUMERICAL-CONTROL ROUT		3	100%	0%	0%	33%	67%	67%	0%	0%	0%	67%	33%	33%	100%	0%	0%	0%	67%		
606.362-010	DRILL-PRESS OPERATOR, NU		3	100%	0%	0%	0%	100%	100%	0%	0%	0%	67%	33%	33%	100%	0%	0%	0%	100%		
606.382-014	JIG-BORING MACHINE OPERA		2	100%	0%	0%	50%	50%	50%	0%	0%	0%	50%	50%	50%	50%	0%	0%	0%	100%		
606.382-018	NUMERICAL-CONTROL DRILL		2	100%	0%	0%	100%	0%	0%	0%	0%	0%	50%	50%	50%	100%	0%	0%	0%	0%		

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male			% Wht			% Amr			% Asn			AGE			YEARS OF EDUCATION								% UI
				%	Male	TOTAL	%	Non-Hisp	%	Black	%	Hisp	%	Ind, Alaska	%	Hispanic	%	45+	%	11-12	%	13-15	%	16-17	%	18+	
915050 COMBINATION MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC																											
TOTALS FOR OES OCCUPATION				995	84%	16%	26%	9%	61%	1%	3%	23%	40%	38%	27%	62%	8%	3%	0%	55%							547
number				836	159	259	90	607	10	30	229	398	617	80	30	0	547							547			
600.360-014	MACHINE SETTER		7	100%	0%	0%	14%	86%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	57%							57%	
600.380-018	MACHINE SET-UP OPERATOR		192	94%	6%	18%	9%	62%	1%	11%	19%	49%	32%	34%	51%	2%	0%	58%							58%		
601.280-054	TOOL-MACHINE SET-UP OPER		62	94%	6%	27%	21%	44%	5%	3%	16%	45%	39%	32%	50%	2%	0%	50%							50%		
602.280-010	GEAR-CUTTING-MACHINE SE		2	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%							0%		
602.382-018	GEAR-GENERATOR SET-UP O		2	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%							0%		
616.380-018	MACHINE OPERATOR I		730	80%	20%	10%	10%	75%	1%	4%	22%	51%	27%	51%	43%	1%	0%	54%							54%		
915080 COMBINATION MACHINE TOOL OPERATORS AND TENDERS, METAL AND PLASTIC																											
TOTALS FOR OES OCCUPATION				402	86%	14%	12%	12%	71%	1%	5%	23%	49%	29%	49%	46%	5%	0%	55%							221	
number				346	56	48	48	285	4	20	92	197	185	20	0	0	221							221			
609.685-018	PRODUCTION MACHINE TEND		138	91%	9%	13%	12%	71%	1%	4%	25%	47%	28%	43%	50%	7%	0%	54%							54%		
619.685-062	MACHINE OPERATOR II		264	83%	17%	10%	13%	70%	2%	7%	21%	50%	30%	55%	41%	3%	0%	55%							55%		
919020 PLASTIC MOLDING AND CASTING MACHINE SETTERS AND SET UP OPERATORS																											
TOTALS FOR OES OCCUPATION				20	90%	10%	20%	5%	70%	0%	5%	25%	40%	35%	50%	45%	5%	0%	60%							12	
number				18	2	4	1	14	0	1	5	8	10	9	1	0	12							12			
556.380-010	MOLD SETTER		20	90%	10%	20%	5%	70%	0%	0%	25%	40%	35%	50%	45%	5%	0%	60%							60%		
919210 ELECTROLYTIC PLATING AND COATING MACHINE OPERATORS AND TENDERS, METAL AND PLASTIC																											
TOTALS FOR OES OCCUPATION				10	100%	0%	11%	18%	71%	0%	0%	0%	58%	42%	41%	59%	0%	0%	60%							6	
number				10	0	1	2	7	0	0	0	6	4	4	6	0	6							6			
500.682-010	ANODIZER		3	100%	0%	33%	33%	33%	0%	0%	0%	33%	67%	33%	67%	0%	0%	67%							67%		
500.684-026	PLATER, PRINTED CIRCUIT B		5	100%	0%	0%	20%	80%	0%	0%	0%	40%	60%	40%	60%	0%	0%	60%							60%		
500.684-034	PLATER		2	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	50%	50%	0%	0%	50%							50%		
919320 HEAT TREATING, ANNEALING, AND TEMPERING MACHINE OPERATORS AND TENDERS, METAL AND PLASTIC																											
TOTALS FOR OES OCCUPATION				24	100%	0%	23%	28%	38%	3%	8%	8%	36%	56%	33%	57%	11%	0%	63%							15	
number				24	0	6	7	9	1	2	2	9	13	8	14	3	0	15							15		
504.382-014	HEAT TREATER I		19	100%	0%	26%	37%	16%	5%	16%	16%	32%	53%	5%	74%	21%	0%	58%							58%		
504.682-018	HEAT TREATER II		5	100%	0%	20%	20%	60%	0%	0%	0%	40%	60%	60%	40%	0%	0%	80%							80%		
921970 ALL OTHER METAL AND PLASTIC (CUT,FORM, FABRICATE, OR PROCESS) MACHINE SETTERS AND SET-UP OPERATORS																											
TOTALS FOR OES OCCUPATION				22	82%	18%	26%	15%	59%	0%	0%	28%	23%	49%	41%	56%	3%	0%	64%							64%	

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES DOT CODE	DOT TITLE	number	TOTAL	% Male	% Fe-			% Wht			% Amr			AGE			YEARS OF EDUCATION					% UI
					male	male	male	Non-Hisp	Black	Hisp	% Ind,	Alsk	IsInd	% 18	% 31	% 45+	% 1	% 12	% 13	% 16	% 17+	
553.382-026	METAL-BONDING PRESS OPE	3	3	67%	33%	33%	33%	67%	0%	33%	0%	0%	0%	0%	33%	67%	67%	33%	0%	0%	0%	14
609.380-010	ELECTRICAL-DISCHARGE-MA	1	1	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	67%
616.260-014	MULTI-OPERATION-FORMING-	1	1	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%
616.360-026	MULTI-OPERATION-FORMING-	5	5	100%	0%	0%	0%	0%	20%	80%	0%	0%	0%	80%	20%	0%	50%	50%	0%	0%	0%	0%
616.682-010	ARBOR-PRESS OPERATOR I	1	1	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	40%
699.482-010	RIVETING-MACHINE OPERAT	1	1	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%
726.380-010	ELECTRONIC EQUIPMENT SE	9	9	67%	33%	33%	44%	44%	0%	56%	0%	0%	0%	44%	33%	22%	11%	67%	22%	0%	0%	78%
806.380-010	RIVETING MACHINE OPERAT	1	1	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%

921980 ALL OTHER METAL AND PLASTIC (CUT,FORM, FABRICATE OR PROCESS) MACHINE OPERATORS AND TENDERS

TOTALS FOR OES OCCUPATION	16	94%	6%	23%	18%	18%	59%	0%	0%	13%	60%	28%	51%	33%	16%	0%	0%	0%	0%	0%	0%	44%
503.685-042	SANDBLAST-OR-SHOTBLAST-	4	4	100%	0%	0%	0%	0%	0%	25%	50%	25%	25%	50%	50%	25%	25%	0%	0%	0%	0%	50%
590.685-082	STRIPPER-ETCHER, PRINTED	1	1	100%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%
609.462-010	BALANCING-MACHINE OPERA	1	1	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%
609.482-010	ELECTRICAL-DISCHARGE-MA	1	1	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%
619.685-066	METAL FABRICATOR HELPER	1	1	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%
690.685-154	ELECTRIC-SEALING-MACHINE	1	1	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%
709.684-050	KEY CUTTER	1	1	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%
728.685-010	WIRE PREPARATION MACHIN	1	1	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%
800.662-010	RIVETER, HYDRAULIC	2	2	50%	50%	50%	50%	50%	0%	50%	0%	0%	50%	50%	50%	50%	50%	50%	0%	0%	0%	50%
809.684-018	DRILLER, HAND	3	3	100%	0%	0%	33%	33%	0%	67%	0%	0%	100%	33%	33%	33%	33%	33%	0%	0%	0%	0%

929020 ELECTRONIC SEMICONDUCTOR PROCESSORS

TOTALS FOR OES OCCUPATION	30	77%	23%	12%	23%	23%	40%	1%	24%	3%	76%	21%	2%	59%	18%	19%	1%	47%				
590.362-018	GROUP LEADER, SEMICONDU	1	1	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	14
590.362-022	MICROELECTRONICS TECHN	9	9	78%	22%	33%	22%	22%	22%	11%	44%	44%	0%	44%	44%	11%	0%	78%				
590.684-014	ELECTRONIC-COMPONENT P	13	13	69%	31%	23%	15%	31%	23%	8%	62%	31%	15%	46%	31%	0%	8%	38%				
590.684-022	SEMICONDUCTOR PROCESS	4	4	100%	0%	0%	25%	25%	25%	0%	25%	75%	0%	25%	50%	25%	0%	0%	0%	0%	0%	0%
590.684-042	INTEGRATED CIRCUIT FABRIC	1	1	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
590.685-078	ETCHER	1	1	0%	100%	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
920.587-026	MARKER, SEMICONDUCTOR	1	1	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%

929470 PAINTERS, TRANSPORTATION EQUIPMENT

TOTALS FOR OES OCCUPATION	96	97%	3%	21%	5%	74%	0%	1%	18%	45%	37%	60%	36%	3%	0%	1%	57%				
845.381-010	PAINTER APPRENTICE, TRAN	8	8	100%	0%	13%	0%	88%	0%	25%	38%	38%	75%	25%	0%	0%	25%				
845.381-014	PAINTER, TRANSPORTATION	88	88	97%	3%	29%	10%	60%	2%	10%	53%	37%	45%	47%	7%	1%	60%				

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht Non- Hisp	% Black	% Hisp	% Amr Ind, Pac IsInd	% 18 - 30	AGE % 31 - 44	% 45+	% 1 - 11	% 12	% 13	% 16	% 17+	% UI Climt
929510 COATING, PAINTING, AND SPRAYING MACHINE SETTERS AND SET-UP OPERATORS																		
TOTALS FOR OES OCCUPATION																		
	599.382-010	PAINT-SPRAYER OPERATOR, number	9	89%	11%	22%	11%	67%	0%	0%	11%	56%	33%	67%	11%	22%	0%	56%
				8	1	2	1	6	0	0	1	5	3	6	1	2	0	5
			9	89%	11%	22%	11%	67%	0%	0%	11%	56%	33%	67%	11%	22%	0%	56%
929530 COATING, PAINTING, AND SPRAYING MACHINE OPERATORS AND TENDERS																		
TOTALS FOR OES OCCUPATION																		
	599.685-074	PAINTING-MACHINE OPERAT number	16	88%	13%	14%	19%	75%	0%	0%	19%	42%	39%	67%	20%	13%	0%	44%
				14	2	2	3	12	0	0	3	7	6	11	3	2	0	7
	741.685-010	SPRAY-PAINTING-MACHINE O	9	89%	11%	11%	22%	67%	0%	0%	22%	33%	44%	78%	11%	11%	0%	22%
			7	86%	14%	17%	17%	83%	0%	0%	17%	50%	33%	57%	29%	14%	0%	71%
929580 CLEANING, WASHING, AND PICKLING EQUIPMENT OPERATORS AND TENDERS																		
TOTALS FOR OES OCCUPATION																		
	503.685-030	METAL-CLEANER, IMMERSION number	3	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	67%	33%	0%	0%	0%
				3	0	0	0	3	0	0	0	0	3	2	1	0	0	0
			3	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	67%	33%	0%	0%	0%
929650 CRUSHING, GRINDING, MIXING, AND BLENDING MACHINE OPERATORS AND TENDERS																		
TOTALS FOR OES OCCUPATION																		
	550.382-022	MIXING-MACHINE OPERATOR number	25	96%	4%	10%	10%	80%	0%	0%	31%	47%	22%	51%	47%	2%	0%	72%
				24	1	3	3	20	0	0	8	12	6	13	12	1	0	18
	550.485-018	PAINT MIXER, MACHINE	2	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%
	550.685-062	GLUE MIXER	11	91%	9%	9%	9%	82%	0%	0%	9%	55%	36%	27%	73%	0%	0%	73%
	599.685-058	MILL OPERATOR	1	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%
	599.685-110	TUMBLER OPERATOR	7	100%	0%	0%	0%	100%	0%	0%	29%	29%	43%	29%	57%	14%	0%	86%
	673.685-094	POLISHING MACHINE TENDER	2	100%	0%	50%	0%	50%	0%	0%	0%	50%	50%	0%	100%	0%	0%	50%
			2	100%	0%	50%	0%	50%	0%	0%	50%	50%	0%	50%	50%	0%	0%	100%
929740 PACKAGING AND FILLING MACHINE OPERATORS																		
TOTALS FOR OES OCCUPATION																		
	920.685-010	BALING-MACHINE TENDER number	188	43%	57%	19%	6%	73%	0%	2%	26%	40%	34%	40%	59%	0%	1%	51%
				81	107	36	11	137	0	4	49	75	64	75	111	0	2	96
	920.685-074	PACKAGE SEALER, MACHINE	6	67%	33%	33%	0%	67%	0%	0%	33%	17%	50%	33%	67%	0%	0%	33%
	920.685-078	PACKAGER, MACHINE	7	14%	86%	14%	14%	71%	0%	0%	14%	57%	29%	29%	71%	0%	0%	43%
			175	43%	57%	10%	4%	82%	0%	5%	30%	45%	25%	58%	39%	1%	2%	52%
929970 ALL OTHER MACHINE SETTERS AND SET-UP OPERATORS																		
TOTALS FOR OES OCCUPATION																		
	809.382-010	BALANCING-MACHINE SET-UP number	1	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%
				1	0	0	1	0	0	0	0	1	0	1	0	0	0	0
			1	100%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%
929980 ALL OTHER MACHINE OPERATORS AND TENDERS																		

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES DOT CODE	DOT TITLE	TOTAL	% Male		% Fe- male	% Wht		% Black		% Hisp	% Amr		% Asn		AGE			YEARS OF EDUCATION							% UI Cimnt		
			%	Male	%	Non- Hisp	%	Black	%	Hisp	%	Ind, Alsk	%	Pac Isld	%	18 -30	%	31 -44	%	45+ -66	%	1 -11	%	12		%	13 -15
TOTALS FOR OES OCCUPATION			55	71%	29%	35%	5%	57%	3%	0%	6%	66%	28%	67%	22%	1%	10%	0%	53%								
number			39	16	19	3	31	2	0	3	36	15	37	12	1	6	0	29									
554.685-034	PHOTORESIST LAMINATOR, P	1	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%									
583.685-082	PLEATING-MACHINE OPERAT	3	67%	33%	0%	0%	0%	100%	0%	0%	0%	67%	33%	100%	0%	0%	0%	100%									
599.685-122	WATER TENDER	1	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	100%									
641.685-022	CARTON-FORMING-MACHINE	1	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%									
690.685-014	ASSEMBLY-PRESS OPERATO	21	43%	57%	15%	20%	70%	0%	0%	10%	65%	25%	52%	48%	0%	0%	29%										
699.685-018	EYELET-MACHINE OPERATOR	1	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	100%										
726.685-014	INSERTION MACHINE TENDER	3	67%	33%	33%	0%	67%	0%	0%	33%	67%	0%	67%	33%	0%	0%	67%										
726.685-062	PROGRAMMING EQUIPMENT	1	100%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%										
781.685-010	SPREADER, MACHINE	20	90%	10%	5%	0%	95%	0%	0%	20%	60%	20%	80%	10%	10%	0%	70%										
950.685-010	AIR-COMPRESSOR OPERATO	3	100%	0%	0%	0%	33%	33%	33%	0%	100%	0%	67%	33%	0%	0%	0%										
subtotal-machine setters, operators, tenders			3,101	2,645	456	674	323	1,967	23	124	550	1,379	1,186	1,144	1,614	291	50	2	1,713								
%			100%	85%	15%	22%	10%	63%	1%	4%	18%	44%	38%	37%	52%	9%	2%	0%	55%								

Hand Working Occupations, Including Assemblers and Fabricators

931020 AIRCRAFT STRUCTURE, SURFACES, RIGGING, AND SYSTEM ASSEMBLERS-PRECISION																			
TOTALS FOR OES OCCUPATION			525	87%	13%	39%	25%	30%	1%	5%	12%	50%	38%	29%	54%	14%	2%	0%	74%
	number		457	68	205	131	158	5	26	63	263	200	152	284	74	11	0	389	
693.261-014	DEVELOPMENT MECHANIC	34	85%	15%	56%	12%	24%	0%	9%	24%	41%	35%	6%	71%	12%	9%	3%	71%	
806.361-014	ASSEMBLER-INSTALLER, GEN	77	73%	27%	29%	21%	43%	1%	6%	9%	51%	40%	26%	55%	17%	3%	0%	61%	
806.361-030	AIRCRAFT MECHANIC, ARMA	15	67%	33%	40%	20%	27%	0%	13%	13%	47%	40%	13%	67%	13%	7%	0%	60%	
806.381-014	AIRCRAFT MECHANIC, ENVIR	5	100%	0%	0%	40%	40%	0%	20%	40%	60%	0%	0%	100%	0%	0%	0%	100%	
806.381-018	AIRCRAFT MECHANIC, RIGGIN	25	88%	12%	40%	36%	20%	4%	0%	20%	56%	24%	20%	48%	32%	0%	0%	80%	
806.381-026	ASSEMBLER, AIRCRAFT, STR	288	90%	10%	62%	18%	16%	2%	2%	7%	51%	43%	12%	72%	14%	2%	0%	78%	
806.381-034	ASSEMBLER, TUBING	6	83%	17%	100%	0%	0%	0%	0%	0%	67%	33%	33%	33%	33%	0%	0%	67%	
806.381-042	CABLE ASSEMBLER AND SWA	2	0%	100%	0%	0%	100%	0%	0%	0%	50%	50%	100%	0%	0%	0%	0%	100%	
806.381-066	AIRCRAFT MECHANIC, PLUMB	60	97%	3%	52%	15%	30%	0%	3%	22%	58%	20%	13%	67%	18%	2%	0%	75%	
806.381-082	PRECISION ASSEMBLER	12	92%	8%	50%	8%	33%	8%	0%	0%	67%	33%	0%	83%	17%	0%	0%	75%	
809.261-010	ASSEMBLER, GROUND SUPP	1	0%	100%	0%	100%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%

931050 MACHINE BUILDERS AND OTHER PRECISION MACHINE ASSEMBLERS

TOTALS FOR OES OCCUPATION																	
58	83%	17%	33%	28%	28%	0%	12%	11%	56%	33%	9%	64%	24%	2%	2%	79%	
number																	
	48	10	19	16	16	0	7	6	32	19	5	37	14	1	1	46	
806.381-022 ASSEMBLER, AIRCRAFT POW																	
58	83%	17%	33%	28%	28%	0%	12%	11%	56%	33%	9%	64%	24%	2%	2%	79%	

931110 ELECTROMECHANICAL EQUIPMENT ASSEMBLERS-PRECISION

TOTALS FOR OES OCCUPATION																		
107	75%	25%	35%	21%	29%	3%	14%	16%	52%	32%	9%	61%	24%	4%	2%	48%		
number	80	27	37	22	31	3	15	17	56	34	10	65	26	4	2	51		

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Male	% Fe- male	% Wht			% Amr			AGE			YEARS OF EDUCATION							% UI Cimnt
						% Non- Hisp	% Black	% Hisp	% Ind, Alsk	% Pac IsInd	% 18 -30	% 31 -44	% 45+	% 1 -11	% 12	% 13 -15	% 16	% 17+				
931140 ELECTRICAL AND ELECTRONIC EQUIPMENT ASSEMBLERS-PRECISION																						
TOTALS FOR OES OCCUPATION				1	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
729.381-022 WIRER, CABLE				1	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
931970 ALL OTHER PRECISION ASSEMBLERS																						
TOTALS FOR OES OCCUPATION				50	88%	12%	37%	24%	36%	0%	4%	12%	55%	33%	12%	74%	8%	7%	0%	0%	46%	
806.381-078 INSTALLER, INTERIOR ASSEM				23	91%	9%	48%	22%	30%	0%	0%	13%	57%	30%	13%	70%	4%	13%	0%	23%		
809.381-010 FABRICATOR-ASSEMBLER, M				27	85%	15%	27%	27%	42%	0%	8%	12%	54%	35%	11%	78%	11%	0%	0%	57%		
939050 ELECTRICAL AND ELECTRONIC ASSEMBLERS																						
TOTALS FOR OES OCCUPATION				1,191	47%	53%	16%	19%	51%	1%	13%	25%	41%	35%	27%	60%	12%	2%	0%	52%		
726.364-018 ELECTRONICS UTILITY WORK				9	560	631	191	226	607	12	155	298	488	417	322	715	143	24	0	619		
726.684-018 ELECTRONICS ASSEMBLER				1056	46%	54%	14%	16%	52%	2%	16%	22%	45%	33%	33%	22%	44%	0%	0%	67%		
726.684-034 ASSEMBLER, SEMICONDUCT				11	27%	73%	18%	9%	55%	0%	18%	27%	27%	45%	33%	31%	54%	11%	3%	51%		
726.684-070 PRINTED CIRCUIT BOARD AS				15	53%	47%	20%	7%	47%	7%	20%	27%	40%	33%	33%	53%	7%	7%	0%	36%		
726.684-086 PRINTED CIRCUIT BOARD AS				5	100%	0%	0%	20%	60%	0%	20%	40%	40%	20%	20%	80%	0%	0%	0%	60%		
729.384-026 ELECTRICAL ASSEMBLER				76	46%	54%	32%	28%	29%	1%	11%	7%	51%	42%	17%	67%	14%	1%	0%	64%		
729.684-026 ELECTRICAL-CONTROL ASSE				19	42%	58%	26%	32%	37%	0%	5%	16%	47%	37%	26%	68%	5%	0%	0%	58%		
939140 WELDERS AND CUTTERS																						
TOTALS FOR OES OCCUPATION				2	100%	0%	0%	0%	100%	0%	0%	50%	0%	50%	0%	100%	0%	0%	0%	50%	1	
709.684-086 TORCH-STRAIGHTENER-AND				2	100%	0%	0%	0%	100%	0%	0%	50%	0%	50%	0%	100%	0%	0%	0%	50%		
939530 GRINDING AND POLISHING WORKERS, HAND																						
TOTALS FOR OES OCCUPATION				60	98%	2%	11%	16%	72%	0%	1%	10%	32%	58%	63%	35%	2%	0%	0%	48%		
519.684-018 MOLD DRESSER				3	100%	0%	33%	33%	33%	0%	0%	0%	33%	67%	33%	67%	0%	0%	0%	29%		
705.484-014 FINAL FINISHER, FORGING D				3	100%	0%	0%	33%	67%	0%	0%	0%	0%	100%	33%	67%	0%	0%	0%	67%		
705.684-026 GRINDER I				15	93%	7%	7%	7%	80%	0%	7%	27%	33%	40%	73%	20%	7%	0%	0%	100%		
705.684-030 GRINDER-CHIPPER I				2	100%	0%	0%	0%	100%	0%	0%	0%	50%	50%	100%	0%	0%	0%	0%	40%		
705.684-034 METAL FINISHER				19	100%	0%	11%	22%	72%	0%	0%	6%	44%	50%	47%	53%	0%	0%	0%	0%		
705.684-062 POLISHER AND BUFFER II				7	100%	0%	29%	14%	57%	0%	0%	29%	57%	14%	67%	33%	0%	0%	0%	86%		

CHARACTERISTICS OF LOS ANGELES COUNTY RESIDENTS IN AEROSPACE OCCUPATIONS SERVED BY EDD IN FISCAL YEAR 1994-95

OES	DOT CODE	DOT TITLE	TOTAL	% Wht			% Amr			% Asn			AGE			YEARS OF EDUCATION							% UI
				% Male	% Fe- male	% Non- Hisp	% Black	% Hisp	% Ind,	% Alsk	% Pac	% 18 - 30	% 31 - 44	% 45+	% 1 - 11	% 12	% 13	% 14	% 15	% 16	% 17+	% CImnt	
705.687-014	LABORER, GRINDING AND PO		10	100%	0%	10%	20%	70%	0%	0%	0%	20%	40%	40%	50%	40%	10%	0%	0%	0%	30%		
809.684-026	GRINDER-CHIPPER II		1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	100%	100%		
939560 ASSEMBLERS AND FABRICATORS- EXCEPT MACHINE, ELECTRICAL, ELECTRONIC AND PRECISION																							
TOTALS FOR OES OCCUPATION				1,677	40%	60%	24%	8%	64%	1%	4%	27%	32%	41%	41%	49%	9%	2%	0%	40%	40%		
706.684-018	ASSEMBLER, PRODUCT	number	160	49%	51%	16%	134	1,073	17	67	453	537	688	688	822	151	34	0	671	40%			
706.684-022	ASSEMBLER, SMALL PRODUC		276	30%	70%	10%	8%	77%	1%	4%	25%	43%	30%	47%	46%	6%	1%	1%	41%	38%			
706.684-054	FITTER II		2	100%	0%	50%	0%	50%	0%	0%	50%	0%	50%	0%	100%	0%	0%	0%	100%	100%			
706.687-010	ASSEMBLER, PRODUCTION		936	37%	63%	10%	10%	72%	1%	7%	28%	44%	28%	54%	42%	3%	1%	0%	38%	100%			
710.684-046	INSTRUMENT ASSEMBLER		1	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%			
712.687-010	ASSEMBLER, PLASTIC HOSPI		5	20%	80%	0%	0%	100%	0%	0%	20%	20%	60%	60%	40%	0%	0%	0%	80%	80%			
725.384-010	TUBE ASSEMBLER, ELECTRO		1	0%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%			
725.684-022	TUBE ASSEMBLER, CATHODE		2	100%	0%	0%	0%	100%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	100%	100%			
726.684-042	DIE ATTACHER		3	0%	100%	33%	0%	67%	0%	0%	0%	67%	33%	67%	33%	0%	0%	0%	67%	67%			
726.687-026	LAMINATION ASSEMBLER, PRI		1	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%			
739.687-030	ASSEMBLER, SMALL PRODUC		164	30%	70%	14%	10%	69%	2%	8%	26%	46%	28%	61%	33%	2%	4%	0%	40%	40%			
754.684-042	PLASTICS WORKER		46	76%	24%	48%	26%	20%	2%	4%	13%	43%	43%	7%	85%	9%	0%	0%	67%	67%			
762.684-050	NAILER, HAND		1	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%			
780.684-062	FABRICATOR, FOAM RUBBER		16	44%	56%	6%	6%	75%	0%	13%	38%	38%	25%	44%	56%	0%	0%	25%	25%	25%			
794.684-014	BOX MAKER, PAPERBOARD		6	83%	17%	0%	0%	83%	0%	17%	83%	0%	17%	17%	67%	17%	0%	33%	33%	33%			
795.687-014	GLUER		4	25%	75%	0%	0%	100%	0%	0%	25%	50%	25%	100%	0%	0%	0%	75%	75%	75%			
806.384-030	ASSEMBLER, METAL BONDIN		6	50%	50%	33%	33%	33%	0%	0%	0%	17%	83%	17%	83%	0%	0%	50%	50%	50%			
806.384-034	ASSEMBLER, SUBASSEMBLY		41	93%	7%	27%	34%	34%	2%	2%	22%	54%	24%	22%	63%	7%	0%	56%	56%	56%			
979.684-042	PRINTING SCREEN ASSEMBL		6	100%	0%	0%	17%	67%	0%	17%	50%	0%	50%	17%	50%	17%	17%	0%	33%	33%			
subtotal-hand working occupations				3,671	1,922	1,749	879	552	1,950	37	273	851	1,422	1,410	1,221	1,982	412	77	3	1,829	1,829		
				%	100%	52%	48%	24%	15%	53%	1%	7%	23%	39%	38%	54%	11%	2%	0%	50%	50%		
SUBTOTAL-PRODUCTION & OPERATIONS				13,044	10,200	2,844	4,184	2,004	5,969	149	783	2,576	5,569	4,928	3,234	7,304	2,031	428	65	7,314	7,314		
				%	100%	78%	22%	32%	15%	46%	1%	6%	20%	43%	38%	25%	56%	16%	3%	1%	56%	56%	
TOTAL AEROSPACE JOB SEEKERS				16,616	13,162	3,454	6,212	2,477	6,523	186	1,249	2,999	6,926	6,720	3,309	8,231	2,939	1,657	498	9,422	9,422		
% OF JOB SEEKERS				100%	79%	21%	37%	15%	39%	1%	8%	18%	42%	40%	20%	50%	18%	10%	3%	57%	57%		

Data Source: Employment Development Department (EDD) Labor Market Information Division.

Scope: Data is from EDD's B-96 files, representing 100% of job applicants visiting EDD offices for employment services.

Methodology: (1) EDD's OES survey of aerospace industries in Los Angeles County was used to identify aerospace occupations; (2) occupations which are not specific to aerospace

(e.g. clerical, administrative support, data processing, construction, sales, and service occupations) were deleted; and (3) DOT occupations found within the remaining aerospace-specific OES codes were included in this data set provided the industry designation for the DOT code included aerospace industries and data for the DOT was found in the B-96 data set.

