Appendix
LAX Master Plan Supplement to the Draft EIS/EIR

S-B. Existing Baseline Comparison Issues - 1996 to 2000

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1. NATURE AND PURPOSE OF BASELINE UPDATE

The Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) for the Los Angeles International Airport (LAX) Master Plan utilizes an "Environmental Baseline" from which to measure the potential environmental effects of various alternatives for the LAX Master Plan. The utilization of an environmental baseline is a specific requirement of the California Environmental Quality Act (CEQA). The existing conditions reflected in the Environmental Baseline of the Draft EIS/EIR include data representative of activities at, and related to, LAX during the years 1996 to 1997. Described below is the basis for how and why data from 1996 to 1997 was used in the Environmental Baseline for the Draft EIS/EIR. The nature and purpose of the analysis presented herein is to identify various ways that baseline conditions may have changed since 1996 to 1997. As also described below, the year 2000 is used for updating and comparing certain key data associated with activities at, and related to, LAX, based on the fact that, due to the events of September 11, 2001, data for the year 2001 would be anomalous.

The baseline update has been utilized in the evaluation of Alternative D in the LAX Master Plan Supplement to the Draft EIS/EIR. The Supplement to the Draft EIS/EIR also evaluates if, and how, the update information might change the previous analysis of the alternatives addressed in the Draft EIS/EIR.

1.1 Draft EIS/EIR - Existing Baseline

Two existing baseline scenarios are used in the EIR:

- **Environmental Baseline - Existing Conditions**: This baseline reflects historical airport activity for the full year 1996 and the physical facilities of the airport as they existed in 1997. Under the CEQA Guidelines, the environmental conditions as they existed at the time that the Notice of Preparation (NOP) was published are normally to be the environmental baseline. Calendar year 1996 was the last year of complete information available for the airport before the release of the NOP in July 1997. Physical conditions were represented as they existed in 1997 and in more current years when feasible and appropriate, to provide more up-to-date information.
- **Adjusted Environmental Baseline**: This baseline comprises the same on-airport historical airport activity (1996) and physical facilities (1997) as in the Environmental Baseline - Existing Conditions, but it includes off-airport land use activity and regional traffic development anticipated for the planning years of 2005 and 2015. Except for these two factors, the Adjusted Environmental Baseline Conditions are identical to the Environmental Baseline - Existing Conditions. This scenario was developed in accordance with CEQA guidelines, to satisfy the CEQA need for determining project impacts.

1.2 Baseline Update

In considering an updated comparison of the Draft EIS/EIR baseline year, 2001 constitutes an anomalous year due to the September 11, 2001 terrorist attacks on the World Trade Center and Pentagon. Those events had a profound impact on aviation as almost all domestic aviation activity after September 11, 2001 was driven downward by those events. In response to the attacks, Congress approved the Aviation and Transportation Security Act. The Act required that all security checkpoints be non-privatized and operated by federal employees hired by the newly formed Transportation Security Administration (TSA) and 100 percent baggage screening be performed at all commercial airports by newly purchased Explosive Detection System (EDS) machines. LAX coordinated with the TSA to meet Congress' deadlines for federally operated security checkpoints (November 2002) and 100 percent baggage screening (December 2002). The heightened level of security at checkpoints also required the increase in the number of passenger through lanes. This was accomplished by purchasing additional Electronic Trace Detection (ETD) machines which allowed more efficient passenger processing.

- Since LAX traffic is projected to eventually fully recover, 2001 baseline-related data tends to overestimate project impacts for many disciplines.
- Further, although the typical month for the design day schedule (August) would be unaffected by September 11, 2001, the ratio of peak month activity to annual activity is exceptionally high, due to

the overwhelming fourth quarter decline in activity. This tends to underestimate environmental impacts for many disciplines.

For these reasons, the use of 2001 data as representative of current comparison conditions is inappropriate.

The most recent "normal" year for which a complete dataset is available is 2000. That year is evaluated in this report as the basis for consideration and comparison of how "current" conditions have evolved to some extent from the baseline conditions analyzed in the Draft EIS/EIR. The report also assesses whether the passage of time from the publication of the Draft EIS/EIR has had any material effect on the nature of the "No Action/No Project" alternative.

This change in aviation activity is discussed in detail in the following sections of this memorandum.

2. ACTIVITY CHANGES

2.1 National Trends (1996 to 2000)

- In the five-year period between 1995 (a year for which FAA annual data was readily available) and 2000, total enplanements of U.S. commercial airlines increased from 544.9 million to 660.6 million, an increase of 21.2 percent. During this same period, domestic traffic grew from 496.3 million to 605.8 million, or 22.1 percent. International traffic for U.S. airlines grew from 48.6 million to 54.8 million, a 12.8 percent increase. The cause of this commercial airline passenger increase is largely attributed to the continued growth of the U.S. economy; the Gross Domestic Product (GDP) grew from $7.5 trillion in 1995 to $9.2 trillion in 2000. During this period the average annual economic growth rate (as determined by GDP) remained over 3 percent; an indicator that passenger traffic should increase at a similar rate. In fact, as measured in constant dollars, the GDP grew at an Average Annual Rate of 4.1 percent between 1995 and 2000.
- A number of trends were apparent in commercial air travel during the 1996 to 2000 period, the most noteworthy being the continued keen competition among airlines. A number of "low-fare" airlines initiated service and while some failed, others were more successful. One of the original "low-fare" airlines, Southwest, continued to expand during the period at a faster rate than most other airlines. The "full-service" airlines such as American, Delta, and United also continued to offer innovative service and expand their route systems to blanket the country and the world. Airline alliances between domestic carriers and foreign flag airlines slightly lowered costs for the members of each alliance.
- Another reason the number of air passengers continues to expand is that the average cost to fly (ticket price or "yield" in airline language) continued to decline from 1996 to 2000. One reason for the decline in fares was the use of newer and more efficient aircraft, as well as the continued reduction in airline ticket sales and distribution costs. Therefore, as the costs of operation to the airlines continues to decline, the airlines have chosen to pass these economics on to the passengers in the form of lower rates.
- Turboprop aircraft continue to be replaced by regional jet aircraft. Passengers perceive this type of aircraft as providing a safer, quicker, and more pleasant experience. Regional/commuter passenger traffic grew during the 1996 to 2000 period at approximately twice the rate of all air passengers, partially as a result of this trend.
- Air cargo traffic also continued to grow during the 1995 to 2000 period. Revenue Ton Miles (a ton of air cargo flown 1 mile) increased from 23.2 trillion in 1995 to 30.1 trillion in 2000. International traffic grew at about twice the rate of domestic air cargo, but both benefited as consumers and businesses continued to insist upon "just-in-time" delivery of goods.

2.2 Regional Trends

- In the period from 1996 through 2000, the roles of the airports in the Los Angeles Basin remained constant. In 2000, LAX continued to serve as the dominant air service airport with almost 70 percent of the domestic enplanements and virtually all of the international enplanements in the region, serving 67.3 million annual passengers (MAP) or 76.0 percent of the regional total; up from 74.3 percent in 1996. It is expected that the market share will decrease over time, however, the number of

passengers using LAX will continue to increase. In 2000, a total of 150 destinations were served from LAX: 84 domestic; 5 transborder (Canadian); and 61 other international. John Wayne (SNA), Ontario (ONT), and Burbank-Glendale-Pasadena (BUR) airports augment the air service of LAX. In 2000, SNA served 7.8 MAP, representing 8.8 percent of the region's traffic; down from 9.4 percent in 1996. Physical and policy constrained to limit growth at SNA. The cities served from SNA and ONT are principally western U.S. markets and select mid-continent hub airports. ONT gained international service to Canada and Mexico during the period and likely has the most potential of the secondary airports to accommodate future growth. ONT passenger traffic increased to 6.8 MAP in 2000, yet its market share fell from 8.0 percent in 1996 to 7.6 percent in 2000. Passenger traffic at BUR declined slightly between 1996 and 2000, dropping its market share to 5.4 percent. The only BUR market east of the Mountain Time zone is Dallas/Fort Worth.

Palm Springs (PSP) and Long Beach (LGB) continued to serve a very limited passenger air carrier role in the region. PSP traffic increased from 1.1 MAP to 1.3 MAP, but its market share remained at 1.4 percent. PSP offered service to 13 domestic and 2 transborder destinations in 2000. Despite its relatively convenient location, scheduled air service at LGB expanded to six markets in 2000 from one in 1996. LGB's market share remains at less than 1 percent.