Appendix D4

Employment Development Department Job Openings Received for Aerospace Jobs in Los Angeles County: 1994-95

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT Lower Range Upper Range
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MANAGERIAL AND ADMINISTRATIVE OCCUPATIONS

130170 ENGINEERING, MATHEMATICAL AND NATURAL SCIENCE MANAGERS

TOTALS FOR OES OCCUPATION			21		
	012.167-058	SAFETY MANAGER	3	\$14.42	\$12.01 \$14.42
	019.167-014	PROJECT ENGINEER	10	\$20.43	\$18.81 \$28.84
	029.167-014	PROJECT MANAGER, ENVIRONMENTAL RE	1	\$21.63	\$21.63 \$21.63
	169.167-030	MANAGER, DATA PROCESSING	1	\$14.42	\$14.42 \$14.42
	169.167-082	MANAGER, COMPUTER OPERATIONS	1	\$20.72	\$20.72 \$20.72
	189.117-014	DIRECTOR, RESEARCH AND DEVELOPME	5	\$16.83	\$16.82 \$20.91

150140 INDUSTRIAL PRODUCTION MANAGERS

TOTALS FOR OES OCCUPATION			44		
	183.117-010	MANAGER, BRANCH	11	\$11.53	\$8.65 \$20.00
	183.117-014	PRODUCTION SUPERINTENDENT	29	\$11.53	\$8.92 \$14.71
	183.167-018	GENERAL SUPERVISOR	3	\$12.98	\$6.00 \$15.35
	189.167-046	SUPERINTENDENT, MAINTENANCE	1	\$20.00	\$20.00 \$20.00

SUBTOTAL-MANAGERS AND ADMINISTRATORS			65	\$13.98	
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PROFESSIONAL, PARAPROFESSIONAL AND TECHNICAL OCCUPATIONS

Engineers and Related Occupations

221050 METALLURGISTS AND METALLURGICAL, CERAMIC

TOTALS FOR OES OCCUPATION			2		
	011.061-026	WELDING ENGINEER	2	\$14.00	\$14.00 \$14.00

221140 CHEMICAL ENGINEERS

TOTALS FOR OES OCCUPATION			1		
	008.061-018	CHEMICAL ENGINEER	1	\$14.42	\$14.42 \$14.42

221210 CIVIL ENGINEERS, INCLUDING TRAFFIC

TOTALS FOR OES OCCUPATION			22		
	005.061-014	CIVIL ENGINEER	12	\$19.00	\$14.56 \$23.61
	005.061-026	RAILROAD ENGINEER	10	\$14.42	\$14.42 \$14.42

221270 COMPUTER ENGINEERS

TOTALS FOR OES OCCUPATION			44		
	030.062-010	SOFTWARE ENGINEER	35	\$21.63	\$19.23 \$24.03
	033.167-010	COMPUTER SYSTEMS HARDWARE ANALY	9	\$15.00	\$12.50 \$24.27

221280 INDUSTRIAL ENGINEERS, EXCEPT SAFETY

TOTALS FOR OES OCCUPATION			87		
	012.067-010	METROLOGIST	2	\$17.00	\$16.00 \$18.00
	012.167-010	CONFIGURATION MANAGEMENT ANALYS	2	\$30.00	\$25.00 \$35.00
	012.167-014	MANAGER, QUALITY CONTROL	12	\$14.71	\$12.01 \$19.32
	012.167-030	INDUSTRIAL ENGINEER	24	\$18.26	\$18.26 \$18.26
	012.167-042	MANUFACTURING ENGINEER	13	\$16.82	\$13.18 \$18.89
	012.167-046	PRODUCTION ENGINEER	1	\$25.00	\$25.00 \$25.00
	012.167-050	PRODUCTION PLANNER	21	\$14.42	\$10.26 \$16.82
	012.167-054	QUALITY CONTROL ENGINEER	6	\$13.21	\$11.91 \$16.82

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
	012.167-074	TOOL PLANNER	1	\$24.03	\$24.03	\$24.03
	012.167-078	DOCUMENTATION ENGINEER	1	\$16.82	\$16.82	\$16.82
	012.167-082	MATERIAL SCHEDULER	4	\$13.50	\$10.50	\$15.00
221320 SAFETY ENGINEERS, EXCEPT MINING						
TOTALS FOR OES OCCUPATION			3			
	012.061-014	SAFETY ENGINEER	3	\$19.23	\$14.42	\$24.03
221350 MECHANICAL ENGINEERS						
TOTALS FOR OES OCCUPATION			61			
	007.061-014	MECHANICAL ENGINEER	40	\$21.15	\$16.82	\$24.03
	007.061-018	MECHANICAL-DESIGN ENGINEER, FACILIT	1	\$0.00	\$0.00	\$0.00
	007.061-022	MECHANICAL-DESIGN ENGINEER, PRODU	4	\$18.65	\$16.94	\$23.75
	007.061-026	TOOL DESIGNER	8	\$14.62	\$11.25	\$17.10
	007.061-038	APPLICATIONS ENGINEER, MANUFACTURI	5	\$28.84	\$23.07	\$31.25
	007.061-042	STRESS ANALYST	1	\$10.00	\$10.00	\$10.00
	007.161-034	TEST ENGINEER, MECHANICAL EQUIPME	2	\$14.81	\$8.00	\$21.63
221990 ALL OTHER ENGINEERS						
TOTALS FOR OES OCCUPATION			6			
	019.167-010	LOGISTICS ENGINEER	1	\$19.23	\$19.23	\$19.23
	019.187-010	PACKAGING ENGINEER	5	\$14.00	\$14.00	\$14.89
225020 CIVIL ENGINEERING TECHNICIANS AND TECHNOLOGISTS						
TOTALS FOR OES OCCUPATION			3			
	005.261-014	CIVIL ENGINEERING TECHNICIAN	3	\$6.00	\$6.00	\$16.93
225050 ELECTRICAL AND ELECTRONIC ENGINEERING TECHNICIANS AND TECHNOLOGISTS						
TOTALS FOR OES OCCUPATION			18			
	003.261-010	INSTRUMENTATION TECHNICIAN	1	\$10.00	\$10.00	\$10.00
	019.281-010	CALIBRATION LABORATORY TECHNICIAN	9	\$10.00	\$8.00	\$15.00
	726.261-010	ELECTRONICS ASSEMBLER, DEVELOPME	8	\$6.50	\$4.44	\$7.75
225080 INDUSTRIAL ENGINEERING TECHNICIANS AND TECHNOLOGISTS						
TOTALS FOR OES OCCUPATION			26			
	012.261-014	QUALITY CONTROL TECHNICIAN	26	\$9.00	\$8.00	\$12.00
225110 MECHANICAL ENGINEERING TECHNICIANS AND TECHNOLOGISTS						
TOTALS FOR OES OCCUPATION			9			
	007.161-026	MECHANICAL-ENGINEERING TECHNICIAN	9	\$16.00	\$14.21	\$18.11
225140 DRAFTERS						
TOTALS FOR OES OCCUPATION			176			
	003.261-022	PRINTED CIRCUIT DESIGNER	1	\$19.00	\$19.00	\$19.00
	003.281-010	DRAFTER, ELECTRICAL	6	\$12.25	\$10.00	\$14.75
	003.281-014	DRAFTER, ELECTRONIC	34	\$12.00	\$8.00	\$19.25
	005.281-010	DRAFTER, CIVIL	4	\$16.00	\$13.01	\$16.00
	005.281-014	DRAFTER, STRUCTURAL	1	\$8.00	\$8.00	\$8.00
	007.161-018	ENGINEERING ASSISTANT, MECHANICAL	39	\$25.00	\$25.00	\$25.00
	007.261-022	DRAFTER, TOOL DESIGN	2	\$6.50	\$6.00	\$7.00
	007.281-010	DRAFTER, MECHANICAL	43	\$12.00	\$9.61	\$15.00
	014.281-010	DRAFTER, MARINE	2	\$19.00	\$18.00	\$20.00

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
	017.261-014	DESIGN DRAFTER, ELECTROMECHANISM	27	\$28.00	\$19.00	\$28.00
	017.261-026	DRAFTER, COMMERCIAL	2	\$8.75	\$6.50	\$11.00
	017.261-030	DRAFTER, DETAIL	3	\$10.00	\$7.50	\$15.00
	017.261-034	DRAFTER, HEATING AND VENTILATING	2	\$9.50	\$9.00	\$10.00
	017.281-014	DRAFTER APPRENTICE	6	\$12.00	\$7.75	\$12.75
	017.281-018	DRAFTER, ASSISTANT	2	\$6.00	\$5.00	\$7.00
	017.281-034	TECHNICAL ILLUSTRATOR	2	\$7.00	\$7.00	\$7.00

225990 ALL OTHER ENGINEERING AND RELATED TECHNICIANS AND TECHNOLOGISTS

TOTALS FOR OES OCCUPATION			26			
	003.362-010	DESIGN TECHNICIAN, COMPUTER-AIDED	6	\$13.50	\$9.75	\$17.36
	011.261-010	METALLURGICAL TECHNICIAN	1	\$12.50	\$12.50	\$12.50
	011.261-014	WELDING TECHNICIAN	3	\$9.00	\$9.00	\$13.00
	011.261-018	NONDESTRUCTIVE TESTER	9	\$8.00	\$7.00	\$10.50
	011.361-010	TESTER	2	\$12.00	\$12.00	\$12.00
	019.161-014	TEST TECHNICIAN	5	\$10.10	\$9.75	\$16.50

subtotal-engineers and related occupations

484 \$16.43

Natural Scientists and Related Workers

241050 CHEMISTS, EXCEPT BIOCHEMISTS

TOTALS FOR OES OCCUPATION			16			
	022.061-010	CHEMIST	15	\$11.06	\$11.00	\$18.00
	022.137-010	LABORATORY SUPERVISOR	1	\$10.00	\$10.00	\$10.00

241990 ALL OTHER PHYSICAL SCIENTISTS

TOTALS FOR OES OCCUPATION			5			
	029.081-010	ENVIRONMENTAL ANALYST	5	\$13.06	\$10.75	\$22.11

245050 CHEMICAL TECHNICIANS AND TECHNOLOGISTS

TOTALS FOR OES OCCUPATION			13			
	022.261-010	CHEMICAL LABORATORY TECHNICIAN	7	\$9.00	\$7.00	\$10.00
	029.261-010	LABORATORY TESTER	5	\$10.73	\$9.00	\$11.37
	029.361-014	FOOD TESTER	1	\$8.00	\$8.00	\$8.00

245990 ALL OTHER PHYSICAL AND LIFE SCIENCE TECHNICIANS AND TECHNOLOGISTS

TOTALS FOR OES OCCUPATION			14			
	012.261-010	AIR ANALYST	2	\$17.00	\$16.00	\$18.00
	029.261-014	POLLUTION-CONTROL TECHNICIAN	9	\$14.39	\$10.00	\$16.37
	199.364-014	SCIENTIFIC HELPER	3	\$5.00	\$5.00	\$13.00

subtotal-natural scientists and related workers

48 \$11.34

Computer, Mathematical, Operations Research, and Related Occupations

251020 SYSTEMS ANALYSTS, ELECTRONIC DATA PROCESSING

TOTALS FOR OES OCCUPATION			82			
	030.162-014	PROGRAMMER-ANALYST	42	\$18.02	\$16.82	\$30.00
	030.162-022	SYSTEMS PROGRAMMER	4	\$17.53	\$14.43	\$19.50
	030.167-014	SYSTEMS ANALYST	31	\$19.23	\$16.82	\$25.00
	033.262-010	QUALITY ASSURANCE ANALYST	5	\$7.00	\$7.00	\$15.00

251110 PROGRAMMERS- NUMERICAL, TOOL, AND PROCESS CONTROL

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
TOTALS FOR OES OCCUPATION			22			
	007.167-018	TOOL PROGRAMMER, NUMERICAL CONTR	9	\$13.00	\$11.00	\$13.50
	609.262-010	TOOL PROGRAMMER, NUMERICAL CONTR	13	\$13.00	\$10.00	\$15.00

251990 ALL OTHER COMPUTER SCIENTISTS

TOTALS FOR OES OCCUPATION			33			
	031.262-010	DATA COMMUNICATIONS ANALYST	3	\$18.94	\$16.22	\$21.00
	031.262-014	NETWORK CONTROL OPERATOR	12	\$11.26	\$7.25	\$12.10
	033.162-018	TECHNICAL SUPPORT SPECIALIST	18	\$15.20	\$10.00	\$18.26

253120 STATISTICIANS

TOTALS FOR OES OCCUPATION			1			
	020.067-022	STATISTICIAN, MATHEMATICAL	1	\$17.26	\$17.26	\$17.26

subtotal-computer, mathematical, systems

138 \$16.14

SUBTOTAL-PROFESSIONAL, TECHNICAL

670 \$16.01

PRODUCTION, OPERATING, MAINTENANCE, AND MATERIAL HANDLING OCCUPATIONS

First Line Supervisors/Managers-Production and Maintenance

810020 FIRST LINE SUPERVISORS AND MANAGER/SUPERVISORS-REPAIR

TOTALS FOR OES OCCUPATION			16			
	638.131-022	MAINTENANCE-MECHANIC SUPERVISOR	9	\$4.25	\$4.25	\$9.80
	638.131-030	MILLWRIGHT SUPERVISOR	1	\$10.00	\$10.00	\$10.00
	891.137-010	MAINTENANCE SUPERVISOR	6	\$13.26	\$8.75	\$16.94

810080 FIRST LINE SUPERVISORS AND MANAGER/SUPERVISORS-PRODUCTION

TOTALS FOR OES OCCUPATION			116			
	529.137-014	SANITARIAN	1	\$6.50	\$6.50	\$6.50
	590.130-010	SUPERVISOR, ELECTRONICS PROCESSIN	1	\$6.00	\$6.00	\$6.00
	600.130-010	MACHINE-SHOP SUPERVISOR, TOOL	1	\$15.00	\$15.00	\$15.00
	601.130-010	TOOL-AND-DIE SUPERVISOR	1	\$10.00	\$10.00	\$10.00
	609.130-010	MACHINE-SHOP SUPERVISOR, PRODUCTI	5	\$14.42	\$10.80	\$15.91
	609.131-010	INSPECTION SUPERVISOR	4	\$11.04	\$7.02	\$14.25
	619.130-030	SUPERVISOR, LINE	6	\$10.00	\$10.00	\$16.82
	619.130-034	SUPERVISOR, MACHINE SETTER	3	\$15.00	\$7.00	\$15.00
	699.130-010	PRODUCTION SUPERVISOR	21	\$10.00	\$8.00	\$12.50
	726.130-010	SUPERVISOR, ELECTRONICS PRODUCTIO	7	\$8.00	\$8.00	\$14.00
	726.134-010	SUPERVISOR, PRINTED CIRCUIT BOARD A	1	\$8.00	\$8.00	\$8.00
	739.137-010	ASSEMBLY SUPERVISOR	1	\$12.00	\$12.00	\$12.00
	781.134-010	SUPERVISOR, CUTTING DEPARTMENT	1	\$8.00	\$8.00	\$8.00
	787.132-010	SEWING SUPERVISOR	6	\$6.50	\$6.00	\$15.00
	806.131-042	SUPERVISOR, PRODUCTION DEPARTMEN	1	\$10.00	\$10.00	\$10.00
	809.130-014	SUPERVISOR, METAL FABRICATING	6	\$12.01	\$10.88	\$15.00
	899.133-010	SUPERVISOR, LABOR GANG	5	\$10.86	\$8.50	\$11.00
	920.132-010	PACKAGING SUPERVISOR	3	\$5.50	\$5.50	\$10.00
	929.137-022	WAREHOUSE SUPERVISOR	41	\$8.00	\$6.75	\$10.00
	979.131-018	SUPERVISOR, SILK-SCREEN CUTTING AN	1	\$10.00	\$10.00	\$10.00

subtotal-first line supervisors/managers

132 \$9.17

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
830020 PRECISION INSPECTORS, TESTERS, AND GRADERS						
TOTALS FOR OES OCCUPATION			158			
	600.281-014	LAY-OUT INSPECTOR	2	\$9.64	\$9.29	\$10.00
	601.281-018	INSPECTOR, GAUGE AND INSTRUMENT	3	\$8.31	\$8.31	\$13.00
	601.281-022	INSPECTOR, TOOL	4	\$10.50	\$8.87	\$11.00
	609.361-010	INSPECTOR, FLOOR	9	\$9.00	\$7.34	\$12.00
	619.261-010	INSPECTOR, METAL FABRICATING	19	\$8.00	\$8.00	\$10.00
	710.381-034	CALIBRATOR	4	\$14.00	\$10.75	\$15.27
	726.261-018	ELECTRONICS TESTER	33	\$10.00	\$6.00	\$13.00
	726.381-010	ELECTRONICS INSPECTOR	51	\$5.50	\$4.50	\$8.00
	726.682-018	COORDINATE MEASURING EQUIPMENT O	1	\$10.00	\$10.00	\$10.00
	729.281-046	X-RAY-EQUIPMENT TESTER	9	\$9.00	\$7.50	\$9.00
	729.361-010	INSPECTOR, ELECTROMECHANICAL	6	\$11.00	\$7.50	\$12.00
	729.381-010	ELECTRICAL-EQUIPMENT TESTER	1	\$5.75	\$5.75	\$5.75
	806.261-030	INSPECTOR, ASSEMBLIES AND INSTALLA	4	\$11.24	\$9.55	\$12.00
	806.261-046	INSPECTOR, PLASTICS AND COMPOSITES	4	\$8.00	\$6.25	\$9.00
	806.281-026	INSPECTOR, PRECISION ASSEMBLY	1	\$14.00	\$14.00	\$14.00
	806.361-022	INSPECTOR, FABRICATION	5	\$11.00	\$8.00	\$11.00
	825.381-026	ELECTRICAL INSPECTOR	2	\$9.50	\$9.00	\$10.00

830050 PRODUCTION INSPECTORS, TESTERS, GRADERS, SORTERS, SAMPLERS, AND WEIGHERS

TOTALS FOR OES OCCUPATION			128			
	222.384-010	INSPECTOR, RECEIVING	2	\$10.00	\$10.00	\$10.00
	609.684-010	INSPECTOR, GENERAL	43	\$6.50	\$6.00	\$8.00
	703.687-014	METAL-FINISH INSPECTOR	2	\$5.25	\$5.25	\$5.25
	709.364-010	INSPECTOR, MAGNETIC PARTICLE AND P	1	\$16.00	\$16.00	\$16.00
	726.684-022	ELECTRONICS INSPECTOR	14	\$7.00	\$5.75	\$8.12
	726.684-026	ELECTRONICS TESTER	20	\$10.00	\$5.62	\$10.00
	726.684-062	INSPECTOR, PRINTED CIRCUIT BOARDS	1	\$7.00	\$7.00	\$7.00
	726.684-078	PRINTED CIRCUIT BOARD COMPONENT T	7	\$10.00	\$10.00	\$10.00
	789.587-014	INSPECTOR, FABRIC	4	\$4.25	\$4.25	\$5.56
	789.687-070	GARMENT INSPECTOR	28	\$4.25	\$4.25	\$4.50
	862.687-018	HYDRO-PNEUMATIC TESTER	2	\$8.00	\$8.00	\$8.00
	929.687-062	WEIGHER, PRODUCTION	4	\$5.00	\$5.00	\$6.50

subtotal-Inspectors **286** **\$7.64**

Mechanics, Installers and Repairers

851190 ALL OTHER MACHINERY MAINTENANCE MECHANICS

TOTALS FOR OES OCCUPATION			351			
	630.281-018	PUMP SERVICER	2	\$7.50	\$7.00	\$8.00
	638.261-030	MACHINE REPAIRER, MAINTENANCE	72	\$10.00	\$10.00	\$10.00
	638.281-014	MAINTENANCE MECHANIC	274	\$10.00	\$8.00	\$12.54
	638.281-034	HYDRAULIC REPAIRER	3	\$8.81	\$7.00	\$8.81

851230 MILLWRIGHTS

TOTALS FOR OES OCCUPATION			19			
	638.281-018	MILLWRIGHT	19	\$12.00	\$10.00	\$15.00

853230 AIRCRAFT MECHANICS

TOTALS FOR OES OCCUPATION			202			
	621.281-014	AIRFRAME-AND-POWER-PLANT MECHANI	200	\$8.00	\$8.00	\$8.00

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
	806.384-038	PRESSURE SEALER-AND-TESTER	1	\$15.57	\$15.57	\$15.57
	807.684-018	AIRCRAFT SKIN BURNISHER	1	\$5.50	\$5.50	\$5.50
855140 RADIO MECHANICS						
	TOTALS FOR OES OCCUPATION		18			
	726.381-014	ELECTRONIC EQUIPMENT REPAIRER	6	\$9.28	\$7.12	\$11.68
	823.261-018	RADIO MECHANIC	3	\$9.00	\$8.50	\$9.00
	823.281-014	ELECTRICIAN, RADIO	9	\$12.25	\$9.75	\$17.00
857170 ELECTRONICS REPAIRERS, COMMERCIAL AND INDUSTRIAL EQUIPMENT						
	TOTALS FOR OES OCCUPATION		33			
	823.261-026	AVIONICS TECHNICIAN	10	\$13.00	\$11.87	\$15.00
	828.251-010	ELECTRONIC-SALES-AND-SERVICE TECH	7	\$7.00	\$5.00	\$9.61
	828.261-014	FIELD SERVICE ENGINEER	16	\$9.50	\$8.40	\$13.75
857280 ELECTRICAL INSTALLERS AND REPAIRERS, TRANSPORTATION EQUIPMENT						
	TOTALS FOR OES OCCUPATION		11			
	825.261-018	ELECTRICIAN, AIRCRAFT	9	\$10.48	\$8.53	\$16.00
	825.381-010	AIRCRAFT MECHANIC, ELECTRICAL AND	2	\$16.00	\$16.00	\$16.00
859020 HEATING, AIR CONDITIONING, AND REFRIGERATION MECHANICS AND INSTALLERS						
	TOTALS FOR OES OCCUPATION		15			
	637.261-026	REFRIGERATION MECHANIC	12	\$10.00	\$10.00	\$12.00
	637.261-030	SOLAR-ENERGY-SYSTEM INSTALLER	2	\$7.00	\$6.00	\$8.00
	869.281-010	FURNACE INSTALLER-AND-REPAIRER, HO	1	\$8.50	\$8.50	\$8.50
859050 PRECISION INSTRUMENT REPAIRERS						
	TOTALS FOR OES OCCUPATION		2			
	729.281-026	ELECTRICAL-INSTRUMENT REPAIRER	2	\$8.50	\$7.00	\$10.00
859350 RIGGERS						
	TOTALS FOR OES OCCUPATION		1			
	921.260-010	RIGGER	1	\$14.26	\$14.26	\$14.26
859990 ALL OTHER MECHANICS, INSTALLERS, AND REPAIRERS						
	TOTALS FOR OES OCCUPATION		18			
	638.261-022	PINSETTER MECHANIC, AUTOMATIC	2	\$6.00	\$6.00	\$6.00
	638.281-026	PARTS SALVAGER	3	\$5.00	\$5.00	\$6.00
	638.381-010	FUEL-SYSTEM-MAINTENANCE WORKER	2	\$7.62	\$7.25	\$8.00
	739.484-014	FIRE-EQUIPMENT INSPECTOR	1	\$10.00	\$10.00	\$10.00
	739.684-030	BUFFING-AND-POLISHING-WHEEL REPAIR	2	\$5.00	\$5.00	\$5.00
	891.684-018	SWIMMING-POOL SERVICER	8	\$6.96	\$6.00	\$8.00
subtotal-mechanics, installers and repairers			670	\$9.39		

Precision Production Occupations

891020 TOOL AND DIE MAKERS						
	TOTALS FOR OES OCCUPATION		59			
	601.260-010	TOOL-AND-DIE MAKER	28	\$14.50	\$11.25	\$15.00
	601.280-014	DIE MAKER, TRIM	1	\$12.00	\$12.00	\$12.00
	601.280-030	MOLD MAKER, DIE-CASTING AND PLASTIC	5	\$13.50	\$9.50	\$17.37
	601.280-042	TOOL MAKER	16	\$10.00	\$9.17	\$13.50

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
	601.281-010	DIE MAKER, BENCH, STAMPING	8	\$14.00	\$14.00	\$17.00
	601.381-026	PLASTIC TOOL MAKER	1	\$8.17	\$8.17	\$8.17
891050 PRECISION INSTRUMENT MAKERS						
TOTALS FOR OES OCCUPATION			3			
	600.280-010	INSTRUMENT MAKER	3	\$10.00	\$8.75	\$13.50
891080 MACHINISTS						
TOTALS FOR OES OCCUPATION			414			
	600.260-022	MACHINIST, EXPERIMENTAL	4	\$12.00	\$9.00	\$12.37
	600.280-022	MACHINIST	386	\$9.20	\$7.50	\$12.00
	600.280-026	MACHINIST APPRENTICE	20	\$5.00	\$5.00	\$6.00
	600.280-042	MAINTENANCE MACHINIST	4	\$10.00	\$8.31	\$12.44
891110 TOOL GRINDERS, FILERS, SHARPENERS, AND OTHER PRECISION GRINDERS						
TOTALS FOR OES OCCUPATION			33			
	603.280-010	GRINDER OPERATOR, EXTERNAL, TOOL	5	\$9.00	\$5.62	\$9.00
	603.280-014	GRINDER OPERATOR, SURFACE, TOOL	2	\$9.87	\$8.00	\$11.75
	603.280-018	GRINDER OPERATOR, TOOL	3	\$12.00	\$8.00	\$12.00
	603.280-022	GRINDER SET-UP OPERATOR, INTERNAL	3	\$10.50	\$10.50	\$10.50
	603.280-030	GRINDER SET-UP OPERATOR, UNIVERSA	3	\$14.00	\$14.00	\$15.00
	603.280-038	TOOL-GRINDER OPERATOR	16	\$7.50	\$5.00	\$9.27
	701.381-018	TOOL GRINDER I	1	\$6.00	\$6.00	\$6.00
891170 PRECISION LAYOUT WORKERS, METAL						
TOTALS FOR OES OCCUPATION			4			
	809.281-010	LAY-OUT WORKER I	4	\$10.96	\$8.74	\$10.96
891320 SHEET METAL WORKERS						
TOTALS FOR OES OCCUPATION			205			
	804.281-010	SHEET-METAL WORKER	202	\$9.00	\$7.00	\$11.00
	804.281-014	SHEET-METAL-WORKER APPRENTICE	3	\$8.00	\$5.00	\$8.00
891990 ALL OTHER PRECISION METAL WORKERS						
TOTALS FOR OES OCCUPATION			2			
	704.381-014	CHEMICAL-ETCHING PROCESSOR	2	\$6.00	\$6.00	\$6.00
899990 ALL OTHER PRECISION WORKERS						
TOTALS FOR OES OCCUPATION			2			
	754.381-018	PLASTICS FABRICATOR	2	\$8.00	\$8.00	\$8.00
subtotal-precision production occupations			722	\$9.35		
Machine Setters, Set-Up Operators, Operators, and Tenders						
911020 SAWING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC						
TOTALS FOR OES OCCUPATION			6			
	607.382-014	SAW OPERATOR	1	\$7.00	\$7.00	\$7.00
	607.682-010	CUT-OFF-SAW OPERATOR, METAL	5	\$6.50	\$6.00	\$7.00
911050 LATHE AND TURNING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC						
TOTALS FOR OES OCCUPATION			57			
	604.280-010	ENGINE-LATHE SET-UP OPERATOR, TOOL	4	\$7.00	\$7.00	\$8.12

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
	604.280-014	SCREW-MACHINE SET-UP OPERATOR, MU	6	\$7.50	\$5.00	\$8.50
	604.380-010	CHUCKING-MACHINE SET-UP OPERATOR,	1	\$8.00	\$8.00	\$8.00
	604.380-018	ENGINE-LATHE SET-UP OPERATOR	11	\$9.50	\$8.50	\$9.50
	604.380-022	SCREW-MACHINE SET-UP OPERATOR	20	\$8.00	\$8.00	\$10.52
	604.380-026	TURRET-LATHE SET-UP OPERATOR	4	\$9.25	\$5.87	\$12.25
	604.682-014	THREADING-MACHINE OPERATOR	5	\$5.00	\$5.00	\$6.50
	609.380-014	THREADING-MACHINE SETTER	1	\$12.00	\$12.00	\$12.00
	619.362-018	SPINNER, HAND	3	\$6.00	\$6.00	\$7.00
	619.362-022	SPINNER, HYDRAULIC	2	\$7.00	\$7.00	\$7.00

911080 DRILLING AND BORING MACHINE TOOL SETTERS

TOTALS FOR OES OCCUPATION			17			
	606.280-010	BORING-MACHINE SET-UP OPERATOR, JI	3	\$11.00	\$11.00	\$11.00
	606.280-014	BORING-MILL SET-UP OPERATOR, HORIZ	6	\$8.00	\$7.25	\$13.00
	606.380-014	DRILL-PRESS SET-UP OPERATOR, RADIAL	1	\$9.00	\$9.00	\$9.00
	606.382-022	BORING-MACHINE OPERATOR	3	\$7.50	\$7.50	\$9.00
	606.682-018	DRILL-PRESS SET-UP OPERATOR, SINGLE	4	\$7.00	\$7.00	\$7.00

911110 MILLING AND PLANING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC

TOTALS FOR OES OCCUPATION			38			
	605.280-010	MILLING-MACHINE SET-UP OPERATOR I	31	\$8.00	\$8.00	\$10.00
	605.280-014	PROFILING-MACHINE SET-UP OPERATOR	1	\$7.50	\$7.50	\$7.50
	605.282-010	MILLING-MACHINE SET-UP OPERATOR II	5	\$10.00	\$5.37	\$11.00
	605.382-042	THREAD-MILLING-MACHINE SET-UP OPER	1	\$14.45	\$14.45	\$14.45

911140 GRINDING, LAPPING, AND BUFFING MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLAS

TOTALS FOR OES OCCUPATION			36			
	603.280-026	GRINDER SET-UP OPERATOR, JIG	1	\$13.00	\$13.00	\$13.00
	603.360-010	BUFFING-LINE SET-UP WORKER	2	\$5.00	\$5.00	\$5.00
	603.380-010	GRINDER MACHINE SETTER	10	\$8.75	\$7.62	\$10.70
	603.382-010	BUFFING-MACHINE OPERATOR	1	\$6.00	\$6.00	\$6.00
	603.382-014	GRINDER SET-UP OPERATOR, CENTERLE	2	\$7.00	\$6.00	\$8.00
	603.382-018	HONING-MACHINE SET-UP OPERATOR	2	\$5.25	\$4.50	\$6.00
	603.382-022	HONING-MACHINE SET-UP OPERATOR, T	2	\$8.25	\$5.00	\$11.50
	603.382-034	GRINDER SET-UP OPERATOR	3	\$8.00	\$8.00	\$10.00
	603.482-034	HONING-MACHINE OPERATOR, PRODUCTI	4	\$5.00	\$4.62	\$7.25
	603.682-026	POLISHING-MACHINE OPERATOR	9	\$4.25	\$4.25	\$5.00

911170 MACHINE TOOL CUTTING OPERATORS AND TENDERS, METAL AND PLASTIC

TOTALS FOR OES OCCUPATION			99			
	603.685-062	GRINDING MACHINE TENDER	8	\$4.62	\$4.25	\$6.50
	603.685-070	LAPPING-MACHINE OPERATOR, PRODUCT	1	\$14.00	\$14.00	\$14.00
	604.382-010	SCREW-MACHINE OPERATOR, MULTIPLE	4	\$12.50	\$6.75	\$13.75
	604.382-014	SCREW-MACHINE OPERATOR, SINGLE SP	4	\$5.00	\$4.62	\$5.00
	604.685-026	LATHE TENDER	13	\$6.50	\$6.00	\$7.00
	605.682-034	ROUTER, PRINTED CIRCUIT BOARDS	1	\$6.00	\$6.00	\$6.00
	605.685-030	MILLING-MACHINE TENDER	17	\$6.05	\$5.75	\$8.50
	606.682-014	DRILL-PRESS OPERATOR	11	\$5.00	\$4.50	\$8.00
	606.685-026	DRILL PRESS TENDER	9	\$6.00	\$5.37	\$6.75
	705.684-014	BUFFER I	10	\$4.25	\$4.25	\$4.25
	705.684-058	POLISHER	17	\$5.00	\$4.62	\$5.62
	705.684-066	POLISHER APPRENTICE	4	\$4.25	\$4.25	\$5.56