Oxnard (OXR) and Palmdale (PMD) have historically provided only commuter flights to LAX. There has been no scheduled service from PMD since April 1998.

Table S1, Passenger and Operations Comparison, 1996 vs. 2000, presents the passengers and aircraft operations at the region's airports in 1996 and 2000.

Table S1

Passenger and Operations Comparison, 1996 vs. 2000

	Passengers (000s)			Market Share	
	1996	2000	AAG[1]	1996	2000
Primary					
LAX	57,975	67,303	3.8%	74.3%	76.0%
Secondary					
SNA	7,308	7,773	1.6%	9.4%	8.8%
ONT	6,253	6,756	2.0%	8.0%	7.6%
BUR	4,838	4,749	-0.5%	6.2%	5.4%
PSP	1,115	1,281	3.5%	1.4%	1.4%
LGB	435	638	10.0%	0.6%	0.7%
Commuter					
Other[2]	140	111	-5.6%	0.2%	0.1%
Total Region	**78,064**	**88,611**	**3.2%**	**100.0%**	**100.0%**
	Aircraft Operations			**Market Share**	
	1996	**2000**	**AAG**	**1996**	**2000**
Primary					
LAX	763,866	767,473	0.6%	32.1%	35.6%
Secondary					
SNA	468,811	387,862	-4.6%	19.7%	18.0%
ONT	154,314	155,501	0.2%	6.5%	7.2%
BUR	184,803	160,769	-3.4%	7.8%	7.5%
PSP	90,585	96,103	1.5%	3.8%	4.5%
LGB	477,364	379,399	-5.6%	20.0%	17.6%
Commuter					
Other[2]	242,699	206,319	-4.0%	10.2%	9.6%
Total Region	**2,382,442**	**2,153,426**	**-2.3%**	**100.0%**	**100.0%**

[1] AAG = average annual compound growth rate from 1996 to 2000.
[2] Other = Imperial County, Oxnard, and Palmdale. Van Nuys is not included.

Source: Landrum & Brown, 2002.

- Growth at many of the regions' airports continued to be limited by caps on daily or annual air carrier aircraft operations, the maximum number of terminal gates, and voluntary/involuntary operating

curfews. Terminal congestion and roadway delays also continued to influence future demand and the allocation of demand among the regional airports.

- The wholesale use of regional jets has not been experienced in the Los Angeles Basin, even though regional jets have been deployed at airports across the country for most flights under 300 miles, except for the densest markets. Turboprop aircraft have become almost extinct at many airports. Regional jets are highly desired by the traveling public over turboprop aircraft due to the availability of cabin service and lavatory facilities, reduced cabin noise, and a perception of safer operation. Most regional jets are configured with 50 seats, although models range from 36 to 70 seats. Regional jets are also frequently used to replace small narrow body aircraft in markets where demand is lower. Often the use of regional jets in place of narrow body aircraft in 'thin demand' markets results in better air service due to an increase in the number of daily scheduled departures. Even so, there was no scheduled service on regional jets from LAX in 2000 and the number of regional jet departures at the other regional airports had dropped 64 percent since 1996.
- Turboprop and prop aircraft represented a smaller percentage of the regional fleet in 2000 compared to 1996. Wide body (twin-aisle) aircraft maintained their share of the regional fleet between 1996 and 2000. The workhorse class of aircraft in the region remains the narrow body (single-aisle) jet. Narrow bodies can be as small as 60 seats (Fokker F28) or as large as a single class Boeing 757 with 226 seats. Narrow body jets expanded their share of the fleet between 1996 and 2000. The reduction in small turboprop/prop and regional jet aircraft operations and the increased use of narrow body jets, resulted in an increase of 11 percent in the average number of seats on scheduled aircraft, from 120 to 133 seats in the region (125 to 137 at LAX).

  This increase in average gauge (seats per departure) means more passenger seats are available for the same number of aircraft operations. In the region, PSP provides the most vivid example. Scheduled departures declined 13 percent in the 1996 to 2000 period while gauge increased 30 percent, resulting in an increase of departing seats of 13 percent.
- At the same time that the average gauge was increasing, the length of the average scheduled flight segment from the regional airports also increased. The average length of haul increased by 20 percent between 1996 and 2000, from 864 miles to 1,038 miles (1,025 to 1,208 miles from LAX).

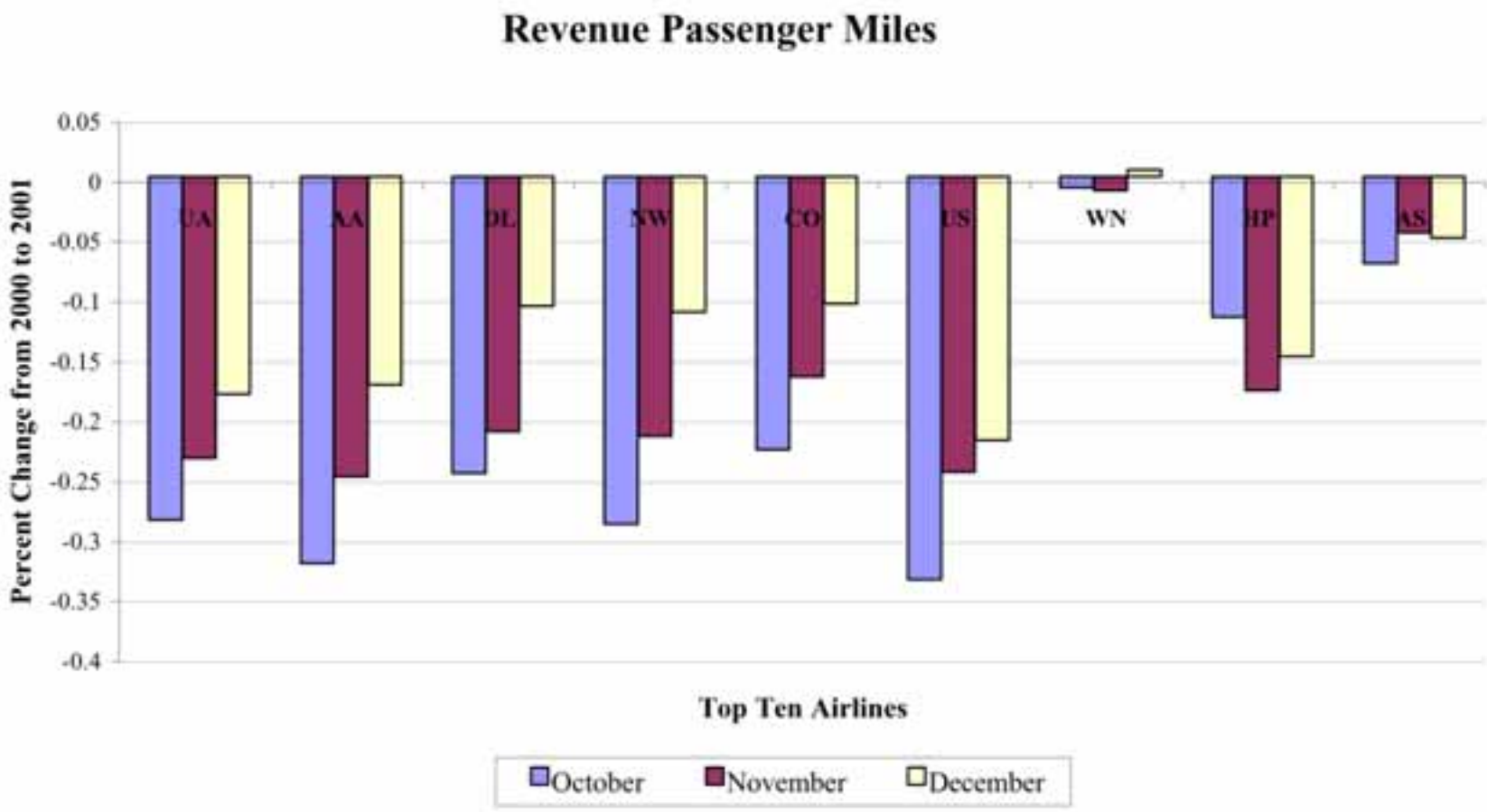
2.3 Comparison of 2000 to 2001 and Beyond

Although 2001 has not been used as an update comparison year for the LAX Draft EIS/EIR, it is useful to acknowledge trends that were observed prior to the September 11, 2001 terrorists attacks to analyze how traffic is recovering and to determine the impact of the recession that began in 2001.

Nationwide Impact of September 11, 2001 and Economic Recession

- Following September 11, 2001, air travel declined at most U.S. airports; in addition, the economic recession exacerbated the schedule cuts. For the industry as a whole, revenue passenger miles declined 32 percent in September 2001 compared to the previous year. Compared to 2000, traffic decreased 26 percent in October and 20 percent in November. During the holidays (December 20 to January 2) traffic declined 12 percent compared to the holiday season a year ago.[1] As shown in **Figure S1**, Revenue Passenger Miles (RPM) Percent Decrease from 2000 to 2001, all of the top 10 carriers experienced decreases in traffic in the fourth quarter of 2001, with the exception of Southwest Airlines.
- While individual airports have been affected differently, activity at most airports appears to be recovering. A review of individual airport statistics shows that the industry averages reflect a wide range of airport traffic fluctuations (see **Table S2**, Los Angeles International Airport Scheduled Seats Comparison). The cost reduction measures of the airlines have disproportionately affected certain airports, while other airports recovered quickly and are now back to pre-September 11, 2001 activity levels. Particularly hard hit have been the large coastal airports such as LAX, which had much overlap in competing airline service to certain markets, and small spoke airports, which often were marginally profitable. Many of the small "spoke" airports have seen commercial jet service downsized to regional jet service offered by the carriers' regional affiliates. This also occurred at LAX in 2001 (regional jets did not serve LAX in 2000). Conversely, inland hubs and larger low-cost air service

[1] Air Transport Association, 2002.



Source: Aviation Daily airline statistics, "U.S. Major Carriers Traffic", October, November, and December 2001.

Prepared by Landrum & Brown, May 18, 2000

LAX Master Plan - Supplement to the Draft EIS/EIR	**Revenue Passenger Miles (RPM) Percent Decrease from 2000 to 2001**	Figure **S1**

Table S2

Los Angeles International Airport Scheduled Seats Comparison

Airport	Oct. 2000	Oct. 2-01	% Change	Nov. 2000	Nov. 2001	% Change	Dec. 2000	Dec. 2001	% Change	4th Qtr. 2000	4th Qtr. 2001	% Change
Los Angeles	**4,406,081**	**3,810,709**	**-14%**	**4,215,074**	**3,252,728**	**-23%**	**4,315,706**	**3,370,679**	**-22%**	**12,936,861**	**10,434,116**	**-19%**
Atlanta	4,880,266	4,454,867	-9%	4,676,453	4,230,071	-10%	4,914,997	4,448,148	-9%	14,471,716	13,133,086	-9%
Chicago O'Hare	4,780,695	4,292,850	-10%	4,502,294	3,875,978	-14%	4,524,287	3,997,774	-12%	13,807,276	12,166,602	-12%
Dallas	3,726,451	3,390,620	-9%	3,572,906	2,989,952	-16%	3,647,821	3,104,921	-15%	10,947,178	9,485,493	-13%
San Francisco	2,509,486	2,136,469	-15%	2,381,886	1,851,036	-22%	2,428,865	1,906,440	-22%	7,320,237	5,893,945	-19%
Denver	2,396,459	2,064,914	-14%	2,166,686	1,801,937	-17%	2,318,026	1,904,789	-18%	6,881,171	5,771,640	-16%
Las Vegas	2,045,648	1,954,886	-4%	1,968,768	1,815,493	-8%	1,979,085	1,843,911	-7%	5,993,501	5,614,290	-6%
Minneapolis/St. Paul	2,175,078	1,840,511	-15%	2,039,701	1,770,854	-13%	2,113,274	1,920,284	-9%	6,328,053	5,531,649	-13%
Phoenix	2,494,108	2,303,396	-8%	2,430,814	2,085,060	-14%	2,522,930	2,184,204	-13%	7,447,852	6,572,660	-12%
Detroit	2,257,048	1,926,221	-15%	2,121,612	1,833,949	-14%	2,152,071	1,922,251	-11%	6,530,731	5,682,421	-13%
Houston	2,050,422	1,907,168	-7%	1,960,027	1,894,287	-3%	2,046,730	1,905,424	-7%	6,057,179	5,706,879	-6%
Newark (NY)	2,288,354	1,864,310	-19%	2,176,061	1,744,107	-20%	2,234,558	1,761,195	-21%	6,698,973	5,369,612	-20%
Miami	1,962,049	1,824,676	-7%	1,961,020	1,754,514	-11%	2,096,790	1,874,930	-11%	6,019,859	5,454,120	-9%
JFK (NY)	2,175,674	1,797,702	-17%	2,085,352	1,549,996	-26%	2,085,094	1,635,924	-22%	6,346,120	4,983,622	-21%
Orlando	1,645,671	1,419,785	-14%	1,631,827	1,302,098	-20%	1,690,840	1,368,898	-19%	4,968,338	4,090,781	-18%
St. Louis	2,106,568	1,979,913	-6%	1,969,741	1,825,583	-7%	2,013,880	1,868,048	-7%	6,090,189	5,673,544	-7%
Seattle	1,801,724	1,627,103	-10%	1,647,797	1,421,858	-14%	1,713,312	1,536,013	-10%	5,162,833	4,584,974	-11%
Boston	2,037,499	1,685,085	-17%	1,922,928	1,339,534	-30%	1,919,561	1,433,715	-25%	5,879,988	4,458,334	-24%
LaGuardia (NY)	1,930,095	1,607,064	-17%	1,911,283	1,353,519	-29%	1,951,072	1,415,390	-27%	5,792,450	4,375,973	-24%
Philadelphia	1,826,653	1,720,934	-6%	1,733,576	1,595,531	-8%	1,761,015	1,661,241	-6%	5,321,244	4,977,706	-6%
Charlotte	1,659,916	1,693,700	2%	1,612,216	1,526,498	-5%	1,684,132	1,616,374	-4%	4,956,264	4,836,572	-2%
Honolulu	1,310,568	1,121,686	-14%	1,302,659	983,527	-24%	1,309,068	1,030,953	-21%	3,922,295	3,136,166	-20%
Cincinnati	1,520,855	1,338,575	-12%	1,429,907	1,360,428	-5%	1,465,517	1,372,660	-6%	4,416,279	4,071,663	-8%
Washington Dulles	1,362,603	1,291,930	-5%	1,251,334	1,080,769	-14%	1,246,745	1,093,917	-12%	3,860,682	3,466,616	-10%
Salt Lake City	1,192,295	1,129,137	-5%	1,129,148	1,102,587	-2%	1,203,556	1,157,346	-4%	3,524,999	3,389,070	-4%
Top 25 Total	**58,542,266**	**52,184,211**	**-11%**	**55,801,070**	**47,341,894**	**-15%**	**57,338,932**	**49,335,429**	**-14%**	**171,682,268**	**148,861,534**	**-13%**

Note: Seats shown represent arrival seats.

Source: Official Airline Guide, 2001.

markets generally have fared better than average. Compared to the same period in 2000, average scheduled seats were down 13 percent for the top 25 U.S. airports for the fourth quarter of 2001. LAX scheduled seats were down 19 percent for this period.