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
913020 PUNCHING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		48			
	615.382-010	PUNCH-PRESS OPERATOR I	27	\$8.00	\$5.25	\$10.00
	615.482-026	PUNCH-PRESS OPERATOR, AUTOMATIC	6	\$4.75	\$4.75	\$5.56
	619.380-014	PUNCH-PRESS SETTER	15	\$9.53	\$7.95	\$10.00
913050 PRESS AND PRESS BRAKE MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		20			
	617.260-010	PRESS OPERATOR, HEAVY DUTY	4	\$8.50	\$6.50	\$10.31
	617.360-010	BRAKE OPERATOR I	14	\$8.00	\$6.75	\$9.00
	617.482-010	BENDING-MACHINE OPERATOR I	2	\$8.00	\$8.00	\$8.00
913080 SHEAR AND SLITTER MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		3			
	615.682-018	SHEAR OPERATOR I	3	\$6.50	\$6.50	\$8.00
913170 FORGING MACHINE SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		5			
	610.362-010	DROPHAMMER OPERATOR	2	\$15.00	\$15.00	\$15.00
	612.462-010	MULTI-OPERATION-MACHINE OPERATOR	3	\$4.25	\$4.25	\$7.00
913210 MACHINE FORMING OPERATORS AND TENDERS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		127			
	615.682-014	PUNCH-PRESS OPERATOR III	2	\$6.00	\$6.00	\$6.00
	615.685-030	PUNCH-PRESS OPERATOR II	109	\$4.50	\$4.50	\$5.00
	615.685-042	TURRET-PUNCH-PRESS OPERATOR, TAP	1	\$6.00	\$6.00	\$6.00
	617.382-014	HAMMER OPERATOR	1	\$15.00	\$15.00	\$15.00
	619.362-014	ROLL OPERATOR I	6	\$9.25	\$5.50	\$12.00
	619.685-026	BRAKE OPERATOR II	7	\$10.00	\$7.50	\$10.00
	619.685-082	SPINNING-LATHE OPERATOR, AUTOMATI	1	\$7.00	\$7.00	\$7.00
915020 NUMERICAL CONTROL MACHINE TOOL OPERATORS						
	TOTALS FOR OES OCCUPATION		212			
	604.362-010	LATHE OPERATOR, NUMERICAL CONTRO	46	\$8.00	\$8.00	\$12.00
	605.380-010	MILLING-MACHINE SET-UP OPERATOR, N	115	\$10.00	\$8.00	\$11.00
	609.360-010	NUMERICAL CONTROL MACHINE SET-UP	2	\$8.25	\$6.50	\$10.00
	609.362-010	NUMERICAL CONTROL MACHINE OPERAT	49	\$8.00	\$6.50	\$10.49
915050 COMBINATION MACHINE TOOL SETTERS AND SET-UP OPERATORS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		290			
	600.380-018	MACHINE SET-UP OPERATOR	75	\$6.50	\$4.50	\$8.00
	601.280-054	TOOL-MACHINE SET-UP OPERATOR	21	\$8.99	\$7.50	\$10.00
	602.380-010	GEAR-CUTTING-MACHINE SET-UP OPERA	1	\$14.00	\$14.00	\$14.00
	602.382-022	GEAR-MILLING-MACHINE SET-UP OPERAT	1	\$14.00	\$14.00	\$14.00
	616.360-022	MACHINE SETTER	1	\$14.00	\$14.00	\$14.00
	616.380-018	MACHINE OPERATOR I	191	\$5.50	\$5.00	\$6.50
915080 COMBINATION MACHINE TOOL OPERATORS AND TENDERS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		216			
	609.685-018	PRODUCTION MACHINE TENDER	51	\$6.00	\$5.00	\$6.00
	619.685-062	MACHINE OPERATOR II	165	\$5.25	\$4.25	\$6.50

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
919020 PLASTIC MOLDING AND CASTING MACHINE SETTERS AND SET-UP OPERATORS						
	TOTALS FOR OES OCCUPATION		13			
	556.380-010	MOLD SETTER	13	\$10.00	\$8.00	\$10.00
919210 ELECTROLYTIC PLATING AND COATING MACHINE OPERATORS AND TENDERS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		4			
	500.682-010	ANODIZER	1	\$8.00	\$8.00	\$8.00
	500.684-034	PLATER	3	\$4.50	\$4.50	\$4.50
919320 HEAT TREATING, ANNEALING, AND TEMPERING MACHINE OPERATORS AND TENDERS, METAL AND PLASTIC						
	TOTALS FOR OES OCCUPATION		4			
	504.382-014	HEAT TREATER I	3	\$7.50	\$5.50	\$10.00
	504.682-010	ANNEALER	1	\$6.00	\$6.00	\$6.00
921970 ALL OTHER METAL AND PLASTIC (CUT, FORM, FABRICATE, OR PROCESS) MACHINE SETTERS AND SET-UP						
	TOTALS FOR OES OCCUPATION		13			
	616.260-014	MULTI-OPERATION-FORMING-MACHINE S	5	\$9.00	\$8.00	\$9.00
	616.360-026	MULTI-OPERATION-FORMING-MACHINE O	1	\$5.00	\$5.00	\$5.00
	616.682-010	ARBOR-PRESS OPERATOR I	6	\$10.00	\$9.00	\$10.00
	616.682-022	CRIMPING-MACHINE OPERATOR	1	\$13.00	\$13.00	\$13.00
921980 ALL OTHER METAL AND PLASTIC (CUT, FORM, FABRICATE, OR PROCESS) MACHINE OPERATORS AND TENDERS						
	TOTALS FOR OES OCCUPATION		17			
	590.685-082	STRIPPER-ETCHER, PRINTED CIRCUIT BO	2	\$5.00	\$5.00	\$5.00
	609.482-010	ELECTRICAL-DISCHARGE-MACHINE OPER	2	\$6.25	\$6.00	\$6.50
	619.685-066	METAL FABRICATOR HELPER	6	\$6.00	\$6.00	\$8.00
	690.685-154	ELECTRIC-SEALING-MACHINE OPERATOR	7	\$7.00	\$7.00	\$7.00
929020 ELECTRONIC SEMICONDUCTOR PROCESSORS						
	TOTALS FOR OES OCCUPATION		3			
	590.262-014	TEST TECHNICIAN, SEMICONDUCTOR PR	1	\$9.50	\$9.50	\$9.50
	590.364-010	LEAD WORKER, WAFER PRODUCTION	1	\$6.00	\$6.00	\$6.00
	590.685-074	ETCH OPERATOR, SEMICONDUCTOR WAF	1	\$8.00	\$8.00	\$8.00
929470 PAINTERS, TRANSPORTATION EQUIPMENT						
	TOTALS FOR OES OCCUPATION		14			
	845.381-014	PAINTER, TRANSPORTATION EQUIPMENT	14	\$9.32	\$5.75	\$10.05
929530 COATING, PAINTING, AND SPRAYING MACHINE OPERATORS AND TENDERS						
	TOTALS FOR OES OCCUPATION		2			
	599.685-074	PAINTING-MACHINE OPERATOR	2	\$4.75	\$4.75	\$4.75
929580 CLEANING, WASHING, AND PICKLING EQUIPMENT OPERATORS AND TENDERS						
	TOTALS FOR OES OCCUPATION		9			
	503.685-030	METAL-CLEANER, IMMERSION	8	\$5.00	\$5.00	\$5.00
	590.685-102	WAFER CLEANER	1	\$8.25	\$8.25	\$8.25
929650 CRUSHING, GRINDING, MIXING, AND BLENDING MACHINE OPERATORS AND TENDERS						
	TOTALS FOR OES OCCUPATION		16			
	550.485-018	PAINT MIXER, MACHINE	16	\$10.00	\$7.85	\$10.00

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT	
					Lower Range	Upper Range
929740 PACKAGING AND FILLING MACHINE OPERATORS						
TOTALS FOR OES OCCUPATION			73			
	920.685-010	BALING-MACHINE TENDER	25	\$7.45	\$6.17	\$7.45
	920.685-074	PACKAGE SEALER, MACHINE	1	\$4.50	\$4.50	\$4.50
	920.685-078	PACKAGER, MACHINE	47	\$6.00	\$5.00	\$8.00
929980 ALL OTHER MACHINE OPERATORS AND TENDERS						
TOTALS FOR OES OCCUPATION			25			
	692.685-202	STAPLING-MACHINE OPERATOR	1	\$4.25	\$4.25	\$4.25
	781.685-010	SPREADER, MACHINE	24	\$5.25	\$5.00	\$6.00
<i>subtotal-machine setters, operators, tenders</i>			1,367	\$6.79		
Hand Working Occupations, Including Assemblers and Fabricators						
931020 AIRCRAFT STRUCTURE, SURFACES, RIGGING, AND SYSTEM ASSEMBLERS-PRECISION						
TOTALS FOR OES OCCUPATION			26			
	693.261-014	DEVELOPMENT MECHANIC	1	\$11.00	\$11.00	\$11.00
	806.361-014	ASSEMBLER-INSTALLER, GENERAL	1	\$11.00	\$11.00	\$11.00
	806.381-026	ASSEMBLER, AIRCRAFT, STRUCTURES A	19	\$18.00	\$10.00	\$18.00
	806.381-042	CABLE ASSEMBLER AND SWAGER	1	\$6.50	\$6.50	\$6.50
	806.381-066	AIRCRAFT MECHANIC, PLUMBING AND HY	3	\$13.00	\$12.00	\$15.57
	809.261-010	ASSEMBLER, GROUND SUPPORT EQUIPM	1	\$16.00	\$16.00	\$16.00
931110 ELECTROMECHANICAL EQUIPMENT ASSEMBLERS-PRECISION						
TOTALS FOR OES OCCUPATION			122			
	706.381-050	PRECISION ASSEMBLER, BENCH	7	\$6.50	\$5.00	\$6.50
	710.281-018	ELECTROMECHANICAL TECHNICIAN	20	\$8.00	\$8.00	\$9.75
	828.381-018	ASSEMBLER, ELECTROMECHANICAL	95	\$8.00	\$7.00	\$9.00
931140 ELECTRICAL AND ELECTRONIC EQUIPMENT ASSEMBLERS-PRECISION						
TOTALS FOR OES OCCUPATION			11			
	726.361-014	GROUP LEADER, PRINTED CIRCUIT BOAR	1	\$6.00	\$6.00	\$6.00
	729.381-022	WIRER, CABLE	10	\$8.00	\$8.00	\$8.00
931970 ALL OTHER PRECISION ASSEMBLERS						
TOTALS FOR OES OCCUPATION			45			
	806.381-078	INSTALLER, INTERIOR ASSEMBLIES	3	\$12.00	\$9.00	\$14.00
	809.381-010	FABRICATOR-ASSEMBLER, METAL PROD	42	\$9.00	\$7.37	\$9.00
939050 ELECTRICAL AND ELECTRONIC ASSEMBLERS						
TOTALS FOR OES OCCUPATION			548			
	726.364-018	ELECTRONICS UTILITY WORKER	5	\$7.00	\$6.00	\$8.75
	726.684-018	ELECTRONICS ASSEMBLER	447	\$6.00	\$5.00	\$8.00
	726.684-070	PRINTED CIRCUIT BOARD ASSEMBLER, H	71	\$7.00	\$7.00	\$7.00
	726.684-086	PRINTED CIRCUIT BOARD ASSEMBLY REP	4	\$10.00	\$10.00	\$10.00
	729.384-026	ELECTRICAL ASSEMBLER	20	\$7.50	\$7.00	\$8.00
	729.684-026	ELECTRICAL-CONTROL ASSEMBLER	1	\$5.75	\$5.75	\$5.75
939530 GRINDING AND POLISHING WORKERS, HAND						
TOTALS FOR OES OCCUPATION			49			
	519.684-018	MOLD DRESSER	12	\$4.25	\$4.25	\$4.25
	705.684-026	GRINDER I	31	\$5.50	\$5.50	\$5.50

EDD JOB OPENINGS RECEIVED FOR AEROSPACE OCCUPATIONS

Los Angeles County Employers Fiscal Year 1994-95

OES	DOT CODE	DOT TITLE	OPENINGS RECEIVED	MEDIAN WAGE	MIDDLE 50 PERCENT Lower Range	Upper Range
	705.684-034	METAL FINISHER	2	\$5.50	\$5.00	\$6.00
	705.684-062	POLISHER AND BUFFER II	2	\$5.00	\$5.00	\$5.00
	705.687-014	LABORER, GRINDING AND POLISHING	1	\$4.50	\$4.50	\$4.50
	706.684-098	VALVE GRINDER	1	\$8.00	\$8.00	\$8.00

939560 ASSEMBLERS AND FABRICATORS- EXCEPT MACHINE, ELECTRICAL, ELECTRONIC AND PRECISION

TOTALS FOR OES OCCUPATION			1,357			
	706.684-018	ASSEMBLER, PRODUCT	119	\$5.00	\$4.50	\$6.00
	706.684-022	ASSEMBLER, SMALL PRODUCTS I	341	\$4.60	\$4.25	\$5.00
	706.687-010	ASSEMBLER, PRODUCTION	668	\$5.00	\$4.50	\$5.25
	710.684-046	INSTRUMENT ASSEMBLER	1	\$8.00	\$8.00	\$8.00
	712.687-010	ASSEMBLER, PLASTIC HOSPITAL PRODU	4	\$5.00	\$5.00	\$5.00
	739.687-030	ASSEMBLER, SMALL PRODUCTS II	142	\$4.25	\$4.25	\$5.00
	754.684-042	PLASTICS WORKER	7	\$10.00	\$5.50	\$12.00
	780.684-062	FABRICATOR, FOAM RUBBER	2	\$10.50	\$5.00	\$16.00
	794.684-014	BOX MAKER, PAPERBOARD	58	\$4.50	\$4.25	\$4.50
	795.687-014	GLUER	9	\$4.40	\$4.40	\$4.45
	806.384-034	ASSEMBLER, SUBASSEMBLY	2	\$8.00	\$8.00	\$8.00
	827.584-010	ELECTRICAL-APPLIANCE PREPARER	1	\$8.65	\$8.65	\$8.65
	979.684-042	PRINTING SCREEN ASSEMBLER	3	\$6.00	\$6.00	\$6.00

<i>subtotal-handworking occupations</i>	2,158	\$5.62
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SUBTOTAL-PRODUCTION AND OPERATIONS	5,335	\$7.09
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TOTAL JOB OPENINGS	6,070	\$8.15
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**DETAILED OCCUPATIONAL EMPLOYMENT PROJECTIONS
1990, 1992, 1994, AND PROJECTED 1999
LOS ANGELES COUNTY**

LINE NUMBER	OES CODE	OCCUPATIONAL TITLE	ANNUAL AVERAGES				ACTUAL CHANGE 1990-92	ACTUAL CHANGE 1990-94	PROJECTED CHANGE 1994-99
			1990	1992	1994	1999			
1	000000	TOTAL, ALL OCCUPATIONS	4,133,360	3,806,470	3,704,550	4,097,410	-326,890	-428,810	392,860
2	100000	MGRS AND ADMIN OCCUPATIONS	314,630	284,800	279,280	305,410	-29,830	-35,350	26,130
3	130020	FINANCIAL MANAGERS	35,570	32,030	31,700	35,190	-3,540	-3,870	3,490
4	130050	PERS. TRAINING, LABOR-REL MGRS	8,820	8,030	7,810	8,920	-790	-1,010	1,110
5	130080	PURCHASING MANAGERS	11,810	10,510	9,930	10,960	-1,300	-1,880	1,030
6	130110	MKTNG, ADV. PUB-REL MANAGERS	24,810	22,510	23,090	27,080	-2,300	-1,720	3,990
7	130140	ADMINISTRATIVE SERVICES MANAGERS	15,760	14,530	14,690	14,680	-1,230	-1,070	-10
8	130170	ENGINEER, MATH, AND NAT SCI MGRS	19,150	16,420	13,690	15,840	-2,730	-5,460	2,150
10	150050	EDUCATION ADMINISTRATORS	10,000	9,840	9,640	10,560	-160	-360	920
11	150080	MEDICINE, HEALTH SERVICES MGRS	4,340	4,450	4,420	4,960	110	80	540
12	150110	PROPERTY AND REAL ESTATE MANAGER	8,720	7,950	7,900	8,850	-770	-820	950
13	150140	INDUSTRIAL PRODUCTION MANAGERS	11,710	9,710	8,540	9,570	-2,000	-3,170	1,030
14	150170	CONSTRUCTION MANAGERS	5,300	4,240	4,280	4,920	-1,060	-1,020	640
15	150210	MINING, OIL AND GAS, RELATED MGR	140	150	150	150	10	10	0
16	150230	COMM, TRANS, UTIL OPER MGRS	6,040	5,640	5,570	6,100	-400	-470	530
17	150261	FOOD SERVICE MANAGERS	6,800	6,410	6,350	7,520	-390	-450	1,170
18	150262	LODGING MANAGERS	2,860	2,610	2,610	2,870	-250	-250	260
20	150320	LAWN SERVICE MANAGER	370	340	330	430	-30	-40	100
21	190020	PUB ADMIN CHIEF EXECS, LEGISLATO	220	230	220	230	10	0	10
22	190050	GENERAL MANAGERS, TOP EXECUTIVES	119,960	108,780	108,430	114,320	-11,180	-11,530	5,890
23	199990	MANAGERS AND ADMINISTRATORS, NEC	22,250	20,420	19,930	22,260	-1,830	-2,320	2,330
24	200000	PROFESSIONAL, PARAPROF, TECHNICAL	914,320	865,800	840,630	961,560	-48,520	-73,690	120,930
25	210000	MANAGEMENT SUPPORT OCCUPATIONS	148,730	134,310	128,150	147,050	-14,420	-20,580	18,900
26	211000	ACCOUNTANTS, AUDIT, FINANCE SPECS	69,460	63,050	61,550	72,520	-6,410	-7,910	10,970
27	211020	UNDERWRITERS	3,550	3,380	3,350	3,670	-170	-200	320
28	211050	CREDIT ANALYSTS	1,470	1,420	1,420	1,340	-50	-50	-80
29	211080	LOAN OFFICERS AND COUNSELORS	6,910	6,700	6,640	8,020	-210	-270	1,380
30	211110	TAX PREPARERS	3,710	3,050	3,230	4,300	-660	-480	1,070
31	211140	ACCOUNTANTS AND AUDITORS	39,670	35,560	35,560	41,220	-4,070	-4,110	5,660
32	211170	BUDGET ANALYSTS	2,350	2,110	1,980	2,220	-240	-370	240
33	211990	FINANCIAL SPECIALISTS, NEC	11,800	10,790	9,370	11,750	-1,010	-2,430	2,380

Appendix D5

**Employment Development Department
Detailed Occupational Employment
Projections for Los Angeles County:
Annual Averages for 1990, 1992, 1994
and Projections for 1999.**

DETAILED OCCUPATIONAL EMPLOYMENT PROJECTIONS
1990, 1992, 1994, AND PROJECTED 1999
LOS ANGELES COUNTY

LINE NUMBER	OES CODE	OCCUPATIONAL TITLE	ANNUAL AVERAGES				ACTUAL CHANGE 1990-92	ACTUAL CHANGE 1990-94	PROJECTED CHANGE 1994-99
			1990	1992	1994	1999			
34	213000	PURCHASING AGENTS AND BUYERS	18,600	16,160	14,630	15,620	-2,440	-3,970	990
35	213020	WHLR AND RET BUYERS--EX FARM PRO	5,910	5,240	4,910	5,350	-670	-1,000	440
36	213050	PURCH AGTS AND BUYERS--FARM PROD	880	820	770	990	-60	-110	220
37	213080	PURCH AGTS--EX WHLR, RET, FARM PRO	11,810	10,100	8,950	9,280	-1,710	-2,860	330
38	215000	PERS, TRAINING, LAB-REL SPECS	11,850	10,720	10,970	11,910	-1,130	-880	940
40	215050	SPECIAL AGENTS--INSURANCE	260	250	240	310	-10	-20	70
41	215080	EMPL INTERVIEWERS--PRIV OR PUB	2,740	2,310	2,990	2,490	-430	250	-500
42	215110	PERS, TRAINING, LAB-REL SPECS, N	8,850	8,160	7,740	9,110	-690	-1,110	1,370
43	219000	OTHER MANAGEMENT SUPPORT WORKERS	48,820	44,380	41,000	47,000	-4,440	-7,820	6,000
44	219020	COST ESTIMATORS	7,050	5,800	5,390	6,020	-1,250	-1,660	630
45	219050	MANAGEMENT ANALYSTS	3,550	3,350	3,390	4,140	-200	-160	750
46	219080	CONST AND BUILDING INSPECTORS	2,450	2,410	2,350	2,600	-40	-100	250
47	219110	COMPL, ENFORCE INSPECT--EX CONST	5,140	5,210	5,090	5,810	70	-50	720
48	219140	TAX EXAMINERS, COLLECT, REV AGEN	2,000	1,940	1,780	1,960	-60	-220	180
50	219210	CLAIMS EXAMINERS--INSURANCE	1,220	1,160	1,060	1,210	-60	-160	150
51	219990	MANAGEMENT SUPPORT WORKERS, NEC	27,410	24,510	21,940	25,260	-2,900	-5,470	3,320
52	220000	ENGINEERS, ARCHITECTS, SURVEYORS	145,190	123,040	108,220	119,140	-22,150	-36,970	10,920
53	221000	ENGINEERS	95,540	81,190	70,050	77,220	-14,350	-25,490	7,170
54	221020	AERONAUT, ASTRONAUTICAL ENGINEER	14,560	11,510	8,670	7,730	-3,050	-5,890	-940
55	221050	METALLURGISTS, RELATED ENGINEERS	440	360	310	370	-80	-130	60
57	221110	PETROLEUM ENGINEERS	200	230	240	240	30	40	0
58	221140	CHEMICAL ENGINEERS	1,380	1,320	1,130	1,400	-60	-250	270
59	221170	NUCLEAR ENGINEERS	150	140	120	140	-10	-30	20
60	221210	CIVIL ENGINEERS--INCLUDING TRAFF	6,720	6,610	6,300	7,060	-110	-420	760
61	221230	AGRICULTURAL ENGINEERS	130	130	110	150	0	-20	40
62	221260	ELECT AND ELECTRONIC ENGINEERS	21,900	18,140	14,990	17,970	-3,760	-6,910	2,980
63	221270	COMPUTER ENGINEERS	5,590	4,740	4,550	7,260	-850	-1,040	2,710
64	221280	INDUST ENGINEERS--EXCEPT SAFETY	10,110	8,040	5,970	6,220	-2,070	-4,140	250
65	221320	SAFETY ENGINEERS--EXCEPT MINING	780	740	670	830	-40	-110	160
66	221350	MECHANICAL ENGINEERS	9,400	8,180	6,720	7,910	-1,220	-2,680	1,190
67	221380	MARINE ENGINEERS	120	140	140	160	20	20	20
68	221990	ENGINEERS, NEC	24,060	20,910	20,130	19,780	-3,150	-3,930	-350
69	223000	ARCHITECTS AND SURVEYORS	4,220	3,370	3,560	3,470	-850	-660	-90
70	223020	ARCHITECTS--EX LANDSCAPE, MARINE	2,860	2,170	2,450	2,210	-690	-410	-240
72	223080	LANDSCAPE ARCHITECTS	290	200	200	220	-90	-90	20

DETAILED OCCUPATIONAL EMPLOYMENT PROJECTIONS
1990, 1992, 1994, AND PROJECTED 1999
LOS ANGELES COUNTY

LINE NUMBER	OES CODE	OCCUPATIONAL TITLE	ANNUAL AVERAGES				ACTUAL CHANGE 1990-92	ACTUAL CHANGE 1990-94	PROJECTED CHANGE 1994-99
			1990	1992	1994	1999			
73	223110	SURVEYING AND MAPPING SCIENTISTS	1,070	1,000	910	1,040	-70	-160	130
74	225000	ENGINEERING, RELATED TECHNICIANS	45,430	38,480	34,610	38,450	-6,950	-10,820	3,840
75	225020	CIVIL ENGINEERING TECHNICIANS	2,830	2,520	2,230	2,440	-310	-600	210
76	225050	ELECT, ELECTRONIC ENGINEERING TE	16,580	13,450	11,500	13,210	-3,130	-5,080	1,710
77	225080	INDUST ENGINEERING TECHS	760	580	470	530	-180	-290	60
78	225110	MECHANICAL ENGINEERING TECHS	3,770	3,170	2,580	2,960	-600	-1,190	380
79	225140	DRAFTERS	10,760	9,140	8,640	9,300	-1,620	-2,120	660
81	225210	SURVEYING AND MAPPING TECHS	1,190	1,120	1,010	1,170	-70	-180	160
82	225990	ENGINEERING, RELATED TECHS, NEC	9,540	8,500	8,180	8,840	-1,040	-1,360	660
83	240000	NAT SCIENTISTS AND RELATED WORKERS	19,060	18,010	15,520	20,280	-1,050	-3,540	4,760
84	241000	PHYSICAL SCIENTISTS	6,850	6,370	5,580	7,310	-480	-1,270	1,730
85	241020	PHYSICISTS AND ASTRONOMERS	320	270	250	260	-50	-70	10
86	241050	CHEMISTS, EXCEPT BIOCHEMISTS	1,770	1,630	1,510	1,960	-140	-260	450
88	241110	GEOLOGIST, GEOPHYS, OCEANOGRAPHE	980	960	890	1,160	-20	-90	270
89	241990	PHYSICAL SCIENTISTS, NEC	3,780	3,510	2,930	3,930	-270	-850	1,000
90	243000	LIFE SCIENTISTS	2,750	2,740	2,150	3,360	-10	-600	1,210
93	243080	BIOLOGICAL SCIENTISTS	1,120	1,100	930	1,330	-20	-190	400
94	243110	MEDICAL SCIENTISTS	560	560	410	650	0	-150	240
95	243990	LIFE SCIENTISTS, NEC	1,070	1,080	810	1,380	10	-260	570
96	245000	PHYSICAL, LIFE SCIENCE TECHS	9,460	8,900	7,790	9,610	-560	-1,670	1,820
97	245020	BIOLOGICAL, AGRI, FOOD TECHS	850	820	660	950	-30	-190	290
98	245050	CHEM TECHS--EXCEPT HEALTH	1,440	1,310	1,180	1,660	-130	-260	480
100	245110	PETROLEUM TECHNICIANS	240	230	150	260	-10	-90	110
101	245990	PHYSICAL, LIFE SCIENCE TECHS, NE	6,930	6,540	5,800	6,740	-390	-1,130	940
102	250000	COMPUTER, MATH, OPS RESRCH, RELATE	45,880	41,550	38,800	49,670	-4,330	-7,080	10,870
103	251000	COMPUTER SCIENTISTS AND RELATED	41,120	37,180	34,760	44,860	-3,940	-6,360	10,100
104	251020	SYSTEMS ANALYSTS--ELEC DATA PROC	15,100	13,470	12,200	18,180	-1,630	-2,900	5,980
105	251051	COMPUTER PROGRAMMERS, INCL AIDES	22,650	20,770	19,950	22,670	-1,880	-2,700	2,720
106	251110	NC TOOL, PROCESS PROGRAMMERS	370	280	240	270	-90	-130	30
107	251990	COMPUTER SCIENTISTS, REL WRKRS,N	3,000	2,660	2,370	3,740	-340	-630	1,370
108	253000	MATH SCIENTISTS AND RELATED	4,760	4,370	4,040	4,810	-390	-720	770
109	253020	OPS, SYS RESEARCHERS--EX COMPUTE	1,750	1,480	1,240	1,390	-270	-510	150

DETAILED OCCUPATIONAL EMPLOYMENT PROJECTIONS
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LOS ANGELES COUNTY

LINE NUMBER	OES CODE	OCCUPATIONAL TITLE	ANNUAL AVERAGES				ACTUAL CHANGE 1990-92	ACTUAL CHANGE 1990-94	PROJECTED CHANGE 1994-99
			1990	1992	1994	1999			
111	253120	STATISTICIANS	730	760	480	830	30	-250	350
112	253130	ACTUARIES	350	350	310	380	0	-40	70
113	253150	FINANCIAL ANALYSTS, STATISTICAL	1,380	1,250	1,260	1,640	-130	-120	380
114	253190	MATHEMATICAL SCIENTISTS, NEC	550	530	750	570	-20	200	-180
116	270000	SOCIAL SCI., RECREATION, RELIGIOUS	40,360	40,360	42,420	47,800	0	2,060	5,380
117	271000	SOCIAL SCI--INCL URBAN, REG PLNER	6,370	6,430	6,270	7,410	60	-100	1,140
118	271020	ECONOMISTS--INCL MKT RESRCH ANAL	930	930	1,060	1,120	0	130	60
119	271050	URBAN AND REGIONAL PLANNERS	1,430	1,420	1,480	1,600	-10	50	120
120	271080	PSYCHOLOGISTS	2,400	2,440	2,480	2,830	40	80	360
121	271990	SOCIAL SCIENTISTS, NEC	1,610	1,640	1,250	1,860	30	-360	610
122	273000	OTH SOCIAL SCIENCE RELATED WORKER	26,030	26,700	26,650	31,820	670	620	5,170
123	273020	SOCIAL WORKERS--MED, PSYCHIATRIC	4,070	4,130	4,180	4,740	60	110	560
124	273050	SOCIAL WKRS--EX MED, PSYCHIATRIC	9,510	9,720	9,630	10,900	210	120	1,270
125	273070	RESIDENTIAL COUNSELORS	180	170	160	190	-10	-20	30
126	273080	HUMAN SERVICES WORKERS	4,390	4,610	4,650	6,720	220	260	2,070
127	273110	RECREATION WORKERS	7,880	8,070	8,030	9,270	190	150	1,240
128	275000	RELIGIOUS WORKERS	7,960	7,230	9,500	8,570	-730	1,540	-930
129	275020	CLERGY	6,750	6,140	8,050	7,170	-610	1,300	-880
130	275050	DIRECTORS--RELIG ACTIVITIES, EDU	380	340	450	400	-40	70	-50
131	275990	RELIGIOUS WORKERS, NEC	830	750	1,000	1,000	-80	170	0
132	280000	LAW AND RELATED OCCUPATIONS	34,280	32,480	30,240	40,320	-1,800	-4,040	10,080
133	281000	LAWYERS AND RELATED WORKERS	22,820	21,860	20,330	27,170	-960	-2,490	6,840
134	281020	JUDGES AND MAGISTRATES	350	360	360	370	10	10	10
135	281050	ADJUDICATORS, JUDICIAL REVIEWERS	1,850	1,900	1,900	1,930	50	50	30
136	281080	LAWYERS	20,620	19,600	18,070	24,870	-1,020	-2,550	6,800
137	283000	LEGAL ASSTS, TECHS, EX CLERICAL	11,460	10,620	9,910	13,150	-840	-1,550	3,240
138	283020	LAW CLERKS	2,510	2,380	2,180	2,580	-130	-330	400
139	283050	PARALEGAL PERSONNEL	4,330	4,080	3,720	6,120	-250	-610	2,400
140	283080	TITLE SEARCHERS	890	740	710	770	-150	-180	60
141	283110	TITLE EXAMINERS AND ABSTRACTORS	1,000	850	800	720	-150	-200	-80
142	283990	LEGAL ASSTS, TECHS--EX CLER, NEC	2,730	2,570	2,500	2,960	-160	-230	460