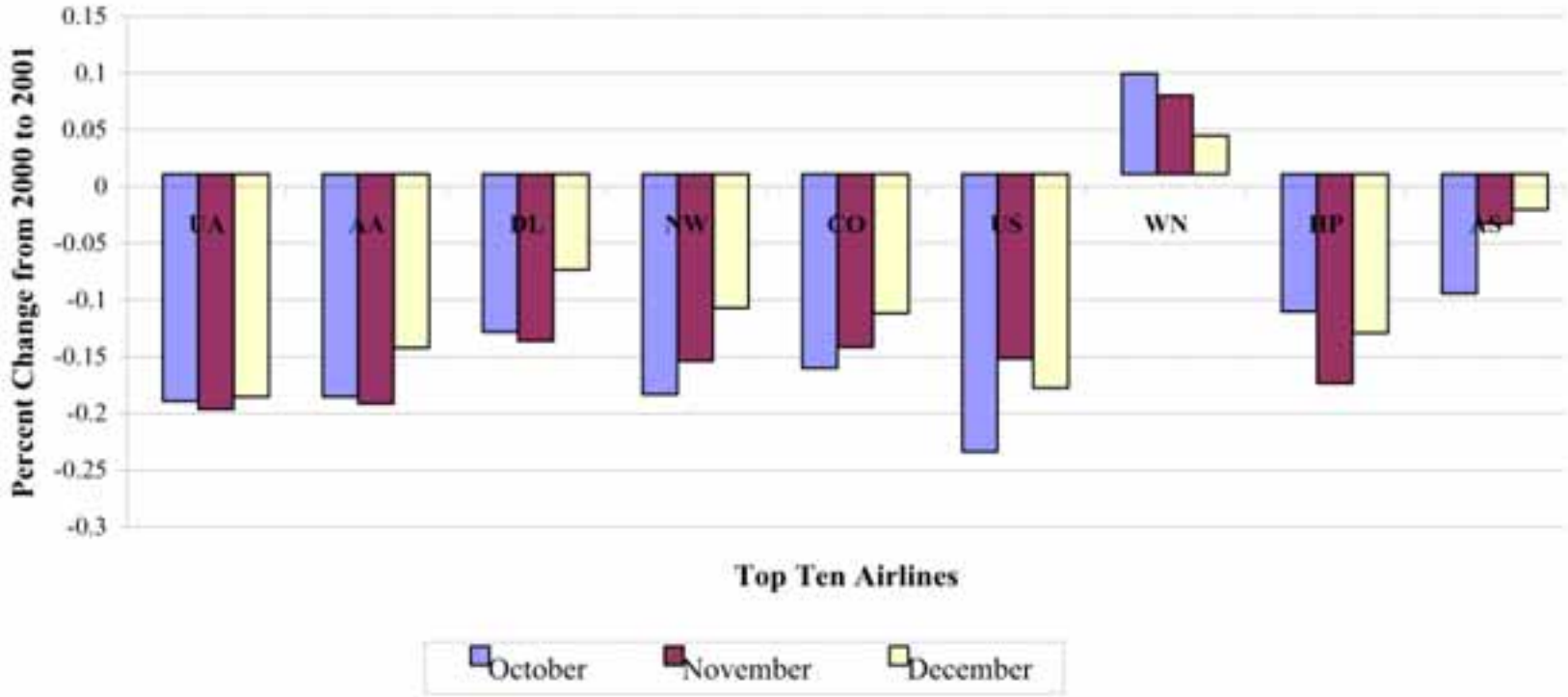
- Most airlines reduced the number of available seats from 2000 fourth quarter levels to control costs in light of the current economic conditions and reduced travel. Southwest Airlines is the exception to this trend. As shown in **Figure S2**, Revenue Available Seat Miles (ASM) Percent Decrease from 2000 to 2001, Southwest is the only airline of the top 10 airlines to increase ASM in the fourth quarter of 2001, as compared to the same period in 2000. Although nothing is comparable to the attacks of September 11, 2001, there have been many negative events over the past 40 years which have had led to an initial decline, and subsequent recovery, in air travel at various times. To put the terrorist attacks of September 11, 2001 and the economic recession into perspective in terms of their impact on U.S. aviation, nationwide aviation activity over the last 40 years was evaluated[2] (see **Figure S3**, 40-Year United States Historical Aviation Traffic). Some events that have had a temporary negative impact on air travel include the Cuban Missile Crisis in the 1960s, aircraft hijackings in the 1970s, the Professional Air Traffic Controllers Association (PATCO) strike and the mass firing of controllers in the early 1980s, and the Persian Gulf War in the early 1990s.
- Every aforementioned decade-defining industry episode was coterminous with an economic recession. The rash of hijackings in the mid-1970s was concurrent with Organization of Petroleum Exporting Countries (OPEC) actions and economic hardship in the U.S. and abroad. Months before the Reagan Administration replaced civilian air traffic controllers with military controllers, the nation was well into a deep and debilitating recession. The Persian Gulf War occurred as economic malaise gripped the nation. An economic recession was also well underway before the events of September 11, 2001. Economic recessions have always been the industry's single greatest threat to profitability, competition, and traffic volumes.
- In spite of the aforementioned events and economic downturns, air travel has followed a general upward trend since the 1960s, increasing by an average of over 10 percent annually. An analysis of the major events mentioned above shows that declines in air travel (or very limited growth) were typically followed by robust recovery. The general longer-term growth trend holds true despite these temporary dips. While none of these events is comparable to what occurred on September 11, 2001, the trends observed from these occurrences can provide insight into the future. The new millennium brings a recession and a new "war against worldwide terrorism" that presents its unique set of uncertainties. However, if aviation history provides any guidance, the current downturn will be offset by a pronounced rebound.
- Two of the nation's major air carriers, US Airways and United Airlines, filed for bankruptcy protection in the second half of 2002. Most of the major airlines were losing money before the events of September 11, 2001 due to reductions in business travel brought on by the economic recession. The protracted duration of the recession has led many industry observers to believe that full-fare business travel may never return to the levels experienced in the 1990s. Business travel has experienced a fundamental shift to advance purchase tickets, extending trips to take advantage of lower fares that require Saturday night stays, and conducting more meetings via video conferences.

LAX Activity 2000 to 2001

- Prior to September 11, 2001, the number of passengers served at LAX was relatively constant with 2000 levels; after the terrorist attacks, LAX was one of the disproportionately affected airports in the U.S. LAX passenger traffic declined by 25 percent for the fourth quarter of 2001 compared to the same period in 2000. As shown in **Figure S4**, 2000 and 2001 Total Passenger Comparison, LAX is showing gradual recovery; traffic was down 33 percent in September, improving to a decrease of 20 percent in December. During January and February 2002, passenger traffic was down only 17.5 percent, compared to the same two months in 2001.
- In October of 2001, the airlines introduced regional jet service at LAX. The introduction of regular regional jet service was likely a reaction to reduced passenger demand following September 11, 2001 and the demise of United Shuttle.

[2] This Landrum & Brown 40-year analysis was reported in November of 2001 in *Aviation Week & Space Technology* and in the February 2002 issue of *Airport Magazine*.