DETAILED OCCUPATIONAL EMPLOYMENT PROJECTIONS
1990, 1992, 1994, AND PROJECTED 1999
LOS ANGELES COUNTY

LINE NUMBER	OES CODE	OCCUPATIONAL TITLE	ANNUAL AVERAGES				ACTUAL CHANGE 1990-92	ACTUAL CHANGE 1990-94	PROJECTED CHANGE 1994-99
			1990	1992	1994	1999			
143	310000	TEACHERS, EDUCATORS, LIBRARIANS	213,110	211,690	213,500	236,110	-1,420	390	22,610
144	311000	POST-SECONDARY TEACHERS	41,450	39,790	37,410	42,540	-1,660	-4,040	5,130
145	311110	LECTURERS	500	400	360	560	-100	-140	200
146	311140	NURSING INSTRUCTORS	950	940	950	1,030	-10	0	80
147	311170	GRADUATE ASSISTANTS, TEACHING	6,130	5,900	5,220	6,590	-230	-910	1,370
148	312020	LIFE SCIENCES TEACHERS	2,640	2,530	2,300	2,690	-110	-340	390
149	312040	CHEMISTRY TEACHERS	580	560	530	590	-20	-50	60
150	312060	PHYSICS TEACHERS	680	660	610	700	-20	-70	90
151	312090	PHYSICAL SCIENCE TEACHERS, NEC	650	630	580	670	-20	-70	90
152	312100	SOCIAL SCIENCE TEACHERS	3,530	3,400	3,210	3,580	-130	-320	370
153	312120	HEALTH SPECIALTIES TEACHERS	2,280	2,200	1,960	2,350	-80	-320	390
154	312160	ENGLISH, FOREIGN LANGUAGE TEACHE	4,310	4,120	4,070	4,350	-190	-240	280
155	312180	ART, DRAMA, MUSIC TEACHERS	3,070	2,960	2,890	3,110	-110	-180	220
156	312220	ENGINEERING TEACHERS	1,410	1,350	1,210	1,440	-60	-200	230
157	312240	MATHEMATICAL SCIENCES TEACHERS	1,580	1,520	1,480	1,580	-60	-100	100
158	312260	COMPUTER SCIENCE TEACHERS	870	830	840	860	-40	-30	20
159	312990	POSTSECONDARY TEACHERS, NEC	12,270	11,790	11,200	12,440	-480	-1,070	1,240
160	313000	OTHER TEACHERS AND INSTRUCTORS	115,160	115,220	118,730	129,350	60	3,570	10,620
161	313020	TEACHERS, PRESCHOOL & KINDERGART	12,070	12,440	13,380	15,400	370	1,310	2,020
162	313050	TEACHERS--ELEMENTARY SCHOOL	36,610	36,610	37,660	38,140	0	1,050	480
163	313080	TEACHERS--SECONDARY SCHOOL	26,700	26,800	27,170	29,540	100	470	2,370
164	313110	TEACHERS--SPECIAL EDUCATION	6,750	6,780	6,880	8,640	30	130	1,760
165	313140	TEACHERS--VOC ED AND TRAINING	9,670	9,330	9,850	10,930	-340	180	1,080
166	313170	INSTRUCTORS--NON-VOC EDUCATION	4,430	4,470	4,560	5,210	40	130	650
167	313210	INSTRUCTORS AND COACHES--SPORTS	6,250	6,110	6,250	7,130	-140	0	880
169	313990	TEACHERS AND INSTRUCTORS, NEC	12,680	12,680	12,980	14,360	0	300	1,380
170	315000	LIBRARIANS, ARCHIVISTS AND RELATE	56,500	56,680	57,360	64,220	180	860	6,860
171	315020	LIBRARIANS--PROFESSIONAL	2,780	2,730	2,610	2,910	-50	-170	300
172	315050	TECHNICAL ASSISTANTS--LIBRARY	1,260	1,240	1,220	1,360	-20	-40	140
173	315080	AUDIO-VISUAL SPECIALISTS	230	220	210	240	-10	-20	30
174	315110	CURATORS, ARCHIVISTS, AND RELATE	340	300	330	460	-40	-10	130
175	315140	VOCATIONAL & EDUCATIONAL COUNSEL	5,960	5,550	5,490	6,060	-70	-70	570
176	315170	INSTRUCTIONAL COORDINATORS	1,650	1,650	1,620	1,930	0	-30	310
177	315211	INSTRUCTIONAL AIDES	44,680	44,990	45,880	51,260	310	1,200	5,380
178	320000	HEALTH PRACTITIONERS, TECHS, RELAT	154,840	158,420	155,180	175,780	3,580	340	20,600
179	321000	HEALTH DIAGNOSING, TREATING	25,230	26,290	24,680	28,820	1,060	-550	4,140

DETAILED OCCUPATIONAL EMPLOYMENT PROJECTIONS
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LINE NUMBER	OES CODE	OCCUPATIONAL TITLE	ANNUAL AVERAGES				ACTUAL CHANGE 1990-92	ACTUAL CHANGE 1990-94	PROJECTED CHANGE 1994-99
			1990	1992	1994	1999			
180	321020	PHYSICIANS AND SURGEONS	19,010	19,710	18,160	21,600	700	-850	3,440
181	321050	DENTISTS	3,640	3,840	3,920	4,020	200	280	100
182	321080	OPTOMETRISTS	940	950	900	1,060	10	-40	160
183	321110	PODIATRISTS	240	240	230	280	0	-10	50
184	321130	CHIROPRACTORS	720	800	690	980	80	-30	290
185	321140	VETS AND VETERINARY INSPECTORS	540	620	640	710	80	100	70
186	321990	HEALTH DIAGNOSING, TREATING, NEC	140	130	140	170	-10	0	30
187	323000	THERAPISTS	9,820	10,240	10,360	12,360	420	540	2,000
188	323020	RESPIRATORY CARE PRACTITIONERS	3,340	3,470	3,380	3,920	130	40	540
189	323050	OCCUPATIONAL THERAPISTS	1,180	1,230	1,240	1,480	50	60	240
190	323080	PHYSICAL THERAPISTS	2,800	3,010	3,180	3,970	210	380	790
192	323140	SPEECH PATHOLOGISTS, AUDIOLOGIST	1,530	1,560	1,570	1,870	30	40	300
193	323170	RECREATIONAL THERAPISTS	650	650	670	730	0	20	60
194	323990	THERAPISTS, NEC	320	320	320	390	0	0	70
195	325000	HEALTH CARE MAINTENANCE, TREATING	85,210	86,930	85,760	94,810	1,720	550	9,050
196	325020	REGISTERED NURSES	54,010	55,510	54,600	60,090	1,500	590	5,490
197	325050	LICENSED VOCATIONAL NURSES	15,470	15,590	15,890	17,040	120	420	1,150
198	325080	EMERGENCY MEDICAL TECHNICIANS	2,880	3,030	3,010	3,670	150	130	660
199	325110	PHYSICIAN'S ASSISTANTS	2,250	2,330	2,120	2,510	80	-130	390
200	325140	OPTICIANS--DISPENSING, MEASURING	2,060	2,040	2,000	2,390	-20	-60	390
201	325170	PHARMACISTS	4,820	4,690	4,490	5,060	-130	-330	570
202	325181	PHARMACY TECHNICIANS	2,250	2,210	2,120	2,360	-40	-130	240
203	325210	DIETITIANS AND NUTRITIONISTS	1,040	1,080	1,080	1,160	40	40	80
204	325230	DIETETIC TECHNICIANS	430	450	450	530	20	20	80
205	329000	OTHER HEALTH PROFS, PARAPROFS	34,580	34,960	34,380	39,790	380	-200	5,410
206	329020	MED, CLINICAL LAB TECHNOLOGISTS	5,470	5,670	5,450	5,990	200	-20	540
207	329050	MED, CLINICAL LAB ASSISTANTS	3,360	3,440	3,390	3,520	80	30	130
208	329080	DENTAL HYGIENISTS	3,320	3,520	3,610	4,360	200	290	750
209	329110	MEDICAL RECORDS TECHNICIANS	2,440	2,520	2,400	3,110	80	-40	710
210	329140	NUCLEAR MEDICINE TECHNOLOGISTS	470	500	470	550	30	0	80
211	329170	RADIOLOGIC TECHNOLOGIST, THERAPEUTIC	340	350	330	380	10	-10	50
212	329210	RADIOLOGIC TECHNOLOGIST, DIAGNOSTIC	4,180	4,380	4,120	5,140	200	-60	1,020
213	329230	ELECTRONEURODIAGNOSTIC TECHNOLOG	160	160	160	180	0	0	20
214	329250	CARDIOLOGY TECHNOLOGISTS	350	360	350	380	10	0	30
215	329260	ELECTROCARDIOGRAPH TECHNICIANS	530	550	520	460	20	-10	-60
216	329280	SURGICAL TECHNICIANS	1,070	1,130	1,080	1,200	60	10	120
217	329310	PSYCHIATRIC TECHNICIANS	860	780	760	820	-80	-100	60
218	329510	VETERINARY TECHNICIANS	420	460	470	510	40	50	40
219	329990	HEALTH CARE PROFS, PARAPROFS, NE	11,610	11,140	11,270	13,190	-470	-340	1,920

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			1990	1992	1994	1999			
220	340000	WRITERS, ARTISTS, ENTER, ATHLETES	60,720	56,480	60,250	66,220	-4,240	-470	5,970
221	340020	WRITERS AND EDITORS	5,140	4,610	4,850	5,230	-530	-290	380
222	340050	TECHNICAL WRITERS	2,390	1,920	2,000	1,870	-470	-390	-130
223	340080	PUB REL SPECS, PUBLICITY WRITERS	3,440	3,150	3,220	3,530	-290	-220	310
224	340110	REPORTERS AND CORRESPONDENTS	1,900	1,740	1,660	1,940	-160	-240	280
226	340170	ANNOUNCERS--RADIO AND TELEVISION	1,350	1,230	1,180	1,320	-120	-170	140
228	340230	PHOTOGRAPHERS	1,610	1,630	1,660	1,870	20	50	210
229	340260	CAMERA OPS--TV AND MOTION PICTUR	760	760	930	810	0	170	-120
230	340280	BROADCAST TECHNICIANS	4,920	4,830	5,670	5,080	-90	750	-590
231	340320	FILM EDITORS	1,650	1,650	2,110	2,260	0	460	150
232	340350	ARTISTS AND RELATED WORKERS	7,400	6,930	6,890	7,740	-470	-510	850
233	340381	FLORAL DESIGNERS	1,220	890	790	1,050	-330	-430	260
234	340382	DESIGNERS, EX INTERIOR AND FLORA	7,210	7,010	6,690	7,930	-200	-520	1,240
235	340410	INTERIOR DESIGNERS	1,960	1,670	1,720	1,720	-290	-240	0
236	340440	MERCH DISPLAYERS, WINDOW TRIMMER	3,690	3,250	3,210	4,580	-440	-480	1,370
237	340470	MUSIC DIRECTORS, SINGERS, COMPOSE	1,470	1,310	1,530	1,580	-160	60	50
238	340510	MUSICIANS--INSTRUMENTAL	4,520	4,240	4,300	5,280	-280	-220	980
239	340530	DANCERS AND CHOREOGRAPHERS	500	470	370	640	-30	-130	270
240	340560	PRODUCERS, DIRECTORS, ACTORS	8,860	8,860	11,080	11,340	0	2,220	260
241	340580	ATHLETES, COACHES, UMPs, RELATED	730	330	390	450	-400	-340	60
242	390000	MISC PROFS, PARAPROFS, TECHNICAL	52,150	49,460	48,350	59,190	-2,690	-3,800	10,840
243	390020	AIR DISPATCHERS, AIR TRAFFIC CON	1,080	1,040	950	1,040	-40	-130	90
244	390050	TRAFFIC TECHNICIANS	160	160	160	170	0	0	10
245	390080	RADIO OPERATORS	330	320	310	370	-10	-20	60
246	390110	FUNERAL DIRECTORS AND MORTICIANS	400	400	320	470	0	-80	150
247	390140	EMBALMERS	300	300	240	350	0	-60	110
248	399990	OTHER PROF, PARAPROF, TECHNICAL	49,880	47,240	46,370	56,790	-2,640	-3,510	10,420
249	400000	SALES AND RELATED OCCUPATIONS	444,360	394,820	378,260	426,000	-49,540	-66,100	47,740
250	410000	FIRST-LINE SUP/MGR--SALES	48,110	42,640	40,770	48,130	-5,470	-7,340	7,360
251	430000	SALES AGENTS--SERVICE	42,820	39,110	39,020	41,780	-3,710	-3,800	2,760
252	430020	SALES AGENTS, PLACERS--INSURANCE	11,460	10,170	9,330	9,750	-1,290	-2,130	420
253	430050	BROKERS--REAL ESTATE	1,230	1,140	1,170	1,210	-90	-60	40

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			1990	1992	1994	1999			
254	430080	SALES AGENTS--REAL ESTATE	2,660	2,400	2,400	2,410	-260	-260	10
255	430110	APPRAISERS--REAL ESTATE	1,890	1,830	1,840	2,040	-60	-50	200
256	430140	SALES AGENTS--FINANCIAL SERVICES	4,330	3,990	4,260	4,470	-340	-70	210
257	430170	SALES AGENTS--SEL BUS SERVICES	7,580	7,000	7,600	8,100	-580	20	500
258	430210	TRAVEL AGENTS	6,020	5,590	5,390	6,050	-430	-630	660
259	430230	SALES AGENTS--ADVERTISING	5,100	4,730	4,570	5,130	-370	-530	560
260	430990	SALES REPS, SERVICE--NEC	2,550	2,260	2,460	2,620	-290	-90	160
261	490000	MERCH, PRODUCTS AND OTHER SALES	353,430	313,070	298,470	336,090	-40,360	-54,960	37,620
262	490020	SALES ENGINEERS	2,470	2,040	1,850	1,970	-430	-620	120
263	490050	SALES REPS, SCIENTIFIC--EX RETAI	15,960	13,290	12,430	13,290	-2,670	-3,530	860
264	490080	SALES REPS, NON-SCIENTIFIC EX RE	57,500	50,100	47,890	52,590	-7,400	-9,610	4,700
265	490111	VEHICLE SALESPERSONS - RETAIL	6,960	5,830	6,040	6,800	-1,130	-920	760
266	490112	SALESPERSONS - RETAIL(NON-VEHICL	130,160	113,130	106,710	123,350	-17,030	-23,450	16,640
267	490140	SALESPERSONS--PARTS	9,440	8,120	7,710	8,540	-1,320	-1,730	830
268	490170	COUNTER AND RENTAL CLERKS	8,750	7,830	7,470	8,960	-920	-1,280	1,490
269	490210	STOCK CLERKS--SALES FLOOR	24,060	21,620	20,220	22,160	-2,440	-3,840	1,940
270	490230	CASHIERS	73,500	68,320	64,710	73,940	-5,180	-8,790	9,230
271	490260	TELEMARKETERS, SOLICITORS & RELA	7,140	6,600	7,060	7,230	-540	-80	170
272	490320	DEMONSTRATORS, PROMOTERS, MODELS	2,000	1,880	1,980	2,140	-120	-20	160
273	499990	SALES AND RELATED WORKERS, NEC	15,490	14,310	14,400	15,120	-1,180	-1,090	720
274	500000	CLERICAL, ADMINISTRATIVE SUPPORT	868,160	804,280	788,180	839,890	-63,880	-79,980	51,710
275	510000	FIRST-LINE SUP/MGR, CLERL, ADM SUP	59,600	55,860	53,880	60,900	-3,740	-5,720	7,020
276	530000	INDUSTRY SPECIFIC CLERICAL, ADMIN	107,550	98,120	93,100	105,220	-9,430	-14,450	12,120
277	531000	BANKING, SECURITY, FINANCE, CREDI	59,800	53,430	50,060	55,840	-6,370	-9,740	5,780
278	531020	TELLERS	26,670	23,260	20,730	22,220	-3,410	-5,940	1,490
279	531050	NEW ACCOUNTS CLERKS	3,620	3,070	2,920	3,330	-550	-700	410
280	531080	TRANSIT CLERKS	280	240	220	210	-40	-60	-10
281	531110	LOAN INTERVIEWERS	1,320	1,130	1,140	1,350	-190	-180	210
282	531140	CREDIT AUTHORIZERS	690	590	570	670	-100	-120	100
283	531170	CREDIT CHECKERS	1,760	1,720	1,550	1,840	-40	-210	290
284	531210	LOAN AND CREDIT CLERKS	6,620	6,320	6,550	7,230	-300	-70	680
285	531230	ADJUSTMENT CLERKS	16,320	14,800	13,960	16,730	-1,520	-2,360	2,770
286	531260	STATEMENT CLERKS	540	460	440	400	-80	-100	-40

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			1990	1992	1994	1999			
287	531280	BROKERAGE CLERKS	1,980	1,840	1,980	1,860	-140	0	-120
288	533000	INSURANCE WORKERS	14,410	13,190	12,410	14,980	-1,220	-2,000	2,570
289	533020	INS ADJUST, EXAMIN, INVESTIGATOR	4,720	4,340	4,110	5,250	-380	-610	1,140
290	533050	INSURANCE APPRAISERS--AUTO DAMAG	130	120	120	130	-10	-10	10
291	533080	INSURANCE EXAMINING CLERKS	260	220	210	250	-40	-50	40
292	533110	INSURANCE CLAIMS CLERKS	4,070	4,030	3,720	4,780	-40	-350	1,060
293	533140	INSURANCE POLICY PROCESSING CLER	5,230	4,480	4,250	4,570	-750	-980	320
294	535000	INVESTIGATIVE, RELATED, EX INSUR	14,680	14,020	13,710	15,520	-660	-970	1,810
295	535020	WELFARE ELIG WORKERS, INTERVIEWE	5,670	5,700	5,500	6,030	30	-170	530
296	535050	INVESTIGATORS--CLERICAL	360	350	340	330	-10	-20	-10
297	535080	BILL AND ACCOUNT COLLECTORS	8,650	7,970	7,870	9,160	-680	-780	1,290
298	537000	MUNICIPAL WORKERS	1,200	1,240	1,220	1,360	40	20	140
299	537020	COURT CLERKS	1,000	1,020	990	1,140	20	-10	150
301	537080	LICENSE CLERKS	200	220	230	220	20	30	-10
302	538000	LODGING AND TRAVEL WORKERS	10,890	10,000	9,600	10,880	-890	-1,290	1,280
303	538020	TRAVEL CLERKS	620	560	550	600	-60	-70	50
304	538050	RESERVATION, TRANS TICKET AGENTS	7,190	6,830	6,550	7,150	-360	-640	600
305	538080	HOTEL DESK CLERKS	3,080	2,610	2,500	3,130	-470	-580	630
306	539000	MISC INDUSTRY SPECIFIC CLERICAL	6,570	6,240	6,100	6,640	-330	-470	540
307	539020	LIBRARY ASSTS & BOOKMOBILE DRIVE	3,640	3,580	3,380	3,770	-60	-260	390
308	539080	ADVERTISING CLERKS	740	700	700	810	-40	-40	110
309	539110	PROOFREADERS AND COPY MARKERS	1,040	880	930	930	-160	-110	0
310	539140	REAL ESTATE CLERKS	1,150	1,080	1,090	1,130	-70	-60	40
311	550000	SECRETARIAL, GENERAL OFFICE OCCS	473,230	440,870	438,740	459,810	-32,360	-34,490	21,070
312	551000	SECRETARIES	114,340	105,740	104,660	109,860	-8,600	-9,680	5,200
313	551020	SECRETARIES, LEGAL	14,220	13,390	12,190	17,810	-830	-2,030	5,620
314	551050	SECRETARIES, MEDICAL	5,900	6,230	5,870	7,110	330	-30	1,240
315	551080	SECRETARIES, GENERAL	94,220	86,120	86,600	84,940	-8,100	-7,620	-1,660
316	553000	MISC SECRETARIAL, GENL OFF OCCS	358,890	335,130	334,080	349,950	-23,760	-24,810	15,870
317	553020	STENOGRAPHERS	2,300	2,270	2,200	2,120	-30	-100	-80
318	553050	RECEPTIONISTS, INFORMATION CLERK	42,150	40,080	39,960	45,550	-2,070	-2,190	5,590
319	553070	TYPISTS, INCLUDING WORD PROCESSI	40,210	38,860	39,780	34,120	-1,350	-430	-5,660
320	553140	PERS CLERKS--EX PAYROLL	5,060	4,710	4,530	5,240	-350	-530	710

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321	553170	CORRESPONDENCE CLERKS	520	470	470	500	-50	-50	30
322	553210	FILE CLERKS	11,760	10,970	10,940	11,690	-790	-820	750
323	553230	ORDER CLERKS--MATERIALS, SERVICE	16,360	15,140	15,470	15,920	-1,220	-890	450
324	553260	PROCUREMENT CLERKS	3,420	3,000	2,780	2,820	-420	-640	40
325	553280	STATISTICAL CLERKS	2,180	2,050	1,880	1,810	-130	-300	-70
326	553320	INTERVIEW CLERKS--EX PERS, WELFA	2,630	2,720	2,560	2,830	90	-70	270
327	553350	CUSTOMER SERVICE REPS--UTILITIES	5,750	5,370	4,980	6,200	-380	-770	1,220
328	553380	BOOKKEEPING, ACCOUNTING CLERKS	79,040	71,900	71,690	72,850	-7,140	-7,350	1,160
329	553410	PAYROLL AND TIMEKEEPING CLERKS	7,590	6,910	6,890	6,870	-680	-700	-20
330	553440	BILLING, COST, AND RATE CLERKS	15,810	14,870	14,730	15,470	-940	-1,080	740
331	553470	GENERAL OFFICE CLERKS	124,110	115,810	115,220	125,960	-8,300	-8,890	10,740
332	560000	EDP AND OFFICE MACHINE OCCUPATIONS	42,650	38,580	38,180	36,910	-4,070	-4,470	-1,270
333	560020	BILLING, POSTING, CALC MACHINE O	5,470	5,270	5,290	4,320	-200	-180	-970
334	560050	DUPPLICATING MACHINE OPERATORS	1,630	1,550	1,570	1,830	-80	-60	260
335	560080	MAIL MACH OPS--PREP AND HANDLING	2,170	1,790	1,820	2,080	-380	-350	260
336	560110	COMPUTER OPS--EX PERIPHERAL EQUI	9,410	8,480	8,110	6,790	-930	-1,300	-1,320
337	560140	PERIPHERAL EDP EQUIPMENT OPERATO	1,030	940	810	600	-90	-220	-210
338	560170	DATA ENTRY KEYERS--EX COMPOSING	18,980	17,080	17,150	17,980	-1,900	-1,830	830
339	560210	DATA KEYERS--COMPOSING	740	630	690	580	-110	-50	-110
340	560990	OFFICE MACHINE OPERATORS, NEC	3,220	2,840	2,740	2,730	-380	-480	-10
341	570000	COMMUNICATIONS, MAIL DISTRIBUTION	38,200	36,220	35,870	35,360	-1,980	-2,330	-510
342	571000	COMMUNICATION EQUIPMENT OPERATORS	12,420	11,430	11,240	9,690	-990	-1,180	-1,550
343	571020	SWITCHBOARD OPERATORS	9,390	8,740	8,800	7,610	-650	-590	-1,190
344	571050	DIRECTORY ASSISTANCE OPERATORS	2,780	2,470	2,210	1,880	-310	-570	-330
346	571110	TELEGRAPH AND TELETYPE OPERATORS	250	220	230	200	-30	-20	-30
348	573000	MAIL, MESSAGE DISTRIBUTION WORKER	25,780	24,790	24,630	25,670	-990	-1,150	1,040
349	573020	MAIL CLKS--EX MAIL MACH OPS, POST	3,860	3,600	3,470	3,810	-260	-390	340
350	573050	POSTAL MAIL CARRIERS	10,990	10,550	10,370	11,170	-440	-620	800
351	573080	POSTAL SERVICE CLERKS	2,900	2,780	2,740	2,950	-120	-160	210
352	573110	MESSENGERS	8,030	7,860	8,050	7,740	-170	20	-310
353	580000	MATERIAL RECORDING, DISPATCHING	119,000	107,440	103,120	115,240	-11,560	-15,880	12,120
354	580020	DISPATCH--POLICE, FIRE, AMBULANC	970	1,000	990	1,090	30	20	100
355	580050	DISPATCH--EX POLICE, FIRE, AMBUL	5,790	5,240	5,360	5,850	-550	-430	490
356	580080	PROD, PLANNING, EXPEDITING CLERK	14,560	12,530	11,310	12,790	-2,030	-3,250	1,480

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357	580110	TRANSPORTATION AGENTS	3,320	3,200	3,060	3,410	-120	-260	350
358	580140	METER READERS--UTILITIES	1,010	1,010	990	1,000	0	-20	10
359	580170	WEIGHERS, MEASURERS--RECORDKEEPI	1,000	910	890	1,000	-90	-110	110
360	580210	MARKING CLERKS	1,220	1,260	1,270	1,410	40	50	140
361	580230	STOCK CLERKS--STOCKROOM, WAREHOU	32,390	28,740	27,470	28,430	-3,650	-4,920	960
362	580260	ORDER FILLERS--WHOLE & RET SALES	9,050	8,290	7,910	8,750	-760	-1,140	840
363	580280	TRAFFIC, SHIPPING, RECEIVING CLK	43,240	39,580	38,530	45,110	-3,660	-4,710	6,580
364	580990	MATERIAL RECORDING, RELATED, NEC	6,450	5,680	5,340	6,400	-770	-1,110	1,060
365	590000	CLERICAL, ADMIN SUPPORT, NEC	27,930	27,190	25,290	26,450	-740	-2,640	1,160
367	600000	SERVICE OCCUPATIONS	547,730	525,590	523,550	586,030	-22,140	-24,180	62,480
368	610000	FIRST-LINE SUP/MGR--SERVICE	31,930	30,860	30,690	33,650	-1,070	-1,240	2,960
369	610020	FIRE FIGHTING & PREVENTION SUPS	2,520	2,550	2,490	2,720	30	-30	230
370	610050	POLICE AND DETECTIVE SUPERVISORS	4,070	4,120	4,000	4,320	50	-70	320
371	610080	HOUSEKEEPING SUPERVISORS	5,040	4,780	4,780	5,330	-260	-260	550
372	610990	FIRST-LINE SUP/MGR SERV WKRS, NE	20,300	19,410	19,420	21,280	-890	-880	1,860
373	630000	PROTECTIVE SERVICE OCCUPATIONS	77,080	78,260	77,500	90,250	1,180	420	12,750
374	630020	FIRE INSPECTORS	270	270	260	290	0	-10	30
376	630080	FIRE FIGHTERS	5,110	5,180	5,040	5,540	70	-70	500
377	630110	POLICE DETECTIVES	2,170	2,200	2,140	2,300	30	-30	160
378	630140	POLICE PATROL OFFICERS	11,560	11,760	11,550	12,440	200	-10	890
379	630170	CORRECTION OFFICERS, JAILERS	3,570	3,620	3,530	4,800	50	-40	1,270
380	630210	PARKING ENFORCEMENT OFFICERS	360	360	350	380	0	-10	30
384	630320	SHERIFFS AND DEPUTY SHERIFFS	4,440	5,340	4,370	5,570	900	-70	1,200
385	630350	DETECTIVES, INVESTIGATORS--EX PU	2,490	2,270	2,500	3,040	-220	10	540
386	630380	RAILROAD, TRANSIT POLICE, SPEC AG	230	230	220	250	0	-10	30
388	630440	CROSSING GUARDS	750	760	740	810	10	-10	70
389	630470	GUARDS AND WATCH GUARDS	39,770	39,860	40,500	47,840	90	730	7,340
390	630990	PROTECTIVE SERVICE WORKERS, NEC	6,360	6,410	6,300	6,990	50	-60	690
391	650000	FOOD, BEV PREP AND SERVICE OCCS	259,450	244,320	241,920	268,040	-15,130	-17,530	26,120
392	650020	HOSTS, HOSTESSES--RESTAURANTS	7,410	7,010	6,890	7,790	-400	-520	900
393	650050	BARTENDERS	9,540	8,860	8,750	8,230	-680	-790	-520
394	650080	WAITERS AND WAITRESSES	60,900	56,970	56,510	63,630	-3,930	-4,390	7,120

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395	650110	FOOD SERVERS--OUTSIDE	2,680	2,490	2,410	2,930	-190	-270	520
396	650140	DINING RM ATTENDANTS, BAR HELPER	20,970	19,920	19,830	21,480	-1,050	-1,140	1,650
397	650170	COUNTER ATTENDANTS--FOOD	15,400	14,440	14,130	15,490	-960	-1,270	1,360
398	650210	BAKERS--BREAD AND PASTRY	5,570	4,940	4,790	5,680	-630	-780	890
399	650230	BUTCHERS AND MEAT CUTTERS	7,930	7,740	7,530	7,140	-190	-400	-390
400	650260	COOKS--RESTAURANT	21,190	19,800	19,630	23,030	-1,390	-1,560	3,400
401	650280	COOKS--INSTITUTION OR CAFETERIA	5,770	5,780	5,890	6,110	10	120	220
402	650320	COOKS--SPECIALTY FAST FOOD	14,320	13,460	13,400	14,920	-860	-920	1,520
403	650350	COOKS--SHORT ORDER	5,680	5,300	5,210	5,940	-380	-470	730
404	650380	FOOD PREPARATION WORKERS	43,660	41,240	40,860	47,170	-2,420	-2,800	6,310
405	650410	COMBINED FOOD PREP AND SERVICE	28,920	27,220	26,850	27,780	-1,700	-2,070	930
406	650990	FOOD SERVICE WORKERS, NEC	9,510	9,150	9,240	10,720	-360	-270	1,480
407	660000	HEALTH SERVICE, RELATED OCCS	50,160	51,680	52,410	62,240	1,520	2,250	9,830
408	660020	DENTAL ASSISTANTS	5,730	6,050	6,200	7,410	320	470	1,210
409	660050	MEDICAL ASSISTANTS	7,110	7,470	6,740	9,320	360	-370	2,580
410	660080	NURSE AIDES, ORDERLIES, ATTENDAN	25,750	26,450	27,450	29,850	700	1,700	2,400
411	660110	HOME HEALTH CARE WORKERS	2,040	2,040	2,410	3,260	0	370	850
412	660140	PSYCHIATRIC AIDES	1,230	1,010	1,030	1,140	-220	-200	110
413	660170	PHYSICAL THERAPY ASSISTANTS & AI	2,670	2,850	2,950	3,910	180	280	960
416	660210	OCCUPATIONAL THERAPY ASSISTANTS	390	410	420	530	20	30	110
417	660990	HEALTH SERVICE WORKERS, NEC	5,240	5,400	5,210	6,820	160	-30	1,610
418	670000	CLEANING, BLDING SERV EX PRIV HOUS	79,340	72,860	73,480	75,830	-6,480	-5,860	2,350
419	670020	MAIDS AND HOUSEKEEPING CLEANERS	16,430	14,930	14,780	16,250	-1,500	-1,650	1,470
420	670050	JANITORS, CLEANERS--EXCEPT MAIDS	53,140	48,540	48,010	50,040	-4,600	-5,130	2,030
421	670080	PEST CONTROLLERS AND ASSISTANTS	1,950	1,890	3,250	2,210	-60	1,300	-1,040
423	670990	CLEANING, BLDING SERV--EX PH, NE	7,820	7,500	7,440	7,330	-320	-380	-110
424	680000	MISC PERSONAL SERVICE OCCUPATIONS	37,140	36,350	35,590	42,460	-790	-1,550	6,870
425	680020	BARBERS	400	400	370	330	0	-30	-40
426	680050	HAIRDRESSERS, HAIRSTYLISTS	10,610	10,390	9,560	11,210	-220	-1,050	1,650
427	680080	MANICURISTS	740	760	670	820	20	-70	150
428	680110	SHAMPOOERS	300	310	280	290	10	-20	10
429	680140	AMUSEMENT, RECREATION ATTENDANTS	6,040	6,250	6,920	7,930	210	880	1,010
430	680170	GUIDES	540	460	450	530	-80	-90	80
431	680210	USHERS, LOBBY ATTENDANTS	3,670	3,150	2,790	3,850	-520	-880	1,060
432	680230	BAGGAGE PORTERS AND BELLHOPS	1,120	1,060	1,040	1,230	-60	-80	190
433	680260	FLIGHT ATTENDANTS	6,770	6,380	6,020	7,130	-390	-750	1,110

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435	680320	WARDROBE ATTENDANTS	380	340	370	460	-40	-10	90
436	680350	PERSONAL AND HOME CARE AIDES	890	950	1,080	1,400	60	190	320
437	680380	CHILD CARE WORKERS	5,470	5,690	5,870	7,020	220	400	1,150
438	680410	FUNERAL ATTENDANTS	210	210	170	260	0	-40	90
439	690000	MISC SERVICE WORKERS	12,630	11,260	11,960	13,560	-1,370	-670	1,600
440	700000	AGRICULTURAL, FORESTRY, FISHING	27,660	26,520	25,950	31,120	-1,140	-1,710	5,170
441	720000	FIRST-LINE SUP/MGR--AG, FOR, FISH	300	280	240	310	-20	-60	70
449	790000	MISC AG, FORESTRY, FISHING	27,360	26,240	25,710	30,810	-1,120	-1,650	5,100
450	790020	FOREST, CONSERVATION WORKERS	200	200	190	200	0	-10	10
451	790050	NURSERY WORKERS	1,910	1,770	1,670	2,330	-140	-240	660
453	790110	GRADERS, SORTERS--AG PRODUCTS	690	660	610	800	-30	-80	190
456	790170	ANIMAL CARETAKERS--EXCEPT FARM	2,180	2,370	2,440	2,660	190	260	220
457	790210	FARM EQUIPMENT OPERATORS	240	250	20	270	10	-220	250
458	790300	GARDENERS, GROUNDSKEEPERS-EX FAR	15,120	14,230	14,140	16,190	-890	-980	2,050
459	790330	PRUNERS	460	440	510	610	-20	50	100
460	790360	SPRAYERS, APPLICATORS	120	110	110	140	-10	-10	30
461	790380	LAWN MAINTENANCE WORKERS	2,600	2,380	2,320	3,040	-220	-280	720
462	790990	OTHER AG, FORESTRY, FISHING	3,190	3,080	2,930	3,740	-110	-260	810
463	798060	VETERINARY ASSISTANTS	650	750	770	830	100	120	60
466	800000	PROD, CONST, OPER, MAT HANDLING	1,013,670	898,180	863,000	939,870	-115,490	-150,670	76,870
467	810000	FIRST-LINE SUP/MGR-BLUE COLLAR	50,230	45,740	41,920	48,680	-4,490	-8,310	6,760
468	810020	FIRST-LINE SUP/MGR-MECH, REPAIR	12,970	11,650	10,960	12,200	-1,320	-2,010	1,240
469	810050	FIRST-LINE SUP/MGR-CONSTRUCTION	6,010	4,890	4,750	5,170	-1,120	-1,260	420
470	810080	FIRST-LINE SUP/MGR-PRODUCTION	17,970	15,220	14,140	15,820	-2,750	-3,830	1,680
471	810110	FIRST-LINE SUP/MGR-TRANSPORTATIO	3,150	2,970	2,860	3,180	-180	-290	320
472	810170	FIRST-LINE SUP/MGR-HELP, LABORER	5,500	4,970	4,840	5,500	-530	-660	660
473	810990	FIRST-LINE SUP/MGR-BLUE COLLAR N	4,630	6,040	4,370	6,810	1,410	-260	2,440
474	830000	INSPECTORS, RELATED OCCUPATIONS	28,920	25,210	22,480	22,880	-3,710	-6,440	400

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475	830020	INSPECTORS, TESTERS, & GRADERS, PRE	11,520	9,280	7,820	7,340	-2,240	-3,700	-480
476	830050	PROD INSPECTORS, TESTERS, & GRAD	14,980	13,280	12,290	12,530	-1,700	-2,690	240
477	830080	TRANSPORTATION INSPECTORS	540	500	490	540	-40	-50	50
478	830990	INSPECTORS, TESTERS, RELATED, NE	1,880	2,150	1,880	2,470	270	0	590
479	850000	MECHANICS, INSTALLERS, REPAIRERS	143,880	127,970	121,480	134,040	-15,910	-22,400	12,560
480	851000	MACHINERY AND RELATED MECHANICS	46,190	41,850	40,550	45,150	-4,340	-5,640	4,600
482	851120	MAINTENANCE MECHANICS--TEXTILE	290	330	350	380	40	60	30
483	851130	MAINTENANCE MECHANICS--SEWING MA	310	320	310	360	10	0	50
484	851160	MAINT MECHANICS--MARINE EQUIP	190	180	170	180	-10	-20	10
486	851180	MAINT MECHANICS--WATER, POWER	1,660	1,710	1,670	1,720	50	10	50
487	851190	MACHINERY MAINT MECHANICS, NEC	8,950	7,860	7,050	7,830	-1,090	-1,900	780
488	851230	MILLWRIGHTS	750	640	680	710	-110	-60	20
489	851280	MACHINERY MAINTENANCE WORKERS	1,650	1,560	1,520	1,650	-90	-130	130
491	851320	MAINT REPAIRERS, GENL UTILITY	32,390	29,250	28,790	32,320	-3,140	-3,600	3,530
492	853000	MOBILE EQUIP MECHANICS, REPAIRERS	42,980	38,010	36,260	40,570	-4,970	-6,720	4,310
493	853020	AUTOMOTIVE MECHANICS	20,500	17,850	17,200	19,640	-2,650	-3,300	2,440
494	853050	AUTOMOTIVE BODY, RELATED REPAIR	6,300	5,760	5,440	6,440	-540	-860	1,000
495	853080	MOTORCYCLE REPAIRERS	260	220	210	240	-40	-50	30
496	853110	BUS AND TRUCK MECHANICS	6,820	6,160	6,030	6,700	-660	-790	670
497	853140	MOBILE HEAVY EQUIP MECH--EX ENGI	2,530	2,060	2,050	2,110	-470	-480	60
499	853210	FARM EQUIPMENT MECHANICS	430	370	330	360	-60	-100	30
500	853230	AIRCRAFT MECHANICS	5,650	5,200	4,660	4,720	-450	-990	60
501	853260	AIRCRAFT ENGINE SPECIALISTS	240	180	150	130	-60	-90	-20
502	853280	SMALL ENGINE SPECIALISTS	250	210	190	230	-40	-60	40
504	855000	COMM EQUIPMENT MECHANICS	2,150	1,960	1,800	1,620	-190	-350	-180
505	855020	CENTRAL OFFICE AND PBX INSTALLER	1,600	1,420	1,270	1,220	-180	-330	-50
506	855050	FRAME WIRES, CENTRAL OFFICE	140	130	110	80	-10	-30	-30
509	855140	RADIO MECHANICS	280	280	300	210	0	20	-90
510	855990	COMM EQUIPMENT MECHANICS, NEC	130	130	120	110	0	-10	-10
511	857000	OTHER ELECTRICAL EQUIP MECHANICS	22,360	20,230	18,820	19,650	-2,130	-3,540	830
512	857020	TELEPHONE, CABLE TV INSTALLERS	5,120	4,730	4,420	4,180	-390	-700	-240
513	857050	DATA PROCESSING EQUIP REPAIRERS	3,340	2,890	2,780	3,450	-450	-560	670
514	857080	ELECT HOME ENTERTAINMENT REPAIR	1,220	1,100	1,090	1,030	-120	-130	-60
515	857111	HOME APPLIANCE AND POWER TOOL RE	2,750	2,630	2,470	2,610	-120	-280	140
516	857140	ELECT MOTOR, AND RELATED REPAIR	390	370	320	340	-20	-70	20
517	857170	ELECT REPAIRERS--COMMERCIAL	1,730	1,430	1,330	1,420	-300	-400	90

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518	857210	POWERHOUSE, RELATED ELECTRICIANS	110	120	110	120	10	0	10
519	857230	ELECT POWERLINE INSTALLERS	3,100	2,860	2,640	3,020	-240	-460	380
520	857260	STATION INSTALLERS--TELEPHONE	2,390	2,120	1,910	1,630	-270	-480	-280
521	857280	ELEC INSTALLERS--TRANS EQUIPMENT	1,020	850	650	610	-170	-370	-40
522	857990	ELECT EQUIP MECHANICS, NEC	1,190	1,130	1,100	1,240	-60	-90	140
523	859000	MISC MECH, INSTALLERS, REPAIRERS	30,200	25,920	24,050	27,050	-4,280	-6,150	3,000
524	859020	HEATING, AC, REFRIG MECHANICS	4,460	3,940	3,640	4,140	-520	-820	500
525	859050	INSTRUMENT REPAIRERS, PRECISION	1,900	1,750	1,510	1,700	-150	-390	190
526	859080	ELECTRONED, BIOMEDL EQUIP REPAIR	360	370	360	400	10	0	40
527	859110	ELECT METER INSTALLERS, REPAIRER	170	170	170	160	0	0	-10
528	859140	CAMERA, PHOTO EQUIP REPAIRERS	230	210	240	270	-20	10	30
529	859170	WATCHMAKERS	270	240	190	200	-30	-80	10
530	859210	MUSICAL INST REPAIRERS AND TUNER	120	130	110	140	10	-10	30
531	859230	LOCKSMITHS AND SAFE REPAIRERS	470	440	390	470	-30	-80	80
532	859260	OFF MACH, CASH REGISTER SERVICER	2,400	1,510	1,440	1,570	-890	-960	130
533	859280	MECH CONTROL, VALVE INSTALLERS	1,230	1,220	1,190	1,330	-10	-40	140
534	859320	ELEVATOR INSTALLERS AND REPAIRER	480	520	550	550	30	60	0
535	859350	RIGGERS	300	280	240	240	-20	-60	0
536	859380	INSTALLER & REPAIRER, MOBILE HOM	310	250	240	280	-60	-70	40
537	859470	COIN, VENDING MACHINE SERVICERS	360	330	270	200	-30	-90	-70
538	859510	BICYCLE REPAIRERS	390	320	330	400	-70	-60	70
539	859530	TIRE REPAIRERS AND CHANGERS	3,090	2,570	2,330	2,660	-520	-760	330
540	859560	MENDERS, GARMENTS AND LINENS	460	460	450	550	0	-10	100
541	859990	MECHS, INSTALLERS, REPAIRERS, NE	13,190	11,210	10,400	11,790	-1,980	-2,790	1,390
542	870000	CONSTRUCTION TRADES	83,880	67,530	66,080	71,120	-16,350	-17,800	5,040
543	871000	CARPENTERS AND RELATED WORKERS	26,320	18,780	19,300	20,490	-7,540	-7,020	1,190
544	871020	CARPENTERS	20,040	15,010	15,610	16,230	-5,030	-4,430	620
545	871050	CEILING TILE INSTALLERS	380	230	220	220	-150	-160	0
546	871080	DRYWALL INSTALLERS	3,000	1,800	1,770	2,060	-1,200	-1,230	290
547	871110	TAPERS	1,780	1,080	1,060	1,230	-700	-720	170
548	871140	LATHERS	1,120	660	640	750	-460	-480	110
550	872000	ELECTRICIANS AND RELATED WORKERS	12,930	11,720	11,280	12,310	-1,210	-1,650	1,030
551	872020	ELECTRICIANS	12,930	11,720	11,280	12,310	-1,210	-1,650	1,030
552	873000	MASONS AND RELATED WORKERS	9,050	6,530	6,270	6,760	-2,520	-2,780	490
553	873020	BRICK MASONS	1,200	890	850	920	-310	-350	70
554	873050	STONE MASONS	530	390	330	380	-140	-200	50

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555	873080	HARD TILE SETTERS	910	590	560	620	-320	-350	60
556	873110	CONCRETE AND TERRAZZO FINISHERS	3,800	2,880	2,860	2,840	-920	-940	-20
557	873140	REINFORCING METAL WORKERS	1,210	940	860	1,110	-270	-350	250
558	873170	PLASTERERS AND STUCCO MASONS	1,400	840	810	890	-560	-590	80
559	874000	PAINTERS AND RELATED WORKERS	7,590	6,130	6,310	6,540	-1,460	-1,280	230
560	874020	PAINTERS, PAPERHANGERS--CONST	7,590	6,130	6,310	6,540	-1,460	-1,280	230
561	875000	PLUMBERS AND RELATED WORKERS	9,170	8,100	7,440	7,500	-1,070	-1,730	60
562	875020	PLUMBERS, PIPEFITTERS, STEAMFITT	8,260	7,280	6,650	6,640	-980	-1,610	-10
564	875080	PIPELAYERS	790	710	690	730	-80	-100	40
565	875110	SEPTIC TANK, SEWER PIPE SERVICER	120	110	100	130	-10	-20	30
566	876000	CARPET, FLOOR INSTALLERS	1,890	1,770	1,610	1,860	-120	-280	250
567	876020	CARPET INSTALLERS	1,380	1,280	1,160	1,340	-100	-220	180
568	876050	FLOOR LAYERS--EX CARPET, WOOD, TIL	510	490	450	520	-20	-60	70
570	877000	SELECTED ROAD, RAIL AND RELATED	3,090	2,820	2,770	3,240	-270	-320	470
573	877080	PAVING, TAMPING-EQUIP OPERATORS	1,470	1,250	1,240	1,450	-220	-230	210
574	877110	HIGHWAY MAINTENANCE WORKERS	980	1,000	990	1,130	20	10	140
575	877140	RAIL--TRACK LAYING, MAINT EQUIP O	640	570	540	660	-70	-100	120
576	878000	CONSTRUCTION TRADES, NEC	8,900	7,160	6,780	7,610	-1,740	-2,120	830
577	878020	INSULATION WORKERS	1,260	860	800	960	-400	-460	160
578	878050	SHEET METAL DUCT INSTALLERS	850	740	670	720	-110	-180	50
579	878080	ROOFERS	3,000	2,580	2,480	2,710	-420	-520	230
580	878110	GLAZIERS	1,130	770	670	700	-360	-460	30
581	878140	STRUCTURAL METAL WORKERS	430	340	330	380	-90	-100	50
582	878170	FENCE ERECTORS	1,060	880	860	1,020	-180	-200	160
583	878990	CONSTRUCTION TRADES WORKERS, NEC	1,170	990	970	1,120	-180	-200	150
584	879000	EXTRACTIVE AND RELATED WORKERS	4,940	4,520	4,320	4,810	-420	-620	490
585	879020	EARTH DRILLERS, EXCEPT OIL AND G	590	540	370	600	-50	-220	230
590	879170	SERVICE UNIT OPERATORS	160	150	80	150	-10	-80	70
591	879210	ROUSTABOUTS	530	550	450	510	20	-80	60
597	879990	CONST, EXTRACTIVE--EX HELPERS, N	3,660	3,280	3,420	3,550	-380	-240	130
598	890000	PRODUCTION OCCUPATIONS, PRECISION	75,660	65,050	60,510	66,710	-10,610	-15,150	6,200
599	891000	METAL WORKERS, PRECISION	35,340	29,160	25,900	27,760	-6,180	-9,440	1,860
600	891020	TOOL AND DIE MAKERS	3,900	3,210	2,870	2,920	-690	-1,030	50

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601	891050	INSTRUMENT MAKERS, PRECISION	120	120	100	120	0	-20	20
602	891080	MACHINISTS	17,810	14,670	12,890	13,670	-3,140	-4,920	780
603	891110	TOOL GRINDERS, FILERS, SHARPENER	2,030	1,630	1,500	1,690	-400	-530	190
605	891170	LAYOUT WORKERS--METAL, PRECISION	630	530	490	550	-100	-140	60
606	891210	SHIPFITTERS	240	230	190	220	-10	-50	30
607	891230	JEWELERS AND SILVERSMITHS	1,650	1,450	1,350	1,510	-200	-300	160
608	891260	HAND WORKERS--JEWELRY, PRECISION	400	360	410	450	-40	10	40
610	891320	SHEET METAL WORKERS	7,380	5,980	5,260	5,710	-1,400	-2,120	450
611	891350	BOILERMAKERS	530	460	410	410	-70	-120	0
612	891990	METAL WORKERS, NEC--PRECISION	650	520	430	510	-130	-220	80
613	893000	WOODWORKERS, PRECISION	9,130	6,500	6,480	7,660	-2,630	-2,650	1,180
614	893020	PATTERN AND MODEL MAKERS--WOOD	380	310	260	370	-70	-120	110
616	893080	WOOD MACHINISTS	2,660	1,980	1,980	2,360	-680	-80	380
617	893110	CABINETMAKERS AND BENCH CARPENTE	3,960	2,770	2,780	3,190	-1,190	-1,180	410
618	893140	FURNITURE FINISHERS	1,840	1,260	1,280	1,510	-580	-560	230
619	893990	WOODWORKERS, NEC--PRECISION	290	180	180	230	-110	-110	50
620	895000	TEXTILE, APPAREL, FURNISHINGS, PRE	12,040	11,290	11,420	12,400	-750	-620	980
621	895020	PATTERNMAKERS AND LAYOUT WORKERS	3,240	3,310	3,300	3,710	70	60	410
622	895050	CUSTOM TAILORS AND SEWERS	2,340	2,120	2,320	2,310	-220	-20	-10
623	895080	UPHOLSTERERS	3,220	2,630	2,590	2,920	-590	-630	330
624	895110	SHOE AND LEATHER WKRS--PRECISION	530	510	470	560	-20	-60	90
625	895140	SPOTTERS--DRY CLEANING	290	280	260	290	-10	-30	30
626	895170	PRESSERS--DELICATE FABRICS	1,440	1,450	1,410	1,490	10	-30	80
627	895210	DYERS, PRECISION	270	290	310	350	20	40	40
628	895990	TEXT, APPAREL, FURNISHINGS, NEC--PR	710	700	760	770	-10	50	10
629	897000	PRINTING WORKERS, PRECISION	5,260	5,080	4,720	5,240	-180	-540	520
630	897020	HAND COMPOSITORS AND TYPESETTERS	150	150	140	150	0	-10	10
631	897050	JOB PRINTERS	460	420	400	340	-40	-60	-60
632	897060	PASTE UP WORKERS	640	580	580	520	-60	-60	-60
633	897070	ELECTRONIC PAGINATION SYSTEM WKR	430	400	390	540	-30	-40	150
635	897120	PHOTOENGRAVERS	190	190	180	190	0	-10	10
636	897130	CAMERA OPERATORS	530	500	480	510	-30	-50	30
637	897150	SCANNER OPERATORS	280	290	260	280	10	-20	20
638	897170	STRIPPERS	1,600	1,580	1,440	1,710	-20	-160	270
639	897180	PLATEMAKERS	520	510	470	510	-10	-50	40
640	897190	LITHO AND PHOTOENGRAVING WORKERS	110	110	90	110	0	-20	20
641	897210	BOOKBINDERS	350	350	290	380	0	-60	90
643	898000	FOOD WORKERS, PRECISION	4,340	4,220	3,670	4,420	-120	-670	750

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644	898020	SLAUGHTERERS AND BUTCHERS		720	670	590	-120	-170	-80
645	898050	BAKERS--MANUFACTURING	2,320	2,220	1,930	2,400	-100	-390	470
646	898080	FOOD BATCHMAKERS	590	660	550	760	70	-40	210
647	898990	FOOD AND TOBACCO WORKERS, NEC	590	620	520	670	30	-70	150
648	899000	OTHER PRECISION WORKERS	9,550	8,800	8,320	9,230	-750	-1,230	910
649	899020	FOUNDRY MOLD, CORE MAKERS, PRECISI	560	450	430	500	-110	-130	70
650	899050	MOLDERS, SHAPERS--EX JEWELRY	600	640	640	660	40	40	20
652	899110	DETAIL DESIGN DECORATORS, PAINTE	230	260	270	270	30	40	0
653	899140	PHOTOGRAPHIC PROCESS WKR, PRECISI	340	350	350	390	10	10	40
654	899170	OPTICAL GOODS WORKERS, PRECISION	240	240	190	280	0	-50	90
655	899210	DENTAL LAB TECHNICIANS, PRECISIO	1,850	1,950	1,770	1,970	100	-80	200
656	899230	MEDICAL LAB APPLIANCE MAKERS	240	120	130	160	-120	-110	30
658	899990	WORKERS, PRECISION--NEC	1,210	1,000	940	1,050	-210	-270	110
659	910000	MACH SETTERS, SET-UP, OPS, TENDERS	193,730	177,210	171,380	181,460	-16,520	-22,350	10,080
660	911000	MACH TOOL CUTTING--METAL, PLASTIC	14,980	12,000	10,930	11,030	-2,980	-4,050	100
661	911020	SAW MACH TOOL SETTERS--METAL, PLA	780	590	530	570	-190	-250	40
662	911050	LATHE MACH SETTERS--METAL, PLAST	2,500	2,000	1,720	1,690	-500	-780	-30
663	911080	DRILLING MACH SETTER--METAL, PLAS	1,580	1,280	1,140	1,150	-300	-440	10
664	911110	MILLING MACH SETTERS--METAL, PLAS	1,330	1,080	970	1,000	-250	-360	30
665	911140	GRINDING MACH SETTER--METAL, PLAS	3,440	2,700	2,430	2,420	-740	-1,010	-10
666	911170	MACH TOOL CUTTING OPS--METAL, PLA	5,350	4,350	4,140	4,200	-1,000	-1,210	60
667	913000	MACH FORMING SETTERS--METAL, PLAST	12,390	10,040	9,390	9,840	-2,350	-3,000	450
668	913020	PUNCH MACH SETTERS--METAL, PLAST	2,580	2,100	2,000	2,010	-480	-580	10
669	913050	PRESS MACH SETTERS--METAL, PLAST	1,910	1,530	1,420	1,540	-380	-490	120
670	913080	SHEAR MACH SETTERS--METAL, PLAST	600	460	420	480	-140	-180	60
671	913110	EXTRUDING MACH SETTERS--METAL, PL	1,150	870	800	990	-280	-350	190
672	913140	ROLLING MACH SETTERS--METAL, PLA	410	330	300	350	-80	-110	50
673	913170	FORGING MACH SETTERS--METAL, PLA	320	270	230	260	-50	-90	30
674	913210	MACH FORMING OPS, TENDERS--MET, PL	5,420	4,480	4,220	4,210	-940	-1,200	-10
675	915000	MACH TOOL SETTERS, OPS--METAL, PLA	5,810	4,790	4,130	4,910	-1,020	-1,680	780
676	915020	NUMERICAL MACH TOOL OPS--MET, PL	2,970	2,410	2,010	2,290	-560	-960	280
677	915050	COMB MACH TOOL SETTERS--MET, PLA	1,290	1,080	970	1,200	-210	-320	230
678	915080	COMB MACH TOOL OPS--METAL, PLAST	1,550	1,300	1,150	1,420	-250	-400	270
679	917000	METAL FABRICATING MACH SETTERS, OP	5,380	4,110	3,850	4,200	-1,270	-1,530	350
680	917020	WELDING MACH SETTERS, SET-UP OPS	2,010	1,430	1,330	1,400	-580	-680	70

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			1990	1992	1994	1999			
681	917050	WELDING MACH OPERATORS AND TENDE	1,350	1,100	1,050	1,080	-250	-300	30
682	917080	SOLDERING, BRAZING MACH SETTERS	170	130	130	140	-40	-40	10
683	917110	METAL FABRICATOR, STRUCT MET PRO	310	210	190	230	-100	-120	40
684	917140		1,540	1,240	1,150	1,350	-300	-390	200
685	919000	METAL, PLAST PROCESS MACH SETTERS	13,860	11,560	11,130	11,800	-2,300	-2,730	670
686	919020	PLAST MOLDING, CASTING MACH SETT	1,120	960	900	960	-160	-220	60
687	919050	PLASTIC MOLDING, CASTING MACH OP	4,630	3,930	3,880	4,070	-700	-750	190
688	919080	METAL MOLDING, MACH SETTER, SET-	1,240	1,020	1,000	1,120	-220	-240	120
689	919110	METAL MOLDING MACH OPS AND TENDE	1,230	1,090	1,080	1,180	-140	-150	100
690	919140	FOUNDRY MOLD ASSEMBLY, SHAKEOUT	410	290	250	330	-120	-160	80
691	919170	ELECTROLYTIC PLATING, MACH SETTE	1,030	800	760	790	-230	-270	30
692	919210	ELECTROLYTIC PLATING, MACH OPS	1,930	1,520	1,430	1,400	-410	-500	-30
693	919230	Nonelectrol plating mach-SETTERS	260	220	210	210	-40	-50	0
695	919280	HEATING EQUIP SETTERS-METAL, PLA	210	180	170	170	-30	-40	0
696	919320	HEAT TREATING MACH OPS, TENDERS	990	880	810	830	-110	-180	20
697	919350	FURNACE OPERATORS AND TENDERS	460	330	300	360	-130	-160	60
699	919990	MISC METAL, PLAST MACH SETTERS O	350	340	340	380	-10	-10	40
700	921000	METAL, PLAST MACH SETTERS, OPS NE	3,840	3,250	3,090	3,490	-590	-750	400
701	921970	CUT, FORM, FAB, PROC MACH SETTER	2,020	1,720	1,620	1,810	-300	-400	190
702	921980	CUT, FORM, FAB, PROCESS MACH OPS	1,820	1,530	1,470	1,680	-290	-350	210
703	923000	WOODWORKING MACH SETTERS, OPS	2,800	1,950	1,990	2,040	-850	-810	50
704	923020	SAWING MACH SETTERS, SET-UP OPS	310	230	230	220	-80	-80	-10
706	923080	SAWING MACH OPS AND TENDERS	820	630	630	650	-190	-190	20
707	923110	WOODWORK MACH SETTERS--EX SAWING	820	500	540	540	-320	-280	0
708	923140	WOODWORK MACH OPS, TNDRS--EX SAWI	850	590	590	630	-260	-260	40
709	925000	PRINTING, BINDING, RELATED WORKER	15,890	14,820	14,210	16,590	-1,070	-1,680	2,380
711	925120	OFFSET LITHOGRAPHIC PRESS SETTER	2,920	2,750	2,510	3,310	-170	-410	800
712	925150	LETTERPRESS-SETTERS, SET-UP OPS	1,070	980	930	900	-90	-140	-30
713	925190	PRINT PRESS SETTERS, SET-UP OPS	570	530	510	610	-40	-60	100
715	925220	SPEC MATERL PRINTING MACH SETTER	780	720	680	820	-60	-100	140
716	925240	SCREEN PRINT MACH SETTERS, SET-U	1,150	1,120	1,130	1,420	-30	-20	280
717	925250	BINDERY MACH SETTERS, SET-UP OPS	750	680	620	710	-70	-130	90
718	925290	PRINT REL SETTERS, SET-UP OPS, N	420	350	350	460	-70	-70	110
719	925410	TYPESETTING, COMPOSING MACH OPS	1,260	1,090	1,080	1,040	-170	-180	-40
720	925430	PRINTING PRESS MACHINE OPS, TEND	4,060	3,770	3,640	4,000	-290	-420	360
721	925450	PHOTOENGRAVING, LITHO MACH OPS	200	200	200	220	0	0	20
722	925460	BINDERY MACHINE OPERATORS	1,380	1,310	1,280	1,440	-70	-100	160
723	925490	PRINT, BINDING, REL MACH OPS, TN	1,330	1,320	1,280	1,660	-10	-50	380

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			1990	1992	1994	1999			
724	927000	TEXTILE, RELATED SETTERS, OPS	64,620	65,540	64,730	68,930	920	110	4,200
725	927020	TEXTILE MACH SETTERS, SET-UP OPS	250	250	250	290	0	0	40
726	927050	TEXTILE OPS, TNDRS--WIND, TWIST, KN	3,130	2,870	3,200	3,280	-260	70	80
727	927080	EXTRUDING MACH OPS, TNDRS--SYN/GL	260	240	220	290	-20	-40	70
729	927140	TEXTILE BLEACHING, DYEING MACH O	1,060	1,060	1,150	1,230	0	90	80
730	927170	SEWING MACHINE OPERATORS--GARMEN	45,210	47,010	45,950	48,010	1,800	740	2,060
731	927210	SEWING MACHINE OPS--NON-GARMEN	7,630	7,010	6,990	7,280	-620	-640	290
732	927230	SHOE SEWING MACHINE OPS, TENDERS	250	250	270	280	0	20	10
733	927260	LNDRY, DRYCLEAN MACH OPS--EX PRE	3,740	3,680	3,650	4,530	-60	-90	880
734	927280	PRESSING MACH OPS--TEXTILE, GARM	3,090	3,170	3,050	3,740	80	-40	690
735	929000	MACH SETTER, SET-UP, OP--EX MET, PLA	54,160	49,150	47,930	48,630	-5,010	-6,230	700
736	929020	ELECTRONIC SEMICONDUCTOR PROCESS	760	600	540	600	-160	-220	60
737	929050	MOTION PICTURE PROJECTIONISTS	1,070	980	980	910	-90	-90	-70
738	929080	PHOTOGRAPHIC PROC MACH OPS, TNDRS	2,200	2,370	2,380	2,190	170	180	-190
740	929140	PAPER GOODS MACH SETTERS, SET-UP	1,520	1,400	1,390	1,640	-120	-130	250
741	929170	COOKING MACH OPS, TNDRS--FOOD, TOBA	600	490	490	570	-110	-110	80
742	929210	ROASTING, BAKING MACH OPS--FOOD	260	290	280	330	30	20	50
743	929230	FURNACE, KILN, KETTLE OPS, TENDE	460	420	420	440	-40	-40	20
744	929260	BOILER OPS, TENDERS--LOW PRESSUR	110	100	110	110	0	0	0
745	929280	COOLING, FREEZING EQUIP OPS, TND	230	240	250	290	10	20	40
746	929320	DAIRY PROC EQUIP OPRS--INC SETTE	550	560	460	680	10	-90	220
747	929350	CHEMICAL EQUIP CONTROLLERS, OPS	1,020	870	860	1,100	-150	-160	240
748	929380	CHEMICAL EQUIPMENT TENDERS	230	230	190	310	0	-40	120
749	929410	CUT, SLICING MACH SETTERS, SET-U	1,550	1,440	1,350	1,310	-110	-200	-40
750	929440	CUTTING, SLICING MACH OPS, TNDRS	1,920	1,740	1,660	1,670	-180	-260	10
751	929470	PAINTERS, TRANSPORTATION EQUIP	2,080	1,740	1,460	1,440	-340	-620	-20
752	929510	PAINT, COAT & SPRAY MACH SETTERS	1,840	1,500	1,480	1,610	-340	-360	130
753	929530	PAINTING, REL MACH OPS, TENDERS	3,140	2,490	2,350	2,650	-650	-790	300
754	929560	CEMENTING, GLUING MACH OPS, TENDE	660	540	520	520	-120	-140	0
755	929580	CLEANING, PICKLING EQUIP OPS, TND	1,020	910	850	1,020	-110	-170	170
756	929620	SEPARATING, STILL MACH OPS, TNDR	490	490	350	650	0	-140	300
757	929650	CRUSHING, MIXING MACH OPS, TNDRS	3,730	3,110	2,960	3,230	-620	-770	270
758	929680	EXTRUDING, FORMING, SETTERS, SET	820	640	620	680	-180	-200	60
759	929710	EXTRUDING, FORMING MACH OPS, TND	2,020	1,770	1,650	1,980	-250	-370	330
760	929740	PACKAGING, FILLING MACH OPS, TND	16,470	15,660	15,740	14,640	-810	-730	-1,100
761	929970	MACHINE SETTERS & SET-UP OPS, NE	3,160	2,780	2,680	2,490	-380	-480	-190
762	929980	MACHINE OPERATORS AND TENDERS, N	6,250	5,790	5,910	5,570	-460	-340	-340
763	930000	ASSEMBLERS AND FABRICATORS--HAND	130,230	108,860	99,740	107,490	-21,370	-30,490	7,750