Available Seat Miles

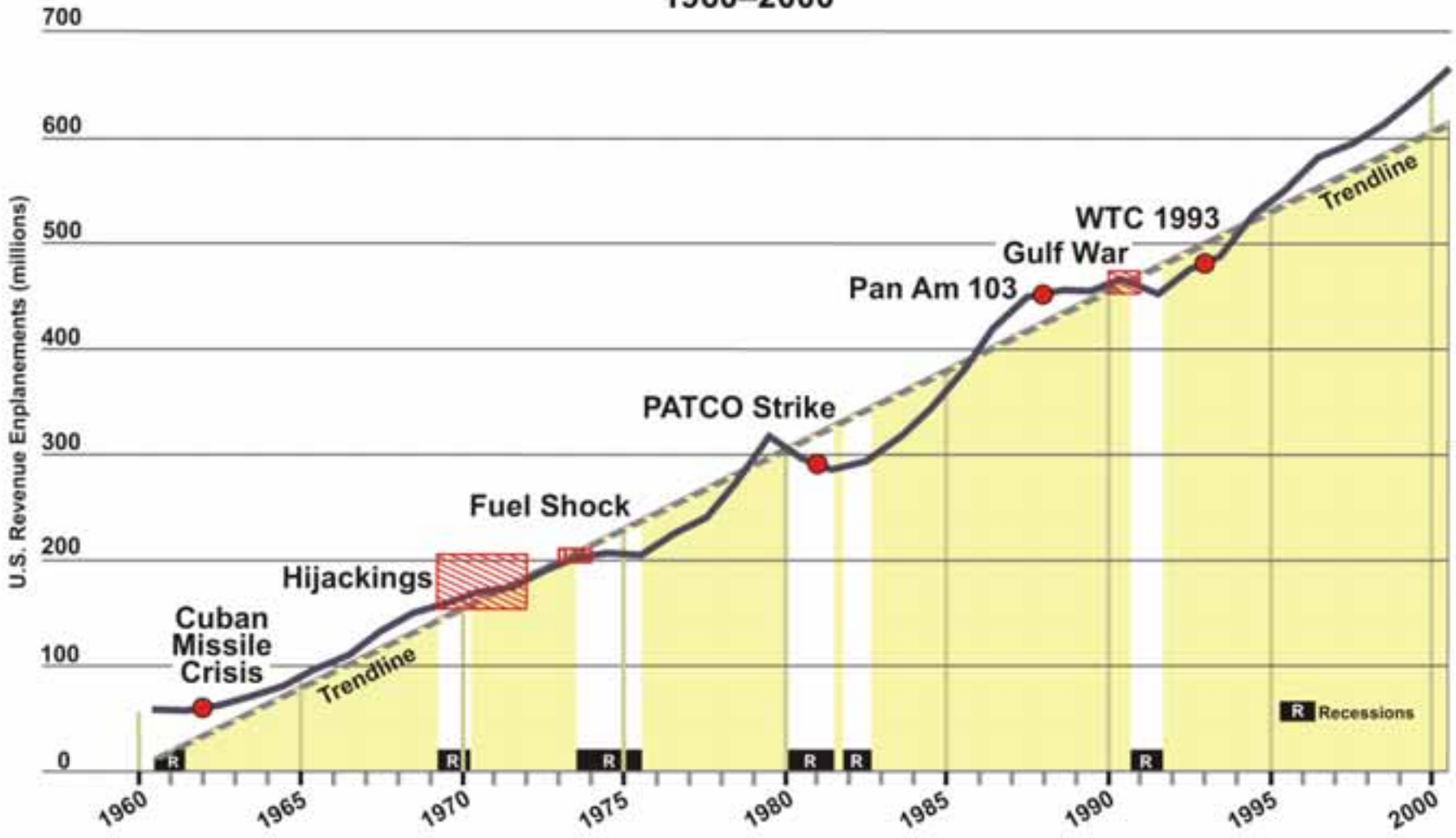


Source: Aviation Daily airline statistics, "U.S. Major Carriers Traffic", October, November, and December 2001.

Prepared by Landrum & Brown, May 18, 2000

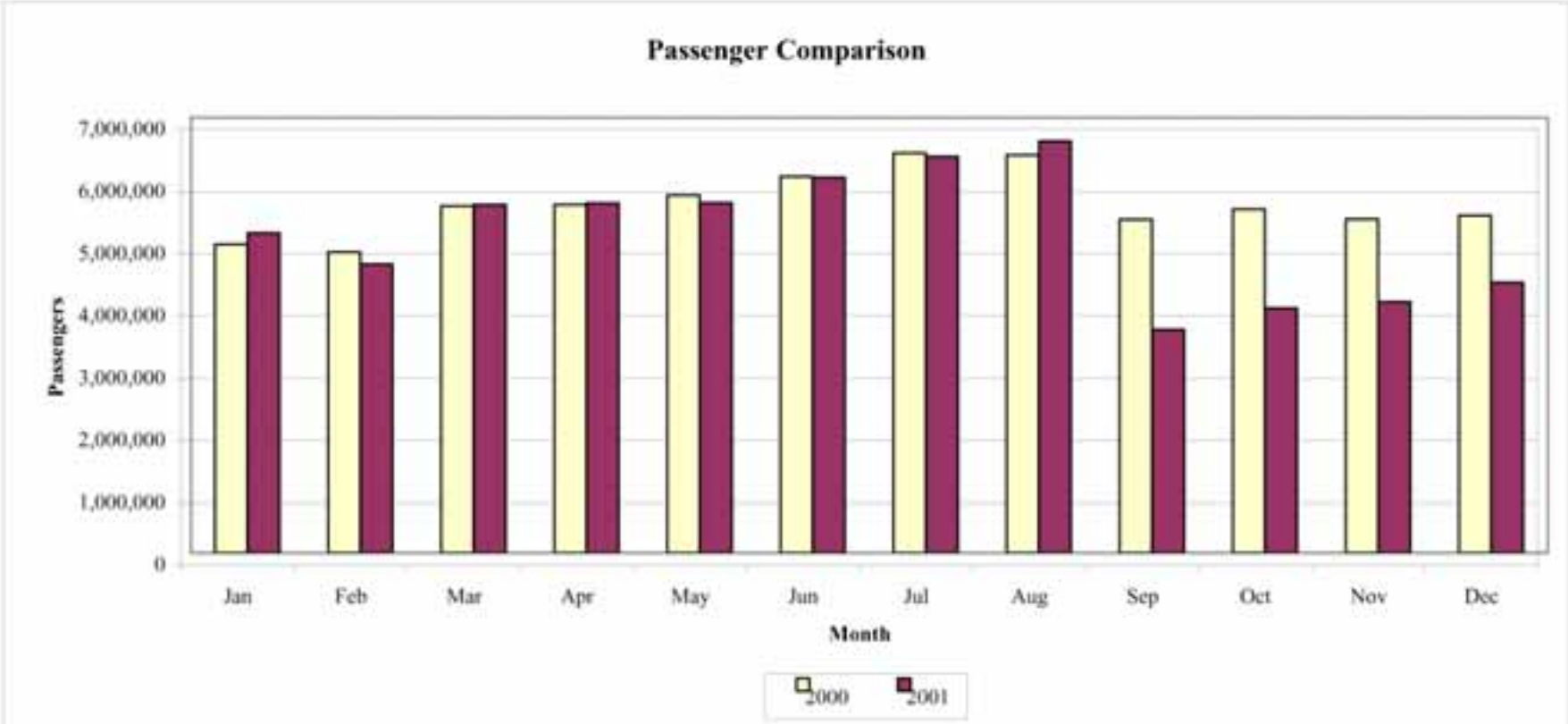
LAX Master Plan - Supplement to the Draft EIS/EIR	**Available Seat Miles (ASM) Percent Decrease from 2000 to 2001**	Figure **S2**

Aviation System Shocks and Recoveries
1960–2000



Prepared By: Landrum & Brown, August 2, 2002
Source: Air Transport Association, Landrum & Brown, Inc.

LAX Master Plan - Supplement to the Draft EIS/EIR	40-Year United States Historical Aviation Traffic	Figure S3



Month	Percent Change	Month	Percent Change	Month	Percent Change
January	4%	May	-2%	September	-33%
February	-4%	June	0%	October	-29%
March	0%	July	-1%	November	-25%
April	0%	August	4%	December	-20%

Source: LAWA Traffic Statistics

Prepared by Landrum & Brown, May 18, 2000

LAX Master Plan - Supplement to the Draft EIS/EIR	2000 and 2001 Total Passenger Comparison	Figure S4

- There are many factors that led to the disproportionate decline in activity levels at LAX after September 11, 2001. For example, LAX had overlap in competing airline service to certain markets, which was cut in response to the September 11, 2001 attacks and the current recession. In addition, since LAX is a large, coastal international gateway airport with a large proportion of international activity (26 percent in 2000), it experienced a larger proportional decline. Also, new security regulations implemented in response to the terrorist attacks caused inconvenience to passengers, making air travel less attractive, particularly for short-haul markets. In response, many passengers in the Los Angeles region began using other modes of transportation or other local airports, reducing demand at LAX.
- The new security regulations and resulting passenger inconvenience has also affected LAX. For example, a new FAA regulation prohibited auto parking within 300 feet of terminal buildings. All of the public parking garages at LAX have parking within that distance, rendering much of the auto parking capacity at LAX unusable immediately after September 11, 2001. In fact, LAX went beyond the Federal requirements and closed access to the curbfront and all close-in parking garages immediately after September 11, 2001. That situation contributed to the large declines in traffic in the last quarter of 2001. Some roadways and the parking garages were reopened on October 20, 2001, and the curbfront was opened on December 15, 2001, however, parking within 300 feet of the terminal is still prohibited.