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764	931000	ASSEMBLERS, PRECISION	29,210	22,680	17,470	16,900	-6,530	-11,740	-570
765	931020	AIRCRAFT ASSEMBLERS--PRECISION	13,700	10,600	7,520	5,780	-3,100	-6,180	-1,740
766	931050	MACH BLDG, OTH PREC MACH ASSEMBL	1,180	890	800	1,060	-290	-380	260
767	931080	FITTERS, STRUCTURAL METAL--PREC	920	750	720	790	-170	-180	50
768	931110	ELECTROMECH EQUIP ASSEMBLERS--PR	2,420	1,770	1,440	1,550	-650	-980	110
769	931140	ELECTRICAL EQUIP ASSEMBLERS--PRE	9,510	7,200	5,790	6,350	-2,310	-3,720	560
770	931170	WATCH ASSEMBLERS, REL--PRECISION	110	100	90	110	-10	-20	20
771	931970	ASSEMBLERS, NEC--PRECISION	1,370	1,370	1,090	1,260	0	-280	170
772	939000	OTHER HAND WORKERS	101,020	86,180	82,270	90,590	-14,840	-18,750	8,320
773	939020	MACHINE ASSEMBLERS	760	590	510	560	-170	-250	50
774	939050	ELECTRICAL, ELECTRONIC ASSEMBLER	10,120	7,570	6,840	7,960	-2,550	-3,280	1,120
775	939080	COIL WINDERS, TAPERS, FINISHERS	570	500	400	470	-70	-170	70
776	939110	GLAZIERS, MANUFACTURING	220	180	170	210	-40	-50	40
777	939140	WELDERS AND CUTTERS	8,510	7,190	6,540	7,390	-1,320	-1,970	850
778	939170	SOLDERERS AND BRAZERS	1,100	860	810	890	-240	-290	80
779	939210	PRESSERS--HAND	1,990	1,530	1,410	1,570	-60	-180	160
780	939230	SEWERS--HAND	1,140	1,200	1,220	1,560	60	80	340
781	939260	CUTTERS AND TRIMMERS--HAND	5,840	5,390	5,250	5,640	-450	-590	390
782	939280	PORTABLE MACHINE CUTTERS	1,370	1,450	1,450	1,340	80	80	-110
783	939320	CARPET CUTTERS, DIAGR, SEAMERS	200	190	180	200	-10	-20	20
784	939350	CANNERY WORKERS	1,360	1,380	1,340	1,410	20	-20	70
785	939380	MEAT, POULTRY, FISH CUTTERS--HAN	1,360	1,280	1,220	1,360	-80	-140	140
786	939410	METAL POURERS, CASTERS--BASIC	380	270	250	320	-110	-130	70
787	939440	MOLDERS AND CASTERS--HAND	640	570	540	530	-70	-100	-10
788	939470	PAINTING, COATING, DECORATING--H	970	840	850	970	-130	-120	120
789	939510	ENGRAVING, PRINTING WORKERS--HAN	150	120	110	130	-30	-40	20
790	939530	GRINDING, POLISHING WORKERS--HAN	4,060	3,310	3,220	3,620	-750	-840	400
791	939560	ASSEMB, FABRICATORS--EX MACH,ELE	46,610	38,500	36,310	38,800	-8,110	-10,300	2,490
792	939990	HAND WORKERS, NEC	14,070	13,260	13,650	15,660	-810	-420	2,010
793	950000	PLANT AND SYSTEM OCCUPATIONS	7,580	7,480	7,300	7,720	-100	-280	420
794	950020	WATER TREATMENT PLANT OPERATORS	750	750	740	810	0	-10	70
795	950050	GAS PLANT OPERATORS	110	100	100	100	-10	-10	0
796	950080	CHEMICAL PLANT, SYSTEM OPERATORS	410	380	360	420	-30	-50	60
797	950110	PETROLEUM PUMP SYSTEM OPERATORS	500	500	510	540	0	10	30
798	950140	PETRO REFINERY, CONTROL PANEL OP	1,350	1,210	1,180	1,070	-140	-170	-110
799	950170	GAUGERS	200	280	280	350	80	80	70
800	950210	POWER PLANT OPS--EX AUXILIARY EQ	1,500	1,580	1,530	1,660	80	30	130
803	950280	POWER DISTRIBUTORS AND DISPATCH	650	640	620	670	-10	-30	50

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804	950320	STATIONARY ENGINEERS	840	840	790	830	0	-50	40
805	950990	PLANT AND SYSTEM OPERATORS, NEC	1,270	1,200	1,190	1,270	-70	-80	80
806	970000	TRANS. MATERIAL MOVING MACHINE OPS	152,120	139,570	137,820	154,750	-12,550	-14,300	16,930
807	971000	MOTOR VEHICLE OPERATORS	102,660	94,010	93,170	104,560	-8,650	-9,490	11,390
808	971020	TRUCK DRIVERS, HEAVY	33,330	29,120	27,850	31,450	-4,210	-5,480	3,600
809	971050	TRUCK DRIVERS, LIGHT	39,810	37,190	37,710	42,920	-2,620	-2,100	5,210
810	971080	BUS DRIVERS	8,670	8,370	8,360	8,770	-300	-310	410
811	971110	BUS DRIVERS--SCHOOL	4,730	4,380	4,610	5,010	-350	-120	400
812	971140	TAXI DRIVERS AND CHAUFFEURS	1,570	1,530	1,520	1,800	-40	-50	280
813	971170	DRIVER/SALES WORKERS	13,370	12,330	12,110	13,500	-1,040	-1,260	1,390
814	971990	MOTOR VEHICLE OPERATORS, NEC	1,180	1,090	1,010	1,110	-90	-170	100
815	973000	RAIL TRANSPORTATION WORKERS	2,270	2,060	1,950	2,370	-210	-320	420
816	973020	RAILROAD CONDUCTORS, YARDMASTERS	950	860	820	990	-90	-130	170
817	973050	LOCOMOTIVE ENGINEERS	230	210	200	240	-20	-30	40
818	973080	RAIL YARD ENGINEERS AND RELATED	360	330	310	380	-30	-50	70
821	973170	RAILROAD BRAKE, SIGNAL, SWITCH O	730	660	620	760	-70	-110	140
823	975000	WATER TRANSPORTATION WORKERS	890	860	850	1,000	-30	-40	150
824	975020	CAPTAINS--WATER VESSEL	180	150	140	180	-30	-40	40
825	975050	MATES--SHIP, BOAT, AND BARGE	150	140	140	160	-10	-10	20
828	975140	ABLE SEAMEN	240	230	220	260	-10	-20	40
829	975170	ORDINARY SEAMEN AND MARINE OILER	170	180	200	230	10	30	30
830	975210	SHIP ENGINEERS	150	160	150	170	10	0	20
831	977000	AIR TRANSPORTATION WORKERS	3,590	3,450	3,300	3,720	-140	-290	420
832	977020	AIRCRAFT PILOTS, FLIGHT ENGINEER	3,590	3,450	3,300	3,720	-140	-290	420
833	978000	MISC TRANSPORTATION WORKERS	14,830	14,160	13,560	15,690	-670	-1,270	2,130
835	978050	SERVICE STATION ATTENDANTS	4,890	4,490	4,360	3,990	-400	-530	-370
836	978080	PARKING LOT ATTENDANTS	6,410	6,490	6,210	8,370	80	-200	2,160
837	978990	TRANS AND RELATED WORKERS, NEC	3,530	3,180	2,990	3,330	-350	-540	340
838	979000	MATERIAL MOVEMENT EQUIP OPERATORS	27,880	25,030	24,990	27,410	-2,850	-2,890	2,420
839	979020	LONGSHORE EQUIPMENT OPERATORS	3,070	2,880	3,000	3,520	-190	-70	520
840	979050	TANK CAR AND TRUCK LOADERS	250	220	210	210	-30	-40	0
846	979230	EXCAVATING, LOADING MACHINE OPS	610	540	590	580	-70	-20	-10
851	979380	GRADER, DOZER, SCRAPER OPERATORS	730	620	660	670	-110	-70	10
852	979410	HOIST AND WINCH OPERATORS	300	280	270	320	-20	-30	50

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Accelerated Novell Networking	CBE Technologies, Inc.	110 S. La Brea #240 Inglewood, CA	90301	310 673-8910	310 673-0371	Donnell Lloyd	9 weeks	
Accelerated Office Automation	CBE Technologies, Inc.	110 S. La Brea #240 Inglewood, CA	90301	310 673-8910	310 673-0371	Donnell Lloyd	9 weeks	
Account Clerk	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	25 weeks	750 hours
Administrative Medical Assistant	American Career College	1160 N. Central Ste. 207 Glendale, CA	91202	818 500-8400	818 500-3987	Geeta Bidaha	16 weeks	
Administration Business Office Operations	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	19 weeks	
Administrative Accounting Assistant	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	15 weeks	
Administrative Assistant	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina, CA	91790	818 960-5173	619 720-7282	Cindy Perry	10 months	
Administrative Assistant	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	10 months	
Administrative Assistant	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	24 weeks	720 hours
Administrative Medical Assistant	American Career College	43 Corporate Park Drive Ste. 204 Irvine CA	92714	714 222-0272	714 222-0559	David Hall	750 hours	M-F 8:30-5 pm 15 week course
Administrative Medical Assistant	Premiere Career College	12901 Ramona Blvd. Irwindale, CA	91706	818 814-2080	818 814-3242	Patricia Talamantes	24 weeks	
Airline Travel Specialist - Prof. Cert.	International Air Academy, Inc.	2980 Inland Empire Blvd. Ontario, CA	91764	909 989-5222	909 948-5330	Tracey Passiello	20 weeks	
Alcohol and Drug Counselor Studies	California Paramedical & Technical College	3745 Long Beach Blvd. Long Beach, CA	90807	310 427-4217	310 427-2920	Tish Schamacher	9 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Alcohol and Drug Counselor Studies	California Paramedical & Technical College	4550 La Sierra Ave. Riverside, CA	92505	909 687-9006	909 687-9739	Diane Arneal	36 weeks	
Apppliance Repair	Brownson Technical School, Inc.	110 Technology Circle #D Anaheim, CA	92805	714 774-9443	714 774-5025	William D. Brown	30 weeks	
Applied Multimedia Design	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	19 weeks	
Armed Security Officer	Excel Security	16621 Maple Ave. Gardena, CA	90248	310 516-8571	310769-5815	Charles W. Rogers	13 weeks	Currently NOT offering program, must have 25 students enrolled.
Armed Security Officer	Gendarme Limited, Inc.	12831 Western Ave. Garden Grove, CA	92641	714 539-7701	714 891-6964	Patricia Dawson	100 hours	
AS/400 RPG Computer Programmer	Helms Group, The	19401 S. Vermont Ave. Ste. J-101 Torrance, CA	90502	310 769-1444	310 769 6138	Reginald Francis	8 weeks	
Assistant Clinical Medical Lab	Health Staff Training Institute	1505 E. 17th Ste. 122 Santa Ana, CA	92705	714 543-9828	714 543-9835	Judee R. Tompkins	19 weeks	
Auto CAD Prof.	Modern Technology Industrial College	2011 West Chapman Ave. Ste. 100 Orange, CA	92668	714 385-1132	714 385-1893	Robert Levesque	10 weeks	
AutoCAD Operations	Right Way Computer Learning Center	22761 Hawthorne Blvd. Torrance, CA	90505	310 375-2005	310 791-2696	Chet Chan	2-3 months	160 hours
Automated Financial	Right Way Computer Learning Center	22761 Hawthorne Blvd. Torrance, CA	90505	310 375-2005	310 791-2696	Chet Chan	3-4 months	240 hours
Automated Office Operations	Orange County Business College	1901 Pacific Ave. West Covina. CA	91790	818 960-5173	619 720-7282	Cindy Perry	8 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
	(El Dorado College)							
Automated Office Operations	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	8 months	
Automated Office Skills	Center for Employment Training	1099 W. Cadadena Dr. Riverside, CA	92501	909 680-0238	909 359-1321	Greg Doonan / Roger Granados	approx. 6 months	Students work at own pace.
Automated Office Skills	Center for Employment Training	1099 W. Cadadena Dr. Riverside, CA	92501	909 680-0238	909 359-1321	Greg Doonan / Roger Granados	approx. 6 months	Students work at own pace.
Automated Office Skills	Center for Employment Training	730 South 8th Street Oxnard, CA	93030	805 487-9821	805 487-7775	Loni Miramontes	31 weeks	
Automotive Diagnostic Tech	Spanish Vocational School	234 South "I" Street San Bernardino, CA	92410	909 384-1090	909 387-0788	Patricia De La Cruz	30 weeks	
Automotive Technician	Automotive Training Corporation of America	1035 E. Bedmar Street Carson, CA	90746	310 639-9610	310 639-1005	Donald Sayers / Roy Hayes	24 weeks	8 weeks externship available
Automotive Technician - Brakes/Alignment	California Career Schools	1100 Technology Circle Anaheim, CA	92805-6329	714 635-6585 or 800 499-6585	714 635-6596	Sindney Smith or Dino Chevalier	20 weeks	500 hour
Automotive Technician - Smog/Tune-Up	California Career Schools	1100 Technology Circle Anaheim, CA	92805-6329	714 635-6585 or 800 499-6585	714 635-6596	Sindney Smith or Dino Chevalier	21 weeks	520 hours
Bank Teller	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	14 weeks	420 hours
Basic Security Officer	Marital Arts Training Academy, Inc.	2024 N. Broadway Ste. 205 Santa Ana, CA	92705	714 547-2566	714 547-0154	Cheryl Ungeman	60 hours basic	+60 hours for specialized training prog..
Bilingual Medical	Glendale College of	1015 Grandview Ave.	91201	818 243-1131	818 243-6028	Haimanot	32 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Assistant	Business & Paramedical	Glendale, CA				Fekadu		
Building Inspector	Addison Career Institute	190 Sierra Court Ste. B-7 Palmdale CA	93550	805 274-4904	805 274-0538	Ed Yard	6 months	
Building Maintenance	Center for Employment Training	1099 W. Cadadena Dr. Riverside, CA	92501	909 680-0238	909 359-1321	Greg Doonan / Roger Granados	approx. 6 months	Students work at own pace.
Building Maintenance	Center for Employment Training	730 South 8th Street Oxnard, CA	93030	805 487-9821	805 487-7775	Loni Miramontes	32 weeks	
Business Account Assistant	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina. CA	91790	818 960-5173	619 720-7282	Cindy Perry	4 months	
Business Accounts Assistant	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	4 months	
Business Administration	Phillips College Los Angeles	15350 Sherman Way Van Nuys, CA	91406	818 376-8400	818 376-8414	Maria Bustamante	18 months	
Business Administration	San Joaquin Valley College	201 New Stine Road Bakersfield, CA	93309	805 834-0126	805 834-1021	Letha McNew / Jan Parker	30 weeks	
Business and Entrepreneurial Success Training	El Camino College	16007 Crenshaw Blvd. Torrance, CA	90506	310 532-3670 or 310 787-6639 310 782-3200	None listed	Frank Stokes	7 weeks	With 6 month follow-up assistance.
Business Application Development Specialist	Professional Development Institute	7100 Knott Ave. Buena Park, CA	90620	714 562-8282	714 518-5944	Anna Brannon	31 weeks	
Business Computer Operations	Pacific Travel Trade School	3807 Wilshire Blvd. 3rd Floor Los Angeles, CA	90010	213 427-1040	None Listed	Dennis Barker	8 1/2 months	
Business Computer Operations	Pacific Travel Trade School	5618 E. Imperial Highway South Gate,	90280	310 869-2122	None Listed	Dennis Barker	8 1/2 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Business Operations	National Education Center (San Bernardino Site)	CA 825 E. Hospitality Lane San Bernardino, CA	92408	909 885-3896	909 885-2396	David Corson	6 months	
Business Ownership System Program	Rancho Santiago Community College	901 E. Santa Ana Blvd. Ste. 115 Santa Ana, CA	92701	714 564-5207 or 714 564-5208	None Listed	Linda Morphew	10 weeks	
CA Preliminary Teach Cred. (Option A) Secondary Math/Science	CSU Dominguez Hills	1000 E. Victoria Carson, CA 90747	90747	310 516-3997	None Listed	Robert DeVries	10 months 46 units	New class with 20-25 students, otherwise when semester begins.
CA Preliminary Tech Cred. (Option A) Elementary-Multiple Subjects (K-6)	CSU Dominguez Hills	1000 E. Victoria Carson, CA	90747	310 516-3997	None Listed	Robert DeVries	10 months 46 units	New class start with 20-25 students, otherwise when semester begins.
CA Preliminary Tech Cred. (Option B) Elementary - Multiple Subjects w/Foreign Language	CSU Dominguez Hills	1000 E. Victoria Carson CA	90747	310 516-3997	None Listed	Robert DeVries	10 months 46 units	New class with 20-25 students, otherwise when semester begins.
CA Preliminary Tech Cred. (Option B) Secondary Math/Science w/Foreign Language	CSU Dominguez Hills	1000 E. Victoria Carson, CA	90747	310 516-3997	None listed	Robert DeVries	10 months 46 units	New class with 20-25 students, otherwise when semester begins.
Calibration Metrology Tester	College of Instrument Technologies	17156 Bellflower Blvd. Bellflower, CA	90706	310 925-1785	310 925-5855	Marcia J. Durbin	16 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Card Dealing--American Poker	Today's Training Center	4901 Patata Street #409 Cudahy, CA	90201	213 560-8881	213 562-5050	Chuck Trigillio	3 months	300 hours
Cardiovascular Technician	Pacific College	3160 Redhill Ave. Costa Mesa, CA	92626	714 662-4402	None Listed	William Nelson	13 months	
Casino Card Dealer	Gaming Academy	3325 West Manchester Blvd. Inglewood, CA	90305	213 750-8762	213 750-8763	Jean Williams	16 weeks	
Cerified Nurse's Assistant	Noval/Educorp	3000 S. Robertson Angeles, CA	90034	310 840-5777	None Listed	Ken Boyle	6 months	
Cert. In C Programming Language	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92634-9480	714 449-7192	714 449-5393	Karen Leaman	6 months	
Cert. in Competitive Manufacturing Ops.	University of California, Irvine Extension	University of California, Irvine	92717	714 824-5488	None Listed	Mario Vidalon	10 weeks each	5-6 different classes
Cert. In Excellence in Manufacturing Mgmt.	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92364-9480	714 449-7192	714 449-5393	Karen Leaman	16 weeks	
Cert. In Industrial Distribution	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92634-9480	714 449-7192	714 449-5393	Karen Leaman	1 year	
Cert. In Microcomp. Digital Sys. Eng.	University of California, Irvine Extension	University of California, Irvine	92717	714 824-5488	None Listed	Mario Vidalon	10 weeks each	5-6 different classes
Cert. In Microcomp. System Design	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92634-9480	714 449-7192	714 449-5393	Karen Leaman	1 year	
Cert. In Mortgage Banking	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92634-9480	714 449-7192	714 449-5393	Karen Leaman	1 1/2 years	
Cert. In Object - Oriented Programming	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92634-9480	714 449-7192	714 449-5393	Karen Leaman	1 year	
Cert. In Real Estate	CSU Fullerton	800 N. State College	92364-	714 449-7192	714 449-5393	Karen Leaman	1 year	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Appraisal	Extension	Bld. Fullerton, CA	9480					
Cert. In Technical Writing	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92634-9480	714 449-7192	714 449-5393	Karen Leaman	1 year	
Cert. In UNIX Operating Systems	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92634-9480	714 449-7192	714 449-5393	Karen Leaman	1 year	
Certified A+ Hardware Technician	Professional Development Institute	7100 Knott Ave. Buena Park, CA	90620	714 562-8282	714 518-5944	Anna Brannon	25 weeks	
Certified Network Engineer	Fullerton College	321 E. Chapman Fullerton, CA	92632	714 563-0768	None Listed	Ruth	13 weeks	
Certified Nurse Asst. / Home Health Aide	Four-D- Success Academy, Inc.	952 Mt. Vernon Ave. Ste. B Colton, CA	92324	909 783-9331 (Colton) All Sites 800 600-5422	909 783-9334	Linda Smith	10 weeks	
Certified Nurse Asst. / Home Health Aide	Four-D-Success Academy, Inc.	3974 Jurupa Ste. 105 Riverside, CA	92506	800 600-5422	909 783-9334	Linda Smith	10 weeks	
Certified Nurse's Assistant	Noval/ Educorp	3737 Atlantic Ave. Long Beach, CA	90807	800 600-5422	None listed	Linda Smith	10 weeks	Evening Classes Avail.
Certified Nurse's Assistant	Noval/Educorp	Nova 520 N. Euclid Ave. Ontario, CA	91762	909 984-5027	None Listed	Ken Boyle	6 months	
Certified Nurse's Assistant	Noval/Educorp	Nova 12449 Putnam St. Whittier, CA	90602	310 945-9191	None Listed	Ken Boyle	6 months	
Clerical Data Entry Receptionist	Health and Career Institute, Inc.	Educorp 230 E. Third St. Long Beach, CA	90802	310 437-0501	310 287-2344	Ken Boyle	6 months	
Clerical Review	Technology Development Center	2001 Tyler Ave. Ste. 204 South El Monte, CA	91733	818 401-1395	818 401-3707	Irene E. Portillo / Richard Contreras	16 weeks	
Clinical X-Ray Technician	Noval/ Educorp	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	10 weeks	300 hours
		Nova 520 N. Euclid Ave. Ontario, CA	91762	909 984-5027	None Listed	Ken Boyle	18 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Clinical Assistant	Premiere Career College	12901 Ramona Blvd. Irwindale, CA	91706	818 814-2080	818 814-3242	Patricia Talamantes	28 weeks	
Clinical Medical Assistant	American Career College	1160 N. Central Ste. 207 Glendale, CA	91202	818 500-8400	818 500-3987	Geeta Bidaha	9 months	
Clinical X-Ray Tech	Noval/Educorp	3000 S. Robertson Angeles, CA	90034	310 840-5777	None Listed	Ken Boyle	9 months	
Clinical X-Ray Tech	Noval/Educorp	Nova 12449 Purnam St. Whittier, CA	90602	310 945-9191	None Listed	Ken Boyle	9 months	
Clinical X-Ray Tech	Noval/Educorp	Educorp 230 E. Third St. Long Beach, CA	90802	310 437-0501	310 287-2344	Ken Boyle	9 months	
CNE / Window	New Horizons Computer Learning Center	303 N. Glen Oaks Ste. 230 Burbank, CA	91502	818 841-8039	714 436-6382	David Cohen	19 weeks	
CNE / Windows NT	New Horizons Computer Learning Center	1231 East Dyer Rd. Ste. 140 Santa Ana, CA	92705-5605	714 556-1220 Ext. 334	714 436-6382	David Cohen	19 weeks	
CNE / Windows NT	New Horizons Computer Learning Center	3337 Michelson #37-1 Irvine, CA	92715	714 556-1220 Ext. 334	714 436-6382	David Cohen	20 weeks	
Commercial Truck Driver	California Career Schools	1100 Technology Circle Anaheim, CA	92805-6329	714 635-6585	714 635-6596	Sindney Smith	6 weeks	240 hours
Computerized Accounting	Adelante Career Institute	14647 Titus Street, Ste. 100 Panarama City	91402	818 908-9912	818 908-9975	Janet Grossfeld	7 months	
Computer Accounting	Ameritech College of Van Nuys	5445 Lankershim Blvd. North Hollywood CA	91601	818 901-7311	818 761-6558	Jari Simpson	15 weeks	
Computer Aided Drafting	Modern Technology Industrial College	2011 West Chapman Ave. Ste. 100 Orange, CA	92668	714 385-1132	714 385-1893	Robert Levesque	24 weeks	
Computer Aided Drafting	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	29 weeks	870 hours
Computer Aided Drafting and Design	Westech College	500 W. Mission Blvd. Pomona, CA	91766	909 622-6486	909 622-5045	Walter Grant / Eric Hyde	30 weeks	900 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Computer Aided Drafting/Design	Advanced Computing Institute	3470 Wilshire Blvd. Ste. 1100 Los Angeles, CA 90010	90010	213 383-8999	213 383-5765	Daniel Mainea /Fanny Washington	18 weeks	
Computer Based Business Skills	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr.	8 weeks	260 hours
Computer Based Business Skills	Larson Training Centers, Inc.	637 E. Albertoni Street Ste. 100 Carson, CA	90746	310 352-3811	None listed	Frank Talarico, Jr.	8 weeks	260 hours
Computer Business Info. Systems	Advanced Computing Institute	3470 Wilshire Blvd., Ste. 1100 Los Angeles, CA 90010	90010	213 383-8999	213 383-5765	Daniel Mainea /Fanny Washington	18 weeks	
Computer Business Systems	Computer Learning Center	222 S. Harbor Blvd. Anaheim, CA	92805	714 956-8060	714 239-6508	Sandra Henigman	7 months	
Computer Business Systems	Computer Learning Center	3130 Wilshire Blvd. Los Angeles, CA	90010	213 384-6311	213 384-9744	Michael Mestas / Michael D. Nielsen	7 months	720 hours = 30 weeks
Computer Business Systems (2)	Computer Education Institute	5455 Garden Grove Blvd. #359 Westminster, CA	92683	714 472-4192	714 472-2015	Amir Banniassad	30 wk. & 20 wk. programs	
Computer Electronic Technology	Advanced Computing Institute	3470 Wilshire Blvd. Ste. 1100 Los Angeles, CA	90010	213 383-8999	213 383-5765	Daniel Mainea /Fanny Washington	18 weeks	
Computer Electronics & Technology	Computer Learning Center	3130 Wilshire Blvd. Los Angeles, CA	90010	213 384-6311	213 384-9744	Michael Mestas / Michael D. Nielsen	9 months	920 hours = 38 weeks
Computer Electronics Technology	Phillips College Los Angeles	15350 Sherman Way Van Nuys, CA	91406	818 376-8400	818 376-8414	Maria Bustamante	18 months	
Computer Enhancement	El Camino College	16007 Crenshaw Blvd. Torrance, CA	90506	310 532-3670 or 310 787-6639 310 782-3200	None listed	Sue Shafer (ask for TOP lab)	2 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Computer Info. Systems	Phillips College Los Angeles	15350 Sherman Way Van Nuys, CA	91406	818 376-8400	818 376-8414	Maria Bustamante	18 months	
Computer Installation & Service Technician	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	5 months	
Computer Installation & Service Technician	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina, CA	91790	818 960-5173	619 720-7282	Cindy Perry	8 months	
Computer Network Administration	Computer Learning Center	222 S. Harbor Blvd. Anaheim, CA	92805	714 956-8060	714 239-6508	Sandra Henigman	7 months	
Computer Network Administration	Computer Learning Center	3130 Wilshire Blvd. Los Angeles, CA	90010	213 386-6311	213 384-9744	Michael Mestas / Michael D. Nielsen	7 months	720 hours = 30 weeks
Computer Network Technology	United Education Institute	3727 W. 6th St. Los Angeles, CA	90020	213 487-5558	213 487-1090	Joanne E. Rose	30 weeks	720 hours
Computer Network Technology	United Education Institute	401 S. Glen Oaks Blvd. Burbank, CA	91502	818 953-4760	818 953-4770	Joanne E. Rose	30 weeks	720 hours
Computer Network Technology	United Education Institute	7311 Van Nuys Blvd. Van Nuys, CA	91405	818 994-5090	818 994-2607	Joanne E. Rose	30 weeks	720 hours
Computer Networking / Programming	Computer Education Institute	6750 Division St. Ste. 106 Riverside, CA	92501	909 276-1704	None Listed	Amir Banniasad	30 weeks	
Computer Networking/ Programming	Computer Education Institute	460 E. Carson Plaza Dr. Carson, CA	90746	310 532-6328	None Listed	Amir Banniasad	30 weeks	
Computer	Computer	5455 Garden Grove	92683	714 472-4192	714 472-2015	Amir	30 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Networking/Programming	Education Institute	Blvd. #359 Westminster, CA				Banniassad		
Computer Networking/Programming	Computer Education Institute	23181 Verdugo Drive #104-A Laguna Hills, CA	92653	714 472-4192	714 472-2015	Amir Banniassad	30 weeks	
Computer Network/Technology	United Education Institute	201 E. 4th Street Santa Ana, CA	92701	714 973-2460	714 285-1028	Joanne E. Rose	30 weeks	720 hours
Computer Office Skills (2)	Computer Education Institute	6750 Division St. Ste. 106 Riverside, CA	92501	909 276-1704	None Listed	Amir Banniassad	30 weeks & 20wks.	
Computer Office Specialist	United Education Institute	201 E. 4th Street Santa Ana, CA	92701	714 973-2460	714 285-1028	Joanne E. Rose	30 weeks	720 hours
Computer Office Specialist	United Education Institute	3727 W. 6th St. Los Angeles, CA	90020	213 487-5558	213 487-1090	Joanne E. Rose	30 weeks	720 hours
Computer Office Specialist	United Education Institute	6812 Pacific Blvd. Huntington Park, CA	90255	213 588-6262	213 588-5484	Joanne E. Rose	30 weeks	720 hours
Computer Office Specialist	United Education Institute	7311 Van Nuys Blvd. Van Nuys, CA	91405	818 994-5090	818 994-2607	Joanne E. Rose	30 weeks	720 hours
Computer Office Specialist	United Education Institute	401 S. Glen Oaks Blvd. Burbank, CA	91502	818 953-4760	818 953-4770	Joanne E. Rose	30 weeks	720 hours
Computer Operating Specialist	California Paramedical & Technical College	4550 La Sierra Ave. Riverside, CA	92505	909 687-9006	909 687-9739	Diane Arneal	10 months	
Computer Operation / Word processing	Modern Technology Industrial College	2011 West Chapman Ave. Ste. 100 Orange, CA	92668	714 385-1132	714 385-1893	Robert Levesque	12 weeks	
Computer Operator	California Paramedical & Technical College	4550 La Sierra Ave. Riverside, CA	92505	909 687-9006	909 687-9739	Diane Arneal	45 weeks	
Computer Program	Computer Learning	222 S. Harbor Blvd.	92805	714 956-8060	714 239-6508	Sandra	7 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Technician	Center	Anaheim, CA				Henigman		
Computer Programming Networking Systems Engineer	CSU, Long Beach Foundation	5912 Bolsa Ave. #106 Huntington Beach, CA	92649	310 985-7190 or 310 985-5233	310 985-7188	C. V. Chelapi	5 months	
Computer Repair Technician	Spanish Vocational School	234 South "I" Street San Bernardino, CA	92410	909 384-1090	909 387-0788	Patricia De La Cruz	30 weeks	
Computer Service / Maintenance & Novell Networking	Monterey Park College	583 Monterey Pass Rd. Monterey Park, CA	91754	818 576-2444	818 576-2540	Michael Burton	18 weeks	Full-time
Computer Service /Maintenance & Novell Networking	Monterey Park College	20265 Valley Blvd. #F1 Walnut, CA	91789	909 598-1994	None Listed	Michael Burton	18 weeks	
Computer Support Specialist	Monterey Park College	20265 Valley Blvd. #F1 Walnut, CA	91789	909 598-1994	None Listed	Michael Burton	12 weeks	
Computer System Programming	Advanced Computing Institute	3470 Wilshire Blvd. Ste. 1100 Los Angeles, CA	90010	213 383-8999	213 383-5765	Daniel Mainea / Fanny Washington	18 weeks	
Computer Systems & Programming	Computer Learning Center	3130 Wilshire Blvd. Los Angeles, CA	90010	213 384-6311	213 384-9744	Michael Mestas / Michael D. Nielsen	7 months	720 hours = 30 weeks
Computer Systems / Business Science	Spanish Vocational School	234 South "I" Street San Bernardino, CA	92410	909 384-1090	909 387-0788	Patricia De La Cruz	30 weeks	
Computer Systems Operation	Computer Learning Center	222 S. Harbor Blvd. Anaheim, CA	92805	714 956-8060	714 239-6508	Sandra Henigman	7 months	
Computer Systems Repair	Computer Education Institute	23181 Verdugo Drive #104-A Laguna Hills, CA	92653	714 472-4192	714 472-2015	Amir Banniasad	30 weeks / & 20 week program	
Computer Systems	Computer	5455 Garden Grove	92683	714 472-4192	714 472-2015	Amir	30 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Repair	Education Institute	Blvd. #359 Westminster, CA				Banniassad	& 20 weeks program	
Computer Systems Repair	Computer Education Institute	460 E. Carson Plaza Dr. Carson, CA	90746	310 532-6328		Amir Banniassad	30 weeks & 20 weeks	
Computer Systems Repair	Computer Education Institute	6750 Division St. Ste.106 Riverside, CA	92501	909 276-1704		Amir Banniassad	30 weeks & 20 weeks	
Computer Systems Repair Technician	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	30 weeks	900 hours
Computer Travel, Hospitality & Business Operations	Modern Technology Industrial College	2011 West Chapman Ave. Ste. 100 Orange, CA	92668	714 385-1132	714 385-1893	Robert Levesque	20 weeks	
Computerized Accounting	Westech College	500 W. Mission Blvd. Pomona, CA	91766	909 622-6486	909 622-5045	Walter Grant / Eric Hyde	30 weeks	900 hours
Computerized Accounting	Modern Technology Industrial College	2011 West Chapman Ave. Ste. 100 Orange, CA	92668	714 385-1132	714 385-1893	Robert Levesque	15 weeks	
Computerized Accounting	Monterey Park College	583 Monterey Pass Rd. Monterey Park, CA	91754	818 576-2444	818 576-2540	Michael Burton	18 weeks	
Computerized Accounting	Monterey Park College	20265 Valley Blvd. #F1 Walnut, CA	91789	909 598-1994	None Listed	Michael Burton	18weeks	
Computerized Accounting	National Education Center (San Bernardino Site)	825 E. Hospitality Lane San Bernardino, CA	92408	909 885-3896	909 885-2396	David Corson	3 months	
Computerized Accounting	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	26 weeks	780 hours
Computerized Accounting Assistant	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina, CA	91790	818 960-5173	619 720-7282	Cindy Perry	5 months	
Computerized	Monterey Park	583 Monterey Pass Rd.	91754	818 576-2444	818 576-2540	Michael	12 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Bookkeeping	College	Monterey Park, CA				Burton		
Computerized Bookkeeping	Monterey Park College	20265 Valley Blvd. #F1 Walnut, CA	91789	909 598-1994	None Listed	Michael Burton	12 weeks	
Computerized Bookkeeping	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina, CA	91790	818 960-5173	619 720-7282	Cindy Perry	8 months	
Computerized Bookkeeping	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	8 months	
Computerized Bookkeeping and Accounting	Health and Career Institute, Inc.	2001 Tyler Ave. Ste. 204 South El Monte, CA	91733	818 401-1395	818 401-3707	Irene E. Portillo / Richard Contreras	24 weeks	
Computerized Inventory Specialist	Health and Career Institute, Inc.	2001 Tyler Ave. Ste. 204 South El Monte, CA	91733	818 401-1395	818 401-3707	Irene E. Portillo / Richard Contreras	16 weeks	
Computerized Junior Accountant	Glendale College of Business & Paramedical	1015 Grandview Ave. Glendale, CA	91201	818 243-1131	818 243-6028	Haimanot Fekadu	36 weeks	
Computerized Office	Adelante Career Institute	14647 Titus Street, Ste. 100 Panorama City CA	91402	818 908-9912	818 908-9975	Janet Grossfeld	7 months	
Computerized office assistant	Glendale College of Business & Paramedical	1015 Grandview Ave. Glendale, CA	91201	818 243-1131	818 243-6028	Haimanot Fekadu	32 weeks	
Computerized Office Occupation	Southern California Institute of Technology (SCIT)	1900 W. Crescent Ave. Bldg. B Anaheim, CA	92801	714 520-5552	714 520-4520	Al Thompson	6 months	
Computerized Office Skills (2)	Computer Education Institute	460 E. Carson Plaza Dr. Carson, CA	90746	310 532-6328		Amir Banniassad	30 weeks & 20	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Computerized Office Skills (2)	Computer Education Institute	23181 Verdugo Drive #104-A Laguna Hills, CA	92653	714 472-4192 or 800 225-5187	714 472-2015	Amir Banniassad	30 weeks/ & 20 week program	
Computerized Office Specialist	Career Management Institute	1855 W. Katella Ave. Ste. 150 Orange, CA	92667	714 771-5077	714 771-2374	Joel Ayala	10 weeks	
Computerized Programming Systems	Computer Learning Center	222 S. Harbor Blvd. Anaheim, CA	92805	714 956-8060	714 239-6508	Sandra Henigman	7 months	
Construction Area	Pacific Asian Consortium Employment (PACE)	2525 West 8th Street Los Angeles, CA	90057	213 389-2373	213 386-2570	Cindy Cheng	10 months	
Construction Inspection Technology	CSU, Long Beach Foundation	5912 Bolsa Ave. #106 Huntington Beach, CA	92649	310 985-7190 or 310 985-5233	310 985-7188	C. V. Chelapati	4-6 months	
Contractor's Licensing	Avis Contractor's Licence Service Center	9815 E. Palm Ave. Bellflower CA	90706	818 785-6550	818 785-2874	Peter Gascon	7 weeks	7 wks. for basic class. 47 different classes available
Contractor's Licensing	Avis Contractor's Licence Service Center	14649 Victory Blvd. Ste. 24 Van Nuys CA	91411	818 785-6550	818 785-2874	Peter Gascon	7 weeks	7 wks. for basic class. 47 different classes available
Cosmetician	Career Academy of Beauty - Anaheim Site	663 North Euclid Anaheim, CA	92801	714 776-8400	None Listed	Debbie Steward	4 months	
Cosmetician	Career Academy of Beauty - Seal Beach Site	1237 Seal Beach Blvd. Seal Beach, CA	90740	310 431-1366	None Listed	Debbie Steward	4 months	
Cosmetology	Career Academy of Beauty - Anaheim Site	663 North Euclid Anaheim, CA	92801	714 776-8400	None Listed	Debbie Steward	10 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Cosmetology	Career Academy of Beauty -Seal Beach Site	1237 Seal Beach Blvd. Seal Beach, CA	90740	310 431-1366	None Listed	Debbie Steward	10 months	
Cosmetology	Colleen O'Hara's Beauty Academy	109 W. 4th Street 2nd Floor Santa Ana, CA	92701	714 568-5399	714 568-0331	Jim Buffington	10 months full-time	Spanish ONLY this location. Part-time program is 20-24 hrs. per week.
Cosmetology	Colleen O'Hara's Beauty Academy	102 N. Glassell St. Orange, CA	92666	714 633-5950 or 714 568-5399	714 633-4139	Jim Buffington	10 months full-time	Part-time 20-24 hrs. per week.
Credit & Collection	Career Management Institute	1855 W. Katella Ave. Ste. 150 Orange, CA	92667	714 771-5077	714 771-2374	Joel Ayala	8 weeks	
Customer Reception/Collection	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	24 weeks	720 hours
Data Entry	Crest Computer Institute	10630 Town Center Drive #101 Rancho Cucamonga, CA	91730	909 989-9123	909 486-7573	Booker T. Lastier, Jr.	12 weeks	
Data Entry Specialist	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina. CA	91790	818 960-5173	619 720-7282	Cindy Perry	8 months	
Data Entry Specialist	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	8 months	
Data Entry Specialist	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	12 weeks	360 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Data Entry, Inventory	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	20 weeks	600 hours
Dental Assistant	Concorde Career Institute	4150 Lankershim Blvd. North Hollywood, CA	91602	818 766-8151	818 766-7587	Jeanne Thompson / Bonnie Bossi	34 weeks	
Dental Assistant	Concorde Career Institute (San Bernardino Site)	570 West 4th Street San Bernardino, CA	92401	909 8848891	909 384-1768	Mary Ellen Kontra	34 weeks	
Dental Assistant	National Education Center (Orange Site)	1120 W. La Veta Ave #100 Orange, CA	92668	714 953-6500	714 953-4163	Marlene Cerbasi / Pamela Burns	8 months	Includes externship Night - 9 months includes externship
Dental Assistant	Noval/Educorp	Nova 520 N. Euclid Ave. Ontario, CA	91762	909 984-5027	None Listed	Ken Boyle	9 months	
Dental Assistant	Noval/Educorp	3000 S. Robertson Los Angeles, CA	90034	310 840-5777	None Listed	Ken Boyle	9 months	
Dental Assistant	Noval/Educorp	Nova 12449 Putnam St. Whittier, CA	90602	310 945-9191	None Listed	Ken Boyle	9 months	
Dental Assistant	Noval/Educorp	Educorp 230 E. Third St. Long Beach, CA	90802	310 437-0501	310 287-2344	Ken Boyle	9 months	
Dental Assistant	San Joaquin Valley College	201 New Stine Road Bakersfield, CA	93309	805 834-0126	805 834-1021	Letha McNew / Jan Parker	33 weeks	
Desktop Production/Desktop Publishing	American Institute of Printing and Graphic Art	9825 S. Painter Ave. Ste. A Whittier, CA	90605	310 903-1212	310 903-1543	Linda Wollaston / Monica Wolf	90 days	
Desktop Publishing	Right Way Computer Learning Center	22761 Hawthorne Blvd. Torrance, CA	90505	310 375-2005	310 791-2696	Chet Chan	4-5 months	280 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Desktop Publishing	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	12 weeks	360 hours
Desktop Publishing /Graphic Design	Health and Career Institute, Inc.	2001 Tyler Ave. Ste. 204 South El Monte, CA	91733	818 401-1395	818 401-3707	Irene E. Portillo / Richard Contreras	26 weeks	
Diagnostic Medical Sonography	Noval/ Educorp	3000 S. Robertson Los Angeles, CA	90034	310 840-5777	None Listed	Ken Boyle	12 months	
Digital Multi-Media Technician	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	26 weeks	780 hours
Drafting with CAD	Southern California Institute of Technology (SCIT)	1900 W. Crescent Ave. Bldg. B Anaheim, CA	92801	714 520-5552	714 520-4520	Al Thompson	6 months	
Electronic Assembly	Center for Employment Training	730 South 8th Street Oxnard, CA	93030	805 487-9821	805 487-7775	Loni Miramontes	23 weeks	
Electronic Computer Technology	Ameritech College of Van Nuys	5445 Lankershim Blvd. North Hollywood CA	91601	818 901-7311	818 761-6558	Jari Simpson	15 weeks	
Electronic Copy Preparation Tech.	American Institute of Printing and Graphic Art	9825 S. Painter Ave. Suite A Whittier CA	90605	310 903-1212	310 903-1543	Linda Wollaston / Monica Wolf	90 days	
Electronic Engineering / Computer Technician	Southern California Institute of Technology (SCIT)	1900 W. Crescent Ave. Bldg. B Anaheim, CA	92801	714 520-5552	714 520-4520	Al Thompson	6 months	
Electronic Engineering Technician w/Robotics	Southern California Institute of Technology (SCIT)	1900 W. Crescent Ave. Bldg. B Anaheim, CA	92801	714 520-5552	714 520-4520	Al Thompson	2 year degree program	Can be completed sooner if student chooses to.
Electronic Medical Claims Processing	Harbor Medical College	1231 Cabrillo Ave. #201 Torrance, CA	90501	310 320-3200	310 320-7030	Jeffery Gearhart	13 weeks	
Electronic Medical	Summit Career	1330 E. Cooley Drive	92324	909 422-8950	909 422-8955	Eric Rudie	9 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Claims Processing	College, Inc.	Colton, CA						
Electronic Technician	Adelante Career Institute	14647 Titus Street, Ste. 100 Panorama City, CA	91402	818 908-9912	818 908-9975	Janet Grossfeld	7 months	
Electronics Engineer/Computer Tech.	Practical Schools	900 E. Ball Road Anaheim, CA	92805	714 535-6000	714 535-1538	Sue Kirtland	30 weeks	900 hours
Environment Assessment Phase II	Appraisal Training Services, Inc.	3919 Westerly Place Ste. 100 Newport Beach, CA	92660	714 250-4111	714 250-9044	Robert D. Faye	7 months	
Environment Assessment Phase I	Appraisal Training Services, Inc.	3919 Westerly Place Ste. 100 Newport Beach, CA	92660	714 250-4111	714 250-9044	Robert D. Faye	7 months	
Environment Assessment Phase I	Appraisal Training Services, Inc.	23801 Calabasas Rd., Ste. 2001 Calabasas, CA	91308	818 223-8444	818 223-8866	Frank Bialobreski	7 months	
Environment Assessment Phase II	Appraisal Training Services, Inc.	23801 Calabasas Rd., Ste. 2001 Calabasas, CA	91308	818 223-8444	818 223-8866	Frank Bialobreski	7 months	
Environment Systems Engineering	CSU, Long Beach Foundation	5912 Bolsa Ave. #106 Huntington Beach, CA	92649	310 985-7190 or 310 985-5233	310 985-7188	C. V. Chelapati	6 months	
Executive Entrepreneur Program	Infotec EEP, Inc.	Pepperdine University Plaza 400 Corporate Pointe Culver City, CA	90230	310 568-3355	None Listed	Dr. Stephen D. Slingby	12 weeks	+ 2 years continuing courses
Executive Entrepreneur Program	Infotec EEP, Inc.	The Long Beach Center - One World Trade Center, Ste. 200 Long Beach, CA	90381-0200	310 495-0988	None Listed	Dr. Stephen D. Slingby	12 weeks	+ 2 years continuing courses
Executive	Infotec EEP, Inc.	Ventura County Center	91361	805 449-1181	None Listed	Dr. Stephen D.	12 weeks	+ 2 years