Beyond 2001

- Many uncertainties affect the airline industry at this time. Net losses for the airlines reached $7 billion in 2001[3] and the major passenger airline's net loss in 2002 was a record $11.2 billion.[4] Merrill Lynch and other analysts predict that the magnitude of the losses may be a catalyst for change. For example, many of the major carriers are restructuring their networks and focusing on the more profitable routes, allowing the airlines to emerge stronger once traffic rebounds.[5] Some analysts believe the airlines would lose money in 2003, even without a war in Iraq. It is not clear if the federal financial bailout will be sufficient to guarantee survival of all of the carriers, particularly because labor and other business issues are not alleviated by the bailout.
- In December 2002, both UAL Corp.'s United Airlines and US Airways Group Inc. began operating under the protection of Chapter 11 bankruptcy, with US Airways Group Inc emerging from Chapter 11 bankruptcy in March 2003. AMR Corp.'s American Airlines has said it too may be forced to seek bankruptcy protection if it cannot lower labor and other costs significantly. As a group, the major U.S. carriers (excluding Southwest) have laid-off thousands of workers, retired planes, deferred delivery of new planes, closed ticket offices and reservation centers, eliminated most in-flight meals, and reduced capital expenditures. The 2003 war in Iraq has hampered travel demand at the same time the cost of jet fuel has climbed. In addition, Severe Acute Respiratory Syndrome (SARS), a contagious disease that newly emerged in 2003, is also hampering travel demand. The Centers for Disease Control and Prevention and the World Health Organization have issued travel advisories and guidance on traveling to certain countries with a high incidence of the disease. The nation's largest carriers are now trying to reduce their biggest single expenditure, wages and benefits. As of May 2003, it is not yet known whether United Airlines will emerge from bankruptcy. Whether American or any other major carrier will be forced to join United in bankruptcy is also not certain. However, the airlines' business is to meet passenger demand. The demise of a particular carrier would result in other carriers moving to serve that demand.
- As long as the economy remains in a recession, traffic will likely lag behind forecast levels; however, as the economy recovers, traffic can be expected to recover to historical growth trends. This is true for the nation and at LAX. Along with most other airports in the U.S., LAX has shown recovery after the initial decline after September 11, 2001.
- Regional jets continued to operate at LAX into 2002. In August of 2002, regional jets were scheduled to serve 13 markets, with over 59 flights per day.[6] In 2000, all but two of these markets (Fresno and

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3 2002 State of the U.S. Airline Industry, A Report on Recent Trends for U.S. Air Carriers, Air Transport Association.

4 Wall Street Journal, February 18, 2003.

5 Merrill Lynch January 9, 2002, Airline Industry Update.

6 Official Airline Guide, August 14, 2002.

Santa Barbara), were exclusively air carrier markets and where not served by commuter aircraft. It is expected that regional jet activity at LAX will continue to increase in the future.

2.4 Aviation at LAX

In support of the baseline year comparison update for various environmental impact analyses, a year 2000 design day flight schedule was developed. This schedule was developed based on LAX Air Traffic Control Tower (ATCT) daily airport operations counts, LAWA traffic statistics, radar data, and the Official Airline Guide (OAG) published schedule of arrivals and departures.

Background Assumptions in the 2000 Design Day Schedule

- The ATCT daily activity counts from January through December 2000 were used to define the volume of annual operations that correspond to the design day. The daily counts were reviewed to identify the peak activity month and to compare fluctuations in activity volumes by day of the week. August was identified as the peak month with 68,871 total operations. Operations for the Peak Month Average Weekday (PMAWD) in August were calculated to be 2,277.
- The daily operations counts for all weekdays in August were reviewed to identify the day that would serve as the base for the preparation of the flight schedule. Wednesday was considered a good candidate day because it is a "busy" day, has a good representation of international activity, and is not likely to be affected by potential peculiar service patterns such as Monday or Friday. Wednesday, August 16, 2000, was selected as the representative day for air carrier and commuter activity for the 2000 design day flight schedule. The OAG schedule for this day was then modified as follows:
  - United Shuttle typically scheduled more flights each day than would actually operate. Forty (40) flights were removed to adjust for this (737-300 and 737-500 aircraft only). The number of flights to remove was determined by comparing the number of actual flights to scheduled flights from the OAG.
  - Saturday is the typical peak day for international operations. To fully reflect international service, 12 international flights from the Saturday, August 19, 2000 OAG schedule were added to the design day schedule.
  - Three charter flights were added to represent typical operations.
- August 3, 2000 was selected as a representative day for all-cargo operations. This was the busiest day of the month for cargo operations. Design day cargo operations increased from 76 in 1996 to 117 in the 2000 design day schedule.
- August 3, 2000 was also used for general aviation operations. The hourly distribution of general aviation operations was adjusted to correspond to the average hourly distribution for general aviation operations for August. Design day general aviation activity remained at 104 operations in 2000.

Highlights of the 2000 Design Day Schedule

- The resulting 2000 flight schedule totaled 2,275 operations, some 40 more than the 1996 baseline schedule and an increase of slightly more than 1 percent. Commercial passenger operations remained similar to the levels observed in 1996 (2,055 in 1996, 2,054 in 2000). The principal increase in design day operations from 1996 to 2000 was in all-cargo activity, which mainly occurs in off-peak hours.
- Several changes occurred between 1996 and 2000 in the level of activity for each air service category, primarily in the level of commuter activity. **Table S3**, 1996 and 2000 LAX Design Day Activity, shows the number of design day operations and passengers for each air service category in the 1996 and 2000 schedules. **Tables S4**, Hourly Forecast Design Day - Arrival Operations By User - Year 2000, **S5**, Hourly Forecast Design Day - Departure Operations By User - Year 2000, and **S6**, Hourly Forecast Design Day - Total Operations By User - Year 2000, show the hourly distribution of the 2000 schedule by region. Commuter activity was somewhat lower in 2000 than it was in 1996, while domestic air carrier and international traffic was higher.

Table S3

1996 and 2000 LAX Design Day Activity

	Passengers		Operations	
	1996	2000[1]	1996	2000
Domestic Air Carrier	139,933	150,045	1,199	1,279
Commuter	7,595	8,232	644	474
International	38,984	57,368	212	301
Cargo	N/A	N/A	76	117
General Aviation	N/A	N/A	104	104
Total	**186,512**	**215,645**	**2,235**	**2,275**

[1] Based on 1996 load factors.

Source: Landrum & Brown, 2002.

- The hourly distribution of activity in the 1996 and 2000 schedules was similar, however there were some differences (see **Figure S5**, Design Day Hourly Operations). The 1996 schedule was more peaked than the 2000 schedule. The peak operations hour contained 159 operations in 1996 and 149 operations in 2000. The main reason for this difference was the decrease in commuter activity from 1996 to 2000 (from 644 daily operations in 1996 to 474 in 2000), which altered the hourly distribution of activity.

  These patterns of scheduled operations at LAX have been influenced in part by travel time "windows" to and from long-haul markets in the U.S. and abroad. Many of the long-haul markets served by LAX, U.S. and foreign, are located in a different time zone than LAX. Local time differences between markets coupled with passenger preferential travel times created peculiar arrival and departure activity patterns at LAX. **Figures S6**, Hourly Distribution of Domestic Operations by Geographic/Time Zone Regions and **S7**, Hourly Distribution of International Operations by Geographic/Time Zone Regions, illustrate the 1996 and 2000 baseline hourly distribution of flights by geographic and time zone regions.

- The profile of operations for short-haul commuter and jet traffic within the Pacific and Mountain Time zones shows a similar pattern throughout the day for each of the baseline schedules. The more pronounced peaks and valleys seen in the commuter traffic were characteristic of "banks" scheduling practices for this type of activity. The Pacific and Mountain Time zones include all Hawaii operations.
- U.S. Central and Eastern Time zone markets are clearly affected by time zone differences showing little or no activity between 17:00 and 21:00 in both the 1996 and 2000 baselines. The U.S. Eastern flights maintain a higher volume of traffic for the hours between 7:00 and 9:00 in 2000 than in 1996. The 2000 baseline also had a peak in the 11:00 hour for the U.S. Central flights that was not present in the 1996 schedule. The 2000 schedule contained a little over 40 more operations in each of the two time zone markets than in 1996.
- Far East traffic primarily occurred in the early to late afternoon with peaks at 11:00 and 13:00 in 1996, and not until 14:00 in 2000. European traffic predominated in the late afternoon and early evening hours for both years. In 2000, the main peaks were greater and occurred earlier in the day than in 1996.
- Both Mexico/Latin America and Canada traffic had peaks and valleys throughout the day. The 2000 schedule was more peaked than the 1996 schedule, with peak activity occurring at 10:00 for Mexico/Latin America traffic and at 12:00 for Canadian traffic.
- In the 2000 schedule, the U.S. major scheduled air carriers (AA, CO, DL, HP, NW, TW, UA, US, WN) made up 73 percent of the activity or 1,668 operations. This compared with 77 percent of the activity or 1,720 operations in the 1996 schedule being made up of U.S. major scheduled air carriers. From 1996 to 2000, the foreign flag carriers' total operations increased by 76 percent from 144 operations