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Entrepreneur Program		- Westlake Center Plaza II 2829 Towngate Road, Ste. 180 Westlake Village, CA				Slingsby		continuing courses
Executive Entrepreneur Program	Infotec EEP, Inc.	3100 S. Harbor Blvd. Ste. 110 Santa Ana, CA	92704	714 755-7776	714 755-7797	Dr. Stephen D. Slingsby	12 weeks	+ 2 year continuing courses
Executive Entrepreneur Program	Infotec EEP, Inc.	The San Fernando Valley Center - 16830 Ventura Blvd. Encino, CA	91436	818 907-5110	None Listed	Dr. Stephen D. Slingsby	12 weeks	+ 2 years continuing courses
Executive Entrepreneur Program	Infotec EEP, Inc.	The Orange County Center 2151 Michelson Drive Irvine, CA	92715	714 833-8221	None Listed	Dr. Stephen D. Slingsby	12 weeks	+ 2 years continuing courses
Financial Records Processor	Premiere Career College	12901 Ramona Blvd. Irwindale, CA	91706	818 814-2080	818 814-3242	Patricia Talamantes	24 weeks	
Foreign Trade and Transportation	Travel and Trade Career Institute	3635 Atlantic Ave. Long Beach, CA	90807	310 426-8841	310 988-0464	Arelene Almaleh	14 weeks	OR 30 weeks
Front Office	Monterey Park College	583 Monterey Pass Rd. Monterey Park, CA	91754	818 576-2444	818 576-2540	Michael Burton	5 months	7 months (nights)
Front Office	Monterey Park College	20265 Valley Blvd. #F1 Walnut, CA	91789	909 598-1994	None Listed	Michael Burton	5 months	7 months (nights)
Front Office / Receptionist	Harbor Medical	1231 Cabrillo Ave. #201 Torrance, CA	90501	310 320-3200	310 320-7030	Jeffery Gearhart	12 weeks	
Gasoline and Diesel Automotive Service	DMC Automotive Training School	530 Cameron Street Placentia, CA	92670	714 528-8336 714 528-8220	714 528-8303	Dominick A. Vigna	7 months	
General Billing Technician	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	25 weeks	750 hours
General Construction Estimator	Career Management Institute	1855 W. Katella Ave. Ste. 150 Orange, CA	92667	714 771-5077	714 771-2374	Joel Ayala	14 weeks	
General Office	Premiere Career	12901 Ramona Blvd.	91706	818 814-2080	818 814-3242	Patricia	24 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Assistant	College	Irwindale, CA				Talamantes		
General Office Skills	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr	8 weeks	260 hours
General Office Skills	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	8 weeks	260 hours
General Office Word Processor	Health and Career Institute, Inc.	2001 Tyler Ave. Ste. 204 South El Monte, CA	91733	818 401-1395	818 401-3707	Irene E. Portillo / Richard Contreras	16 weeks	
Graphic Computer Design	Platt College Ontario, Inc.	9521 Business Center Drive Bldg. 9 Rancho Cucamonga, CA	91730	909 989-1187	909 989-8974	David Siggs	11 months	
Graphic Design (Terms I & II)	Platt College Long Beach (Platt College Cerritos, Inc.)	10900 East 183rd St. Ste. 290 Cerritos, CA	90703	310 809-5100	310 809-7100	Margaret Simons	7 months	
Hazardous Waste Material Technician	Pacific Travel Trade School	5618 E. Imperial Highway South Gate, CA	90280	310 869-2122	None Listed	Dennis P. Barker	36 weeks	
Hazardous Waste Materials Tech	Fullerton College	321 E. Chapman Fullerton, CA	92632	714 568-0768	None Listed	Ruth	20 weeks	
Health Care Admin. / Medical Assistant	San Joaquin Valley College	201 New Stine Road Bakersfield, CA	93309	805 834-0126	805 834-1021	Letha McNew / Jan Parker	31 weeks	
Health Care Administration	San Joaquin Valley College	201 New Stine Road Bakersfield, CA	93309	805 834-0126	805 834-1021	Letha McNew / Jan Parker	30 weeks	
Health Claims Examiner / Medical Biller	Ladera Career Paths	6820 La Tierja Blvd. Ste.217 Los Angeles, CA	90045	310 568-0244	310 568-8202	Karen Brown / Anne Little	8 months	
Health Insurance Claim Examiner/ Medical Biller	Westech College	500 W. Mission Blvd. Pomona, CA	91766	909 622-6486	909 622-5045	Walter Grant / Eric Hyde	30 weeks	900 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Heating, Ventilation A/C & Refrig.	San Joaquin Valley College	201 New Stine Road Bakersfield, CA	93309	805 834-0126	805 834-1021	Letha McNew / Jan Parker	35 weeks	
Hotel /Motel, Apt. & Mobile Home Mgmt.	MTMA Schools, Inc.	1401 S. Anaheim Blvd. Anaheim, CA	92605	714 502-9337	None listed	Laurany Gergen	10 weeks	
Hotel Front Office Assistant	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina. CA	91790	818 960-5173	619 720-7282	Cindy Perry	4 months	
Hotel Front Office Assistant	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	4 months	
Hotel Operations Assistant	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina. CA	91790	818 960-5173	619 720-7282	Cindy Perry	8 months	
Hotel Operations Assistant	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	8 months	
Hotel Property Management	Pacific Travel Trade School	5618 E. Imperial Highway South Gate, CA	90280	310 869-2122	None Listed	Dennis P. Barker	24 weeks	
House Claim Examining	Ameritech College of Van Nuys	5445 Lankershim Blvd. North Hollywood CA	91601	818 901-7311	818 761-6558	Jari Simpson	15 weeks	
Human Resources Management	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	26 weeks	780 hours
Information Processing	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	16 weeks	480 hours
Information Processing Programming	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	26 weeks	780 hours
International Trade	Pacific Travel Trade School	3807 Wilshire Blvd. 3rd Floor Los	90010	213 427-1040	None Listed	Dennis Barker	8.3 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
International Trade	Pacific Travel Trade School	Angeles, CA 5618 E. Imperial Highway South Gate, CA	90280	310 869-2122	None Listed	Dennis Barker	8.3 months	
Internet Info. Services Specialist	Glendale College of Business & Paramedical	1015 Grandview Ave. Glendale, CA	91201	818 243-1131	818 243-6028	Haimanot Kekadu	36 weeks	18 wks. full-time
Junior Account	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	10 months	
Junior Accountant	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina. CA	91790	818 960-5173	619 720-7282	Cindy Perry	10 months	
Keyboarding Techniques / 10-Key	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr	2 weeks	30 hours (optional time available)
Keyboarding Techniques / 10-Key	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	2 weeks	30 hours (Optional Time Available)
Learn to Earn	Trav-L-World Agency & College	11899 West Pico Blvd. Los Angeles, CA	90064	310 479-6093	310 479-1431	Annet Forrest	4 months	
Legal Administrative Assistant	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	10 months	
Legal Administration Assistant	Kensington College Inc.	2428 N. Grand Ave. Ste. D Santa Ana, CA	92705-8708	714 542-8086	714 834-9134	Barbara L. Quigle, J.D.	8 months	16 classes 4 wks. each
Legal Administrative Assistant	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina. CA	91790	818 960-5173	619 720-7282	Cindy Perry	10 months	
Legal Assistant / Paralegal	Newbridge College, Inc.	1840 E. 17th St. Ste.140 Santa Ana,	92705	714 550-8000	714 550-6740	J. Ramon Villanueva	6 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
		CA						
Legal Secretary	Glendale College of Business & Paramedical	1015 Grandview Ave. Glendale, CA	91201	818 243-1131	818 243-6028	Haimanot Fekadu	36 weeks	
Legal Secretary	Kensington College Inc.	2428 N. Grand Ave. Ste. D Santa Ana, CA	92705-8708	714 542-8086	714 834-9134	Barbara L. Quigle, J.D.	6 months	12 classes 4 wks. each
Legal Secretary	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina. CA	91790	818 960-5173	619 720-7282	Cindy Perry	8 months	
Legal Secretary	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	8 months	
Legal Secretary	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	26 weeks	780 hours
Limited License X-Ray Tech./Clinical Skills	American School of X-Ray	13723 Harvard Place Gardena, CA	90249	213 770-4001	310 515-3944	Alda Sichtung	931 hours	
Locksmithing	California Institute of Locksmithing	14721 Oxnard Street Van Nuys, CA	91411	818 994-7426	818 994-7427	Charles Hasekian	12 months	
Lotus Certified Notes Specialist	Infotec Commercial Systems	3130 S. Harbor Blvd. Ste. 160 Santa Ana, CA	92704	714 755-7120 Ext. 226/235	714 755-7155	Jennifer Chacon / Gary Zopt	16 weeks	Could be more or less
Lotus Certified Notes Specialist	Infotec Commercial Systems	520 S. Grand Ave. Ste. 670 Los Angeles, CA 90071	90071	800 282-7999	213 955-9111	Jennifer Chacon / Gary Zopt	16 weeks	Could be more or less
Machine Tool Operator	Center for Employment Training	730 South 8th Street Oxnard, CA	93030	805 487-9821	805 487-7775	Loni Miramontes	31 weeks	
Maintenance Mechanic	Center for Employment Training	1099 W. Cadadena Dr. Riverside, CA	92501	909 680-0238	909 359-1321	Greg Dooan / Roger Granados	approx. 6 months	Students work at own pace.
Manufacturing	Rands System, Inc.	1801 W. Commercial	92408	800 231-6835	None Listed	Dennis Jones	324 hours	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Technology		San Bernardino, CA						
Manufacturing Technology	Rands Systems, Inc.	5441 Avenida Encinas, Ste. B Carlsbad, CA	92008	619 431-8355	619 431-4743	Dennis Jones	324 hours	
Master Commercial Refrig/Repair Tech.	Practical Schools	900 E. Ball Road Anaheim, CA	92805	714 535-6000	714 535-1538	Sue Kirtland	32 weeks	960 hours
Medical Administrative Assistant	United Education Institute	6812 Pacific Blvd. Huntington Park, CA	90255	213 588-6262	213 588-5454	Joanne E. Rose	20 weeks	480 hours
Medical Administrative Assistant	United Education Institute	3727 W. 6th St. Los Angeles, CA	90020	213 487-5558	213 487-1090	Joanne E. Rose	20 weeks	480 hours
Medical Administrative Assistant	National Education Center (San Bernardino Site)	825 E. Hospitality Lane San Bernardino, CA	92408	909 885-3896	909 885-2396	David Corson	5 months	
Medical Administrative Assistant	United Education Institute	7311 Van Nuys Blvd. Van Nuys, CA	91405	818 994-5090	818 994-2607	Joanne E. Rose	20 weeks	480 hours
Medical Administrative Assistant	United Education Institute	401 S. Glen Oaks, Burbank, CA	91502	818 953-4760	818 953-4770	Joanne E. Rose	20 weeks	480 hours
Medical Administrative Assistant	United Education Institute	201 E. 4th Street Santa Ana, CA	92701	714 973-2460	714 285-1028	Joanne E. Rose	20 weeks	480 hours
Medical Assist	San Joaquin Valley College	201 New Stine Road Bakersfield, CA	93309	805 834-0126	805 834-1021	Letha McNew / Jan Parker	31 weeks	
Medical Assistant	American Career College	43 Corporate Park Drive Ste. 204 Irvine CA	92714	714 222-0272	714 222-0559	David Hall	900 hours	M-F 8:30-2 pm 36 week course
Medical Assistant	American School of X-Ray	13723 Harvard Place Gardena, CA	90249	213 770-4001	310 515-3944	Alda Sichtung	240 hours	Med. Asst. to begin Mar. 18, 1996
Medical Assistant	Assert, Inc.	16745 Saticoy Street Van Nuys, CA	91406	818 902-1196	818 902-0425	Elisabeth Adams	8-14 weeks	325 - 525 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Medical Assistant	California Paramedical & Technical College	4550 La Sierra Ave. Riverside, CA	92505	909 687-9006	909 687-9739	Diane Arneal	40 weeks	
Medical Assistant	Center for Employment Training	730 South 8th Street Oxnard, CA	93030	805 487-9821	805 487-7775	Loni Miramontes	34 weeks	
Medical Assistant	Concorde Career Institute	4150 Lankershim Blvd. North Hollywood, CA	91602	818 768-8151	818 766-7587	Jeanne Thompson / Bonnie Bossi	34 weeks	
Medical Assistant	Concorde Career Institute (San Bernardino Site)	570 West 4th Street San Bernardino, CA	92401	909 884-8891	909 384-1768	Mary Ellen Kontra	34 weeks	
Medical Assistant	Glendale College of Business & Paramedical	1015 Grandview Ave. Glendale, CA	91201	818 243-1131	818 243-6028	Haimanot Kekadu	32 weeks	
Medical Assistant	National Education Center (Orange Site)	1120 W. La Veta Ave #100 Orange, CA	92668	714 953-6500	714 953-4163	Marlene Cerbasi / Pamela Burns	8 months	Includes externship Night - 9 months includes externship
Medical Assistant	Newbridge College, Inc.	1840 E. 17th St. Ste.140 Santa Ana, CA	92705	714 550-8000	714 550-6740	J. Ramon Villanueva	7 months	
Medical Assistant	Noval/ Educorp	Nova 520 N. Euclid Ave. Ontario, CA	91762	909 984-5027	None Listed	Ken Boyle	9 months	
Medical Assistant	Noval/Educorp	3000 S. Robertson Los Angeles, CA	90034	310 840-5777	None Listed	Ken Boyle	9 months	
Medical Assistant	Noval/Educorp	12449 Putnam St. Whittier, CA	90602	310 945-9191	None Listed	Ken Boyle	9 months	
Medical Assistant	Noval/Educorp	Educorp 230 E. Third St. Long Beach, CA	90802	310 437-0501	310 287-2344	Ken Boyle	9 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Medical Assistant	Pacific College	3160 Redhill Ave. Costa Mesa, CA	92626	714 662-4402	None Listed	William Nelson	10 months	
Medical Assistant	United Education Institute	201 E. 4th Street Santa Ana, CA	92701	714 973-2460	714 285-1028	Joanne E. Rose	30 weeks	810 hours
Medical Assistant	United Education Institute	3727 W. 6th St. Los Angeles, CA	90020	213 487-5558	213 487-1090	Joanne E. Rose	30 weeks	810 hours
Medical Assistant	United Education Institute	401 S. Glen Oaks Blvd. Burbank, CA	91502	818 953-4760	818 953-4770	Joanne E. Rose	30 weeks	810 hours
Medical Assistant	United Education Institute	6812 Pacific Blvd. Huntington Park, CA	90255	213 588-6262	213 588-6262	Joanne E. Rose	30 weeks	810 hours
Medical Assistant	United Education Institute	7311 Van Nuys Blvd. Van Nuys, CA	91405	818 994-5090	818 994-2607	Joanne E. Rose	30 weeks	810 hours
Medical Assistant Back Office	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	20 weeks	600 hours
Medical Assistant Clinical Front/ Back	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	30 weeks	
Medical Assistant Front Office	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	20 weeks	600 hours
Medical Assistant Front/Back Office	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	30 weeks	900 hours
Medical Assisting	Center for Employment Training	1099 W. Cadadena Dr. Riverside, CA	92501	909 680-0238	909 359-1321	Greg Doonan / Roger Granados	approx. 6 months	Students work at own pace.
Medical Assisting	National Education Center (San Bernardino Site)	825 E. Hospitality Lane San Bernardino, CA	92408	909 885-3896	909 885-2396	David Corson	8 months	
Medical Assisting	National Education Center (Torrance)	4212 W. Artesia Blvd. Torrance, CA	90504	310 542-6951	310 542-3294	Marlene Cerbasi / Judy Kavanaugh	8 months days	Includes externship Night - 9 months includes externship