Table S4

Hourly Forecast Design Day - Arrival Operations By User - Year 2000

	Domestic Commercial Operations										
	Air Carrier										
Time	Pacific/Mountain	Central	Eastern	Total	Commuter	Hawaii	Total	International	Cargo	GA & Military	Total
00:00 - 01:00	3	5	3	**11**	0	1	**12**	0	1	2	**15**
01:00 - 02:00	0	0	2	**2**	0	0	**2**	0	0	1	**3**
02:00 - 03:00	1	0	0	**1**	0	0	**1**	1	4	0	**6**
03:00 - 04:00	0	0	0	**0**	0	0	**0**	0	6	1	**7**
04:00 - 05:00	0	0	0	**0**	0	0	**0**	0	5	1	**6**
05:00 - 06:00	0	0	0	**0**	3	10	**13**	0	3	1	**17**
06:00 - 07:00	2	0	0	**2**	5	2	**9**	3	5	2	**19**
07:00 - 08:00	23	1	0	**24**	24	1	**49**	2	4	0	**55**
08:00 - 09:00	23	7	2	**32**	15	0	**47**	6	2	1	**56**
09:00 - 10:00	21	10	12	**43**	10	0	**53**	9	0	3	**65**
10:00 - 11:00	26	8	11	**45**	18	0	**63**	11	3	3	**80**
11:00 - 12:00	18	12	13	**43**	21	0	**64**	9	0	4	**77**
12:00 - 13:00	27	6	3	**36**	9	0	**45**	10	0	2	**57**
13:00 - 14:00	20	8	9	**37**	15	0	**52**	14	1	2	**69**
14:00 - 15:00	13	3	8	**24**	15	0	**39**	9	3	3	**54**
15:00 - 16:00	24	6	5	**35**	17	1	**53**	14	1	4	**72**
16:00 - 17:00	17	10	2	**29**	12	1	**42**	7	3	2	**54**
17:00 - 18:00	20	8	11	**39**	11	1	**51**	5	2	4	**62**
18:00 - 19:00	21	8	9	**38**	17	0	**55**	9	4	3	**71**
19:00 - 20:00	22	10	11	**43**	12	0	**55**	12	2	3	**72**
20:00 - 21:00	19	6	15	**40**	13	2	**55**	9	3	2	**69**
21:00 - 22:00	24	8	10	**42**	19	5	**66**	13	2	2	**83**
22:00 - 23:00	18	4	7	**29**	1	1	**31**	4	4	2	**41**
23:00 - 24:00	7	6	3	**16**	0	1	**17**	5	2	3	**27**
TOTALS	**349**	**126**	**136**	**611**	**237**	**26**	**874**	**152**	**60**	**51**	**1,137**

Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.

Table S5

Hourly Forecast Design Day - Departure Operations By User - Year 2000

	Domestic Commercial Operations										
	Air Carrier										
Time	Pacific/Mountain	Central	Eastern	Total	Commuter	Hawaii	Total	International	Cargo	GA & Military	Total
00:00 - 01:00	0	5	1	**6**	0	0	**6**	3	1	2	**12**
01:00 - 02:00	0	4	0	**4**	0	0	**4**	10	2	1	**17**
02:00 - 03:00	0	0	1	**1**	0	0	**1**	1	2	1	**5**
03:00 - 04:00	0	0	0	**0**	0	0	**0**	0	2	0	**2**
04:00 - 05:00	0	0	0	**0**	0	0	**0**	0	3	0	**3**
05:00 - 06:00	3	0	0	**3**	0	0	**3**	0	3	1	**7**
06:00 - 07:00	25	11	3	**39**	8	0	**47**	0	5	1	**53**
07:00 - 08:00	30	7	11	**48**	13	0	**61**	5	6	5	**77**
08:00 - 09:00	19	10	19	**48**	15	5	**68**	4	3	4	**79**
09:00 - 10:00	18	9	9	**36**	15	2	**53**	2	1	2	**58**
10:00 - 11:00	19	7	8	**34**	10	2	**46**	13	1	2	**62**
11:00 - 12:00	18	15	8	**41**	19	1	**61**	7	2	2	**72**
12:00 - 13:00	22	7	11	**40**	17	3	**60**	12	0	4	**76**
13:00 - 14:00	23	5	10	**38**	15	0	**53**	9	1	4	**67**
14:00 - 15:00	16	4	7	**27**	12	2	**41**	14	1	4	**60**
15:00 - 16:00	19	8	9	**36**	15	2	**53**	12	0	3	**68**
16:00 - 17:00	14	7	7	**28**	16	2	**46**	7	0	4	**57**
17:00 - 18:00	26	8	2	**36**	8	4	**48**	7	4	1	**60**
18:00 - 19:00	25	10	0	**35**	16	1	**52**	8	1	2	**63**
19:00 - 20:00	21	3	0	**24**	18	1	**43**	5	6	2	**56**
20:00 - 21:00	24	0	0	**24**	11	1	**36**	3	7	2	**48**
21:00 - 22:00	19	0	6	**25**	12	0	**37**	5	1	3	**46**
22:00 - 23:00	10	2	18	**30**	17	0	**47**	9	2	3	**61**
23:00 - 24:00	1	6	6	**13**	0	0	**13**	13	3	0	**29**
TOTALS	**352**	**128**	**136**	**616**	**237**	**26**	**879**	**149**	**57**	**53**	**1,138**

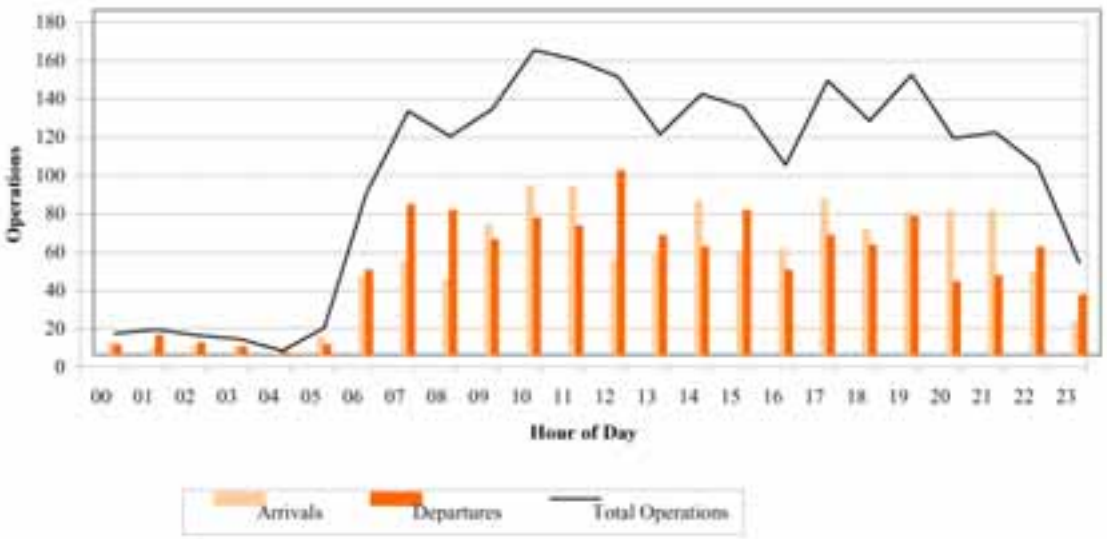
Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.