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Medical Biller	American Institute of Printing and Graphic Art	9825 S. Painter Ave. Ste. A Whittier CA	90605	310 903-1212	310 903-1543	Linda Wollaston / Monica Wolf	90 days	
Medical Biller and Coder	Westech College	500 W. Mission Blvd. Pomona, CA	91766	909 622-6486	909 622-5045	Walter Grant / Eric Hyde	13 weeks	600 hours
Medical Biller/Hlth. Claims Examiner	Adelante Career Institute	14647 Titus Street, Ste. 100 Panarama City, CA	91402	818 908-9912	818 908-9975	Janet Grossfeld	7 months	
Medical Billing Management	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	24 weeks	720 hours
Medical Claims Processing	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr.	8 weeks	260 hours
Medical Claims Processing	Larson Training Centers, Inc.	637 E. Albertoni Street Ste. 100 Carson, CA	90746	310 352-3811	None listed	Frank Talarico, Jr.	8 weeks	260 hours
Medical Claims Processing / Medical Transcription	Larson Training Centers, Inc.	637 E. Albertoni Street Ste. 100 Carson, CA	90746	310 352-3811	None listed	Frank Talarico, Jr.	16 weeks	520 hours
Medical Claims Processing / Medical Transcription	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr.	16 weeks	520 hours
Medical Claims Processing w/ Spreadsheet Processing	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	12 weeks	390 hours
Medical Claims Processing w/ Spreadsheet Processing	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr.	12 weeks	390 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Medical Claims Processing w/ Word Processing Level I	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr.	12 weeks	390 hours
Medical Claims Processing w/ Word Processing Level I	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	12 weeks	390 hours
Medical Claims Processing w/ Word Processing Level I & II	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr.	16 weeks	520 hours
Medical Claims Processing w/ Word Processing Level I & II	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	16 weeks	520 hours
Medical Claims Processing w/ Word Processing Level I & II & Spreadsheet Processing	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr.	20 weeks	650 hours
Medical Claims Processing w/ Word Processing Level I & II Spreadsheet Processing	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	20 weeks	650 hours
Medical Claims Processing, Word Processing I & II, Spreadsheet Processing,	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr.	24 weeks	780 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Accounting								
Medical Claims Processing, Word Processing I & II, Spreadsheet Processing, Accounting	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	24 weeks	780 hours
Medical Clinical Assistant	United Education Institute	7311 Van Nuys Blvd. Van Nuys, CA	91405	818 994-5090	818 994-2607	Joanne E. Rose	20 weeks	480 hours
Medical Clinical Assistant	United Education Institute	401 S. Glen Oaks, Burbank, CA	91502	818 953-4760	818 953-4770	Joanne E. Rose	20 weeks	480 hours
Medical Clinical Assistant	United Education Institute	3727 W. 6th St. Los Angeles, CA	90020	213 487-5558	213 487-1090	Joanne E. Rose	20 weeks	480 hours
Medical Clinical Assistant	United Education Institute	6812 Pacific Blvd. Huntington Park, CA	90255	213 588-6262	213 588-5454	Joanne E. Rose	20 weeks	480 hours
Medical Clinical Assistant	United Education Institute	201 E. 4th Street Santa Ana, CA	92701	714 973-2460	714 285-1028	Joanne E. Rose	20 weeks	480 hours
Medical Ins. Biller / Office Management	Newbridge College, Inc.	1840 E. 17th St. Ste. 140 Santa Ana, CA	92705	714 550-8000	714 550-6740	J. Ramon Villanueva	6 months	
Medical Insurance Biller	Noval/ Educorp	Nova 520 N. Euclid Ave. Ontario, CA	91762	909 984-5027	None Listed	Ken Boyle	9 months	
Medical Insurance Biller	Noval/Educorp	3000 S. Robertson Los Angeles, CA	90034	310 840-5777	None Listed	Ken Boyle	9 months	
Medical Insurance Biller	Noval/Educorp	12449 Putnam St. Whittier, CA	90602	310 945-9191	None Listed	Ken Boyle	9 months	
Medical Lab Technician	ILA Polytechnic Institute, Inc.	202 W. Lincoln Ave. Ste. H Orange, CA	92665	714 998-4448	714 998-4026	John Minella	26 weeks	
Medical Lab Technician	Noval/Educorp	3000 S. Robertson Los Angeles, CA	90034	310 840-5777	None Listed	Ken Boyle	9 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Medical Lab Technician	Noval/Educorp	12449 Putnam St. Whittier, CA	90602	310 945-9191	None Listed	Ken Boyle	9 months	
Medical Laboratory Technician	Newbridge College, Inc.	1840 E. 17th St. Ste. 140 Santa Ana, CA 92705	92705	714 550-8000	714 550-6740	J. Ramon Villanueva	7 months	
Medical Office Management	Concorde Career Institute (San Bernardino Site)	570 West 4th Street San Bernardino, CA	92401	909 884-8891	909 384-1768	Mary Ellen Kontra	34 weeks	
Medical Office Management	National Education Center (Torrance Site)	4212 W. Artesia Blvd. Torrance, CA	90504	310 542-6951	310 542-3294	Marlene Cerbasi / Judy Kavanaugh	8 months days	Includes externship Night - 9 months includes externship
Medical Office Management	National Education Center (San Bernardino Site)	825 E. Hospitality Lane San Bernardino, CA	92408	909 885-3896	909 885-2396	David Corson	8 months	
Medical Office Operation	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	20 weeks	
Medical Receptionist	Health and Career Institute, Inc.	2001 Tyler Ave. Ste. 204 South El Monte, CA	91733	818 401-1395	818 401-3707	Irene E. Portillo / Richard Contreras	16 weeks	
Medical Records Biller	Health and Career Institute, Inc.	2001 Tyler Ave. Ste. 204 South El Monte, CA	91733	818 401-1395	818 401-3707	Irene E. Portillo / Richard Contreras	24 weeks	
Medical Records Clerk	Westech College	500 W. Mission Blvd. Pomona, CA	91766	909 622-6486	909 622-5045	Walter Grant / Eric Hyde	30 weeks	900 hours
Medical Records Coder	Ladera Career Paths	6820 La Tijera Blvd. Ste. #217 Los Angeles, CA	90045	310 568-0244	310 568-8202	Karen Brown & Anna Little	6 months	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Medical Records Technician	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	18 weeks	540 hours
Medical Secretary	Concorde Career Institute	4150 Lankershim Blvd. North Hollywood, CA	91602	818 768-8151	818 766-7587	Jeanne Thompson / Bonnie Bossi	34 weeks	
Medical Secretary	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	16 weeks	
Medical Transcription	California Paramedical & Technical College	4550 La Sierra Ave. Riverside, CA	92505	909 687-9006	909 687-9739	Diane Arneal	45 weeks	
Medical Transcription	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	30 weeks	
Medical Transcription	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	20 weeks	600 hours
Medical Unit Specialist	California Paramedical & Technical College	4550 La Sierra Ave. Riverside, CA	92505	909 687-9006	909 687-9739	Diane Arneal	12 weeks	Offered in (3) 12 week modules. May take all or one module as desired.
Medical/ Dental Office Manager	Glendale College of Business & Paramedical	1015 Grandview Ave. Glendale, CA	91201	818 243-1131	818 243-6028	Haimanot Fekadu	32 weeks	
Medical/Dental Claims Examiner	Complete Claims Service	3020 Saturn St. Ste. 201 Brea, CA	92621	714 528-6990	714 528-4067	Jerrie Garcia	12 weeks	
Microcomputer Operation Specialist	Universal Computing Institute	18341 Sherman Way Ste. 210 Reseda, CA	91335	213 757-7474	None Listed	Sonia Furman	720 hours	
Microcomputer Operations Specialist	Right Way Computer Learning	22761 Hawthorne Blvd. Torrance, CA	90505	310 375-2005	310 791-2696	Chet Chan	6-8 months	600 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
	Center							
Microcomputer Operator	Crest Computer Institute	10630 Town Center Drive #101 Rancho Cucamonga, CA	91730	909 989-9123	909 486-7573	Booker T. Laster, Jr.	14 weeks	
Microcomputer Support Specialist / CNA	New Horizons Computer Learning Center	1231 East Dyer Rd. Ste. 140 Santa Ana, CA	92705-5605	714 556-1220 Ext. 334	714 436-6382	David Cohen	21 weeks	
Microcomputer Support Specialist / CNA	New Horizons Computer Learning Center	3337 Michelson #37-1 Irvine, CA	92715	714 556-1220 Ext. 334	714 436-6382	David Cohen	20 weeks	
Microcomputer Support Specialist / CNA	New Horizons Computer Learning Center	303 N. Glen Oaks Ste. 230 Burbank, CA	91502	818 841-8039	714 436-6382	David Cohen	5 months days	7 months evenings
Microcomputer Technology	Associated Technical College	1177 N. Magnolia Ave. Anaheim, CA	92801	714 229-8785	714 229-8789	Ali Kahlaj	30 weeks	
Microsoft Cert. System Engineer	New Horizons Computer Learning Center	3337 Michelson #37-1 Irvine, CA	92715	714 556-1220 Ext. 334	714 436-6382	David Cohen	21 weeks	
Microsoft Cert. System Engineer	New Horizons Computer Learning Center	303 N. Glen Oaks Ste. 230 Burbank, CA	91502	818 841-8039	714 436-6382	David Cohen	18 months	
Microsoft Cert. System Engineer (Path I)	Infotec Commercial Systems	520 S. Grand Ave. Ste. 670 Los Angeles, CA 90071	90071	800 282-7999	213 955-9111	Jennifer Chacon / Gary Zopt	16-24 weeks	
Microsoft Cert. System Engineer (Path I)	Infotec Commercial Systems	3130 S. Harbor Blvd. Ste. 160 Santa Ana, CA	92704	714 755-7120 Ext. 226/235	714 755-7155	Jennifer Chacon / Gary Zopt	16-24 weeks	
Microsoft Cert. System Engr.	New Horizons Computer Learning Center	1231 East Dyer Rd. Ste. 140 Santa Ana, CA	92705-5605	714 556-1220 Ext. 334	714 436-6382	David Cohen	21 weeks	
Microsoft Certified	Professional	7100 Knott Ave.	90620	714 562-8282	714 518-5944	Anna Brannon	31 weeks	Optional 7

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Systems Engineer	Development Institute	Buena Park, CA						additional wks. for teaching certificate.
Microsoft Solution Developer	Professional Development Institute	7100 Knott Ave. Buena Park, CA	90620	714 562-8282	714 518-5944	Anna Brannon	31 weeks	
Modern Automotive Technology	Automotive Diagnostics	1531 7th Street Riverside, CA	92507	909 781-4484	909 781-9230	William Mc Weeny	4 months	
Multi-Platform CNE	Advanced Career Center	41765 12th Street West, Ste. B Palmdale, CA	93551	805 948-4141	805 948-3015	John Alesso III	36 weeks	
Multimedia Communications /Presentations	Mount Sierra College	350 N. Halstead St. Pasadena, CA	91107	818 351-9995	None Listed	Ram Gayakwad	3 classes 6 months each	
Multimedia Interactive Graphical Programming	Professional Development Institute	7100 Knott Ave. Buena Park, CA	90620	714 562-8282	714 518-5944	Anna Brannon	16 weeks	Taught Per special request
Multimedia Production Specialist	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	15 weeks	
Network Systems Analyst	Advanced Career Center	41765 12th Street West, Ste. B Palmdale, CA	93551	805 948-4141	805 948-3015	John Alesso III	32 weeks	
Networking Technician	United Education Institute	7311 Van Nuys Blvd. Van Nuys, CA	91405	818 994-5090	818 994-2607	Joanne E. Rose	20 weeks	560 hours
Networking Technician	United Education Institute	401 S. Glen Oaks, Burbank, CA	91502	818 953-4760	818 953-4770	Joanne E. Rose	20 weeks	560 hours
Networking Technician	United Education Institute	3727 W. 6th St. Los Angeles, CA	90020	213 487-5558	213 487-1090	Joanne E. Rose	20 weeks	560 hours
Networking Technician	United Education Institute	201 E. 4th Street Santa Ana, CA	92701	714 973-2460	714 285-1028	Joanne E. Rose	20 weeks	560 hours
Nondestructive Testing	Heller Associates - Pacific, Inc.	3710 Artesia Ave. Fullerton, CA	92633	714 562-9227	714 562-9228	Gillian Birch	9 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Novel CNE Program	New Horizons Computer Learning Center	1231 East Dyer Rd. Ste. 140 Santa Ana, CA	92705-5605	714 556-1220 Ext. 334	714 436-6382	David Cohen	19 weeks	
Novel CNE Program	New Horizons Computer Learning Center	3337 Michelson #37-1 Irvine, CA	92715	714 556-1220 Ext. 334	714 436-6382	David Cohen	19 weeks	
Novel CNE Program	New Horizons Computer Learning Center	303 N. Glen Oaks Ste. 230 Burbank, CA	91502	818 841-8039	714 436-6382	David Cohen	19 weeks	448 hours
Nurse Assistant / Home Health Aide	Pacific Travel Trade School	3807 Wilshire Blvd. 3rd Floor Los Angeles, CA	90010	213 427-1040	None Listed	Dennis Barker	24 weeks	5.5 months
Office Admin. Program	Phillips College Los Angeles	15350 Sherman Way Van Nuys, CA	91406	818 376-8400	818 376-8414	Maria Bustamante	9 months	
Office Assistant	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina, CA	91790	818 960-5173	619 720-7282	Cindy Perry	5 months	
Office Assistant	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	16 weeks	480 hours
Office Automation	New Horizons Computer Learning Center	1231 East Dyer Rd. Ste. 140 Santa Ana, CA	92705-5605	714 556-1220 Ext. 334	714 436-6382	David Cohen	16 weeks	
Office Automation	New Horizons Computer Learning Center	3337 Michelson #37-1 Irvine, CA	92715	714 556-1220 Ext. 334	714 436-6382	David Cohn	16 weeks	
Office Automation	New Horizons Computer Learning Center	303 N. Glen Oaks Ste. 230 Burbank, CA	91502	818 841-8039	714 436-6382	David Cohen	16 weeks	462 hours
Office Graphics Specialist	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	26 weeks	780 hours
Offset Press Operator	American Institute of Printing and	9825 S. Painter Ave. Ste. A Whittier CA	90605	310 903-1212	310 903-1543	Linda Wollaston /	90 days	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
	Graphic Art					Monica Wolf		
Optthalmic Technician	National Education Center (Orange Site)	1120 W. La Veta Ave #100 Orange, CA	92668	714 953-6500	714 953-4163	Marlene Cerbasi / Pamela Burnis	8 months	Includes externship Night - 9 months includes externship
Optthalmic Technician	National Education Center (San Bernardino Site)	825 E. Hospitality Lane San Bernardino, CA	92408	909 885-3896	909 885-2396	David Corson	8 months	
Paralegal	Kensington College Inc.	2428 N. Grand Ave. Ste.D Santa Ana, CA	92705-8708	714 542-8086	714 834-9134	Barbara L. Quigle, J.D.	6 months	12 classes 4 wks. each
Paralegal	Modern Technology Industrial College	2011 West Chapman Ave. Ste. 100 Orange, CA	92668	714 385-1132	714 385-1893	Robert Levesque	19 weeks	
Paralegal Specialist	American Career College	43 Corporate Park Drive Ste. 204 Irvine, CA	92714	714 222-0272	714 222-0559	David Hall	900 hours	M-F 8:00-2:45 pm Possible Evening Classes March '96
Paralegal Specialist	American Career College	1160 N. Central Ste. 207 Glendale, CA	91202	818 500-8400	818 500-3987	Geeta Bidaha	9 months	
Paralegal Studies	Platt College Ontario, Inc.	9521 Business Center Drive Bldg. 9 Rancho Cucamonga, CA	91730	909 989-1187	909 989-8974	David Siggs	11 months	
Paralegal/Legal Assistant	Phillips College Los Angeles	15350 Sherman Way Van Nuys, CA	91406	818 376-8400	818 376-8414	Maria Bustamante	18 months	
Pharmacy Assistant	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	22 weeks	660 hours
Pharmacy Technician	California Paramedical & Technical College	3745 Long Beach Blvd. Long Beach, CA	90807	310 427-4217	310 427-2920	Tish Schamacher	10 months	
Pharmacy Technician	California	4550 La Sierra Ave.	92505	909 687-9006	909 687-9739	Diane Arneal	40 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
	Paramedical & Technical College	Riverside, CA						
Pharmacy Technician	Health Staff Training Institute	1505 E. 17th Ste. 122 Santa Ana, CA	92705	714 543-9828	714 543-9835	Judee R. Tompkins	20 weeks	
Pharmacy Technician	Pacific Travel Trade School	5618 E. Imperial Highway South Gate, CA	90280	310 869-2122	None Listed	Dennis P. Barker	24 weeks	
Pharmacy Technician	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	24 weeks	720 hours
Phlebotomy	American School of X-Ray	13723 Harvard Place Gardena, CA	90249	213 770-4001	310 515-3944	Alda Sighting	640 hours	
Physical Medical Assistant	Pacific College	3160 Redhill Ave. Costa Mesa, CA	92626	714 662-4402	None Listed	William Nelson	10 months	
Physical Therapy Aide	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	26 weeks	780 months
PowerBuilder (object-oriented programming)	CSU, Long Beach Foundation	5300 Paseo Rancho Castillas Los Angeles, CA	90032	213 223-4528 or 310 985-4698	None Listed	Steve LeDuc or Bob Kheck	4 months	
Pre-Apprenticeship Plumbing	Associated Technical College	1670 Wilshire Blvd. Los Angeles CA	90017	213 413-6808	213 353-1889	Maria Middleton	7 months	
Private Investigation **	Gendarme Limited, Inc.	12831 Western Ave. Ste. A Garden Grove, CA	92641	714 539-7701	714 891-6964	Patricia Dawson	30 hours	** Program to begin in approx. 3 month (May '96)
Private Investigation /Security	California Career Schools	1100 Technology Circle Anaheim, CA	92805-6329	714 635-6585	714 635-6596	Sindney Smith	20 weeks	500 hours
Private Investigator	California Career Schools	1100 Technology Circle Anaheim, CA	92805-6329	714 635-6585	714 635-6596	Sindney Smith	20 weeks	500 hours
Prof. Cert. In Gerontology	CSU Fullerton Extension	800 N. State College Blvd. Fullerton, CA	92634-9480	714 449-7192	714 449-5393	Karen Leaman	1 year	
Professional Paralegal Cert.	W.L. Stephenson Institute of Business	31225 La Brea Drive, Ste. 114 Westlake	91362	818 597-8490	818 597-8562	JoAnn Ferrea	5 1/2 months -	400 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Program	& Law	Village, CA					6 1/2 months	
Professional Sales Training	Career Management Institute	1855 W. Katella Ave. Ste. 150 Orange, CA	92667	714 771-5077	714 771-2374	Joel Ayala	12 weeks	
Professional Truck Driver	Advanced School of Driving	20825 Currier Road Walnut, CA	91789	909 595-2292	909 595-0986	Glenn Bither	6 weeks	
Property Management	Career Management Institute	1855 W. Katella Ave. Ste. 150 Orange, CA	92667	714 771-5077	714 771-2374	Joel Ayala	10 weeks	
Real Estate Appraisal, Residential and Commercial	Appraisal Training Services, Inc.	23801 Calabasas Rd., Ste. 2001 Calabasas CA	91308	818 223-8444	818 223-8866	Frank Bialobreski	7 months	
Real Estate Appraisal, Residential and Commercial	Appraisal Training Services, Inc.	3919 Westerly Place Ste. 100 Newport Beach CA	92660	714 250-4111	714 250-9044	Robert D. Faye	7 months	
Receptionist	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	18 weeks	540 hours
Receptionist / Clerical	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	10 weeks	
Recordkeeping Clerk	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	16 weeks	480 hours
Refrig./AC /Heating Tech.	Practical Schools	900 E. Ball Road Anaheim, CA	92805	714 535-6000	714 535-1538	Sue Kirtland	48 weeks	Evening class - 648 hours
Refrigeration/Air Conditioning	Brownson Technical School, Inc.	110 Technology Circle #D Anaheim, CA	92805	714 774-9443	714 774-5025	William D. Brown	30 weeks	66 weeks if taken in evening
Respiratory Care Practitioner	California Paramedical & Technical College	3745 Long Beach Blvd. Long Beach, CA	90807	310 427-4217	310 427-2920	Tish Schamacher	1 1/2 years	
Respiratory Care Practitioner	San Joaquin Valley College	201 New Stine Road Bakersfield, CA	93309	805 834-0126	805 834-1021	Letha McNew / Jan Parker	60 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Respiratory Therapist	California Paramedical & Technical College	4550 La Sierra Ave. Riverside, CA	92505	909 687-9006	909 687-9739	Diane Arneal	15 months	
Respiratory Therapy	Concorde Career Institute (North Hollywood Site)	4150 Lankershim Blvd. North Hollywood, CA	91602	818 768-8151	818 766-7587	Jeanne Thompson / Bonnie Bossi	41 weeks	
Restaurant Management	Roscoe's Training Center	106 W. Manchester Ave. Ste. B Los Angeles, CA	90003	213 752-3314	None Listed	Carol Woods	4 1/2 months	528 hours
Sales and Customer Service	Summit Career College, Inc.	1330 E. Cooley Drive Colton, CA	92324	909 422-8950	909 422-8955	Eric Rudie	10 weeks	
Security Management	Gendarme Limited, Inc.	12831 Western Ave. Ste. A Garden Grove, CA	92641	714 539-7701	714 891-6964	Patricia Dawson	40 hours	Should have previous security officer training or experience first.
Service Advisor/Dispatch	Automotive Training Corporation of America	1035 E. Bedmar Street Carson, CA	90746	310 639-9610	310 639-1005	Donald Sayers / Roy Hayes	7 weeks	
Spreadsheet Operator	Right Way Computer Learning Center	22761 Hawthorne Blvd. Torrance, CA	90505	310 375-2005	310 791-2696	Chet Chan	2-3 months	160 hours
Spreadsheet Processing w/Manual Computerized Accounting	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	8 weeks	260 hours
Spreadsheet Processing w/Manual Computerized	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr	8 weeks	260 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Accounting								
Surgical Technician	Concorde Career Institute (North Hollywood Site)	4150 Lankershim Blvd. North Hollywood, CA	91602	818 768-8151	818 766-7587	Jeanne Thompson / Bonnie Bossi	48 weeks	
Surgical Technologist	California Paramedical & Technical College	3745 Long Beach Blvd. Long Beach, CA	90807	310 427-4217	310 427-2920	Tish Schamacher	1 year	
Surgical Technologist	Newbridge College, Inc.	1840 E. 17th St. Ste. 140 Santa Ana, CA	92705	714 550-8000	714 550-6740	J. Ramon Villanueva	13 months	
Surgical Technologist	Premiere Career College	12901 Ramona Blvd. Irwindale, CA	91706	818 814-2080	818 814-3242	Patricia Talamantes	9 months	
Surgical Technology I/II	Glendale College of Business & Paramedical	1015 Grandview Ave. Glendale, CA	91201	818 243-1131	818 243-6028	Haimanot Kekadu	62 weeks	
Systems Support Administration (network operating systems)	CSU, Long Beach/Center for Career Studies	1250 Bellflower Blvd. TE2, Rm. 1117 Long Beach, CA	90840	310 985-4698	None Listed	Bob Kheck / Yvonne Regalado	4 months	
Telecommunications Repair/ Installation	Associated Technical College	1177 N. Magnolia Ave. Anaheim CA	92801	714 229-8785	714 229-8789	Ali Kahilaj	30 weeks	
Telephone Installation/Repair	Associated Technical College	1670 Wilshire Blvd. Los Angeles CA	90017	213 413-6808	213 353-1889	Maria Middleton	7 months	
Tractor/Trailer Driver	Assert, Inc.	16745 Satcoy Street Van Nuys, CA	91406	818 902-1196	818 902-0425	Elisabeth Adams	8 weeks	240 hours
Travel & Tourism	American Career College	43 Corporate Park Drive Ste. 204 Irvine, CA	92714	714 222-0272	714 222-0559	David Hall	720 hours	M-F 8:30-2 pm 30 week course
Travel & Tourism	American Career College	1160 N. Central Ste. 207 Glendale, CA	91202	818 500-8400	818 500-3987	Geeta Bidaha	7 1/2 months	Day and Evening

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Travel Agent/ Travel Operations	Pacific Travel Trade School	3807 Wilshire Blvd. 3rd Floor Los Angeles, CA	90010	213 427-1040	None Listed	Dennis Barker	8.3 months	available
Travel Agent/ Travel Operations	Pacific Travel Trade School	5618 E. Imperial Highway South Gate, CA	90280	310 869-2122	None Listed	Dennis Barker	8.3 months	
Travel and Hospitality	Phillips College Los Angeles	15350 Sherman Way Van Nuys, CA	91406	818 376-8400	818 376-8414	Maria Bustamante	12 months	
Travel and Hospitality Management	Phillips College Los Angeles	15350 Sherman Way Van Nuys, CA	91406	818 376-8400	818 376-8414	Maria Bustamante	18 months	
Travel and Tourism	Travel and Trade Career Institute	3635 Atlantic Ave. Long Beach, CA	90807	310 426-8841	310 988-0464	Arelene Almaleh	16 weeks	OR 30 weeks
Truck Drive (Heavy)	MTA Schools	1955 Sampson St. Corona, CA	91719	909 270-3100 or 909 270-3108	None Listed	Terry Jaco	5 weeks	10 days
Truck Driving	Dootson School of Trucking	11625 Clark St. Arcadia, CA	91006	818 303-1900	818 303-3620	John Dootson / Arlene Dootson	4 - 6 weeks	
Typist Clerk	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	20 weeks	600 hours
Unarmed Security Guard	Gendarme Limited, Inc.	12831 Western Ave. Ste A Garden Grove, CA	92641	714 539-7701	714 891-6964	Patricia Dawson	80 hours	
Unigraphics II	Fullerton College	321 E. Chapman Fullerton, CA	92632	714 568-0768	None Listed	Ruth	12 weeks	
Visual Data Base Design	Professional Development Institute	7100 Knott Ave. Buena Park, CA	90620	714 562-8282	714 518-5944	Anna Brannon	31 weeks	
Vocational Nurse	Concorde Career Institute (North)	4150 Lankershim Blvd. North Hollywood, CA	91602	818 768-8151	818 766-7587	Jeanne Thompson /	51 weeks	

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
	Hollywood Site)					Bonnie Bossi		
Vocational Nurse	Concorde Career Institute (San Bernardino Site)	570 West 4th Street San Bernardino, CA	92401	909 384-1768	909 384-1768	Mary Ellen Kontra	51 weeks	
Water Waste/ Hazardous Waste Treatment	California Institute of Environment Technology	2990 E. La Palma Ave. Ste. A Anaheim, CA	92806	714 632-0212	714 632-3901	Jerry Needham	6 months	8-12:30 pm M-F
Welding	Center for Employment Training	1099 W. Cadadena Dr. Riverside, CA	92501	909 680-0238	909 359-1321	Greg Doonan / Roger Granados	approx. 6 months	Students work at own pace.
Word Processing	Technology Development Center	3777 Dean Drive Ventura, CA	93003	805 641-5200	805 641-5313	Majorie Hanson	20 weeks	600 hours
Word Processing Level I & II, Spreadsheet Processing w/ Manual Computerized Accounting	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr	16 weeks	520 hours
Word Processing Level I & II, Spreadsheet Processing w/ Manual Computerized Accounting	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	16 weeks	520 hours
Word Processing Level I & Level II (CBBS)	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr	8 weeks	260 hours
Word Processing Level I and Level II	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr	8 weeks	260 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
(CBBS)								
Word Processing Level I and Spreadsheet Processing	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr	8 weeks	260 hours
Word Processing Level I and Spreadsheet Processing	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	8 weeks	260 hours
Word Processing Level I and Spreadsheet Processing w/ Manual Computerized Accounting	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr	12 weeks	390 hours
Word Processing Level I and Spreadsheet Processing w/ Manual Computerized Accounting	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	12 weeks	390 hours
Word Processing Level I, Level II &	Larson Training Centers, Inc.	2041 W. Orangewood Ave. Orange, CA	92668	714 634-1800	None Listed	Frank Talarico, Jr	12 weeks	390 hours

Occupational Area	Name of Program	Address_City	Zip	Phone	Fax	Contact Name	Duration of Program	Comments:
Spreadsheet Processing								
Word Processing Level I, Level II & Spreadsheet Processing	Larson Training Centers, Inc.	637 E. Albertoni St. Ste. 100 Carson, CA	90746	310 352-3811	None Listed	Frank Talarico, Jr.	12 weeks	390 hours
Word Processing Operations	Right Way Computer Learning Center	22761 Hawthorne Blvd. Torrance, CA	90505	310 375-2005	310 791-2696	Chet Chan	3-4 months	240 hours
Word Processing Spreadsheet	Right Way Computer Learning Center	22761 Hawthorne Blvd. Torrance, CA	90505	310 375-2005	310 791-2696	Chet Chan	3-4 months	240 hours
Word Processor	Orange County Business College (El Dorado College)	1901 Pacific Ave. West Covina, CA	91790	818 960-5173	619 720-7282	Cindy Perry	4 months	
Word Processor	Orange County Business College (El Dorado College)	2035 E. Ball Road Anaheim, CA	92806	714 772-6941	619 720-7282	Cindy Perry	4 months	
X-Ray Tech. (Ldt) / Medical Asst. Back Office	Modern Technology School of X-Ray	1232 E. Katella Ave. Anaheim, CA	92805	714 978-7702	714 978-0501	Linda Ermshar	12 months	
X-Ray Technician (LTD Pmt.)	Noval/Educorp	12449 Putnam St. Whittier, CA	90602	310 945-9191	None Listed	Ken Boyle	9 months	
X-Ray Technician (LTD Pmt.)	Noval/Educorp	Nova 520 N. Euclid Ave. Ontario, CA	91762	909 984-5027	None Listed	Ken Boyle	9 months	
X-Ray Technician (LTD Pmt.)	Noval/Educorp	3000 S. Robertson Los Angeles, CA	90034	310 840-5777	None Listed	Ken Boyle	9 months	
X-Ray Technician (LTD Pmt.)	Noval/Educorp	Educorp 230 E. Third St. Long Beach, CA	90802	310 437-0501	310 287-2344	Ken Boyle	9 months	