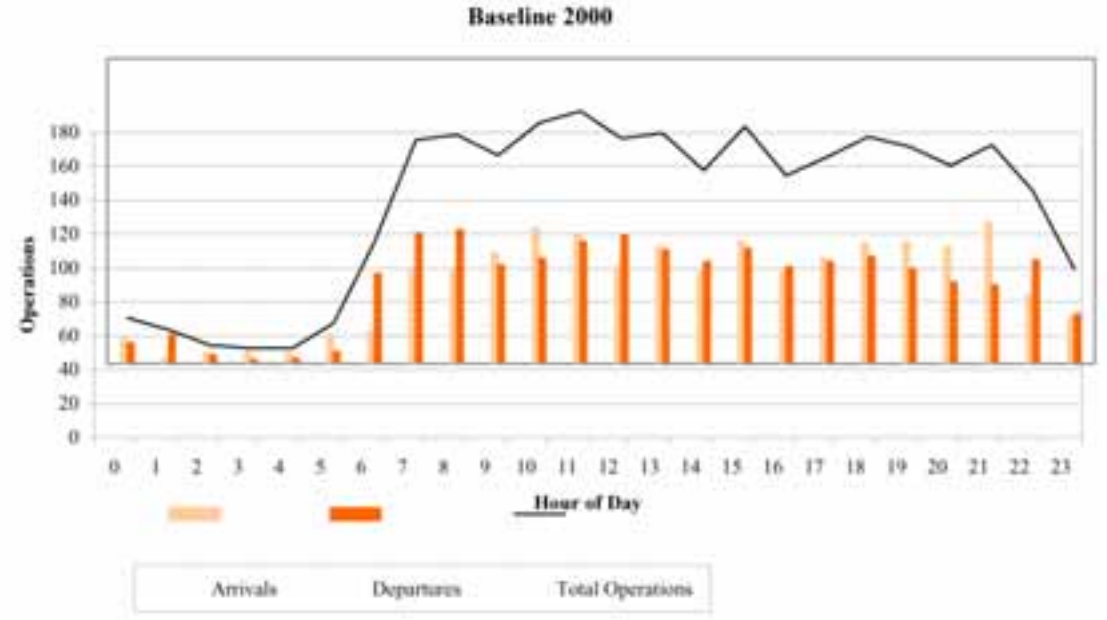
Table S6

Hourly Forecast Design Day - Total Operations By User - Year 2000

	Domestic Commercial Operations										
	Air Carrier										
Time	**Pacific/Mountain**	**Central**	**Eastern**	**Total**	**Commuter**	**Hawaii**	**Total**	**International**	**Cargo**	**GA & Military**	**Total**
00:00 - 01:00	3	10	4	**17**	0	1	**18**	3	2	4	**27**
01:00 - 02:00	0	4	2	**6**	0	0	**6**	10	2	2	**20**
02:00 - 03:00	1	0	1	**2**	0	0	**2**	2	6	1	**11**
03:00 - 04:00	0	0	0	**0**	0	0	**0**	0	8	1	**9**
04:00 - 05:00	0	0	0	**0**	0	0	**0**	0	8	1	**9**
05:00 - 06:00	3	0	0	**3**	3	10	**16**	0	6	2	**24**
06:00 - 07:00	27	11	3	**41**	13	2	**56**	3	10	3	**72**
07:00 - 08:00	53	8	11	**72**	37	1	**110**	7	10	5	**132**
08:00 - 09:00	42	17	21	**80**	30	5	**115**	10	5	5	**135**
09:00 - 10:00	39	19	21	**79**	25	2	**106**	11	1	5	**123**
10:00 - 11:00	45	15	19	**79**	28	2	**109**	24	4	5	**142**
11:00 - 12:00	36	27	21	**84**	40	1	**125**	16	2	6	**149**
12:00 - 13:00	49	13	14	**76**	26	3	**105**	22	0	6	**133**
13:00 - 14:00	43	13	19	**75**	30	0	**105**	23	2	6	**136**
14:00 - 15:00	29	7	15	**51**	27	2	**80**	23	4	7	**114**
15:00 - 16:00	43	14	14	**71**	32	3	**106**	26	1	7	**140**
16:00 - 17:00	31	17	9	**57**	28	3	**88**	14	3	6	**111**
17:00 - 18:00	46	16	13	**75**	19	5	**99**	12	6	5	**122**
18:00 - 19:00	46	18	9	**73**	33	1	**107**	17	5	5	**134**
19:00 - 20:00	43	13	11	**67**	30	1	**98**	17	8	5	**128**
20:00 - 21:00	43	6	15	**64**	24	3	**91**	12	10	4	**117**
21:00 - 22:00	43	8	16	**67**	31	5	**103**	18	3	5	**129**
22:00 - 23:00	28	6	25	**59**	18	1	**78**	13	6	5	**102**
23:00 - 24:00	8	12	9	**29**	0	1	**30**	18	5	3	**56**
TOTALS	**701**	**254**	**272**	**1,227**	**474**	**52**	**1,753**	**301**	**117**	**104**	**2,275**

Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.

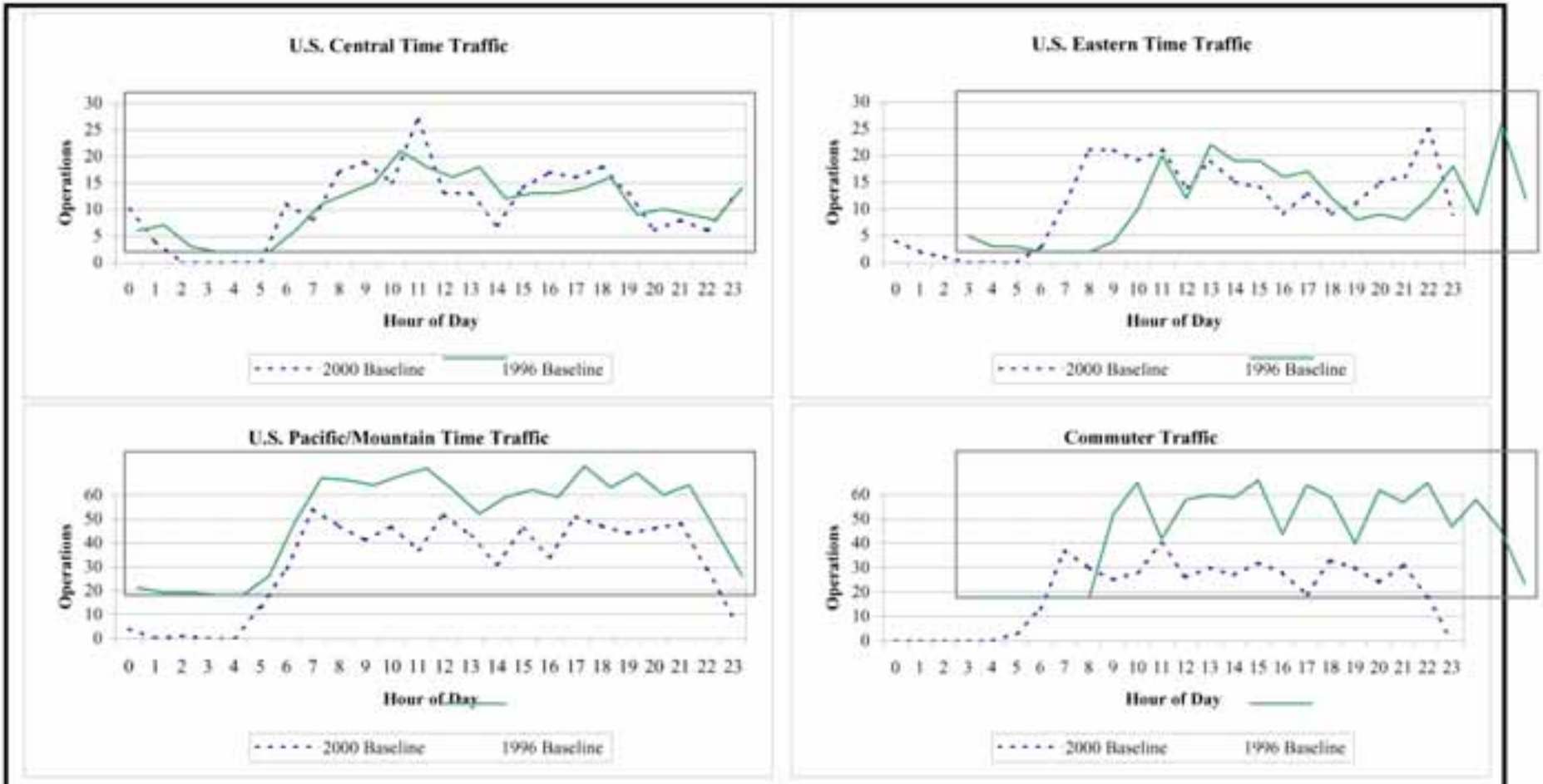




Source: 1996 and August 16 & 19, 2000 Official Airline Guide, Air Traffic Control Tower counts, and radar data.

Prepared by Landrum & Brown, May 3, 2002

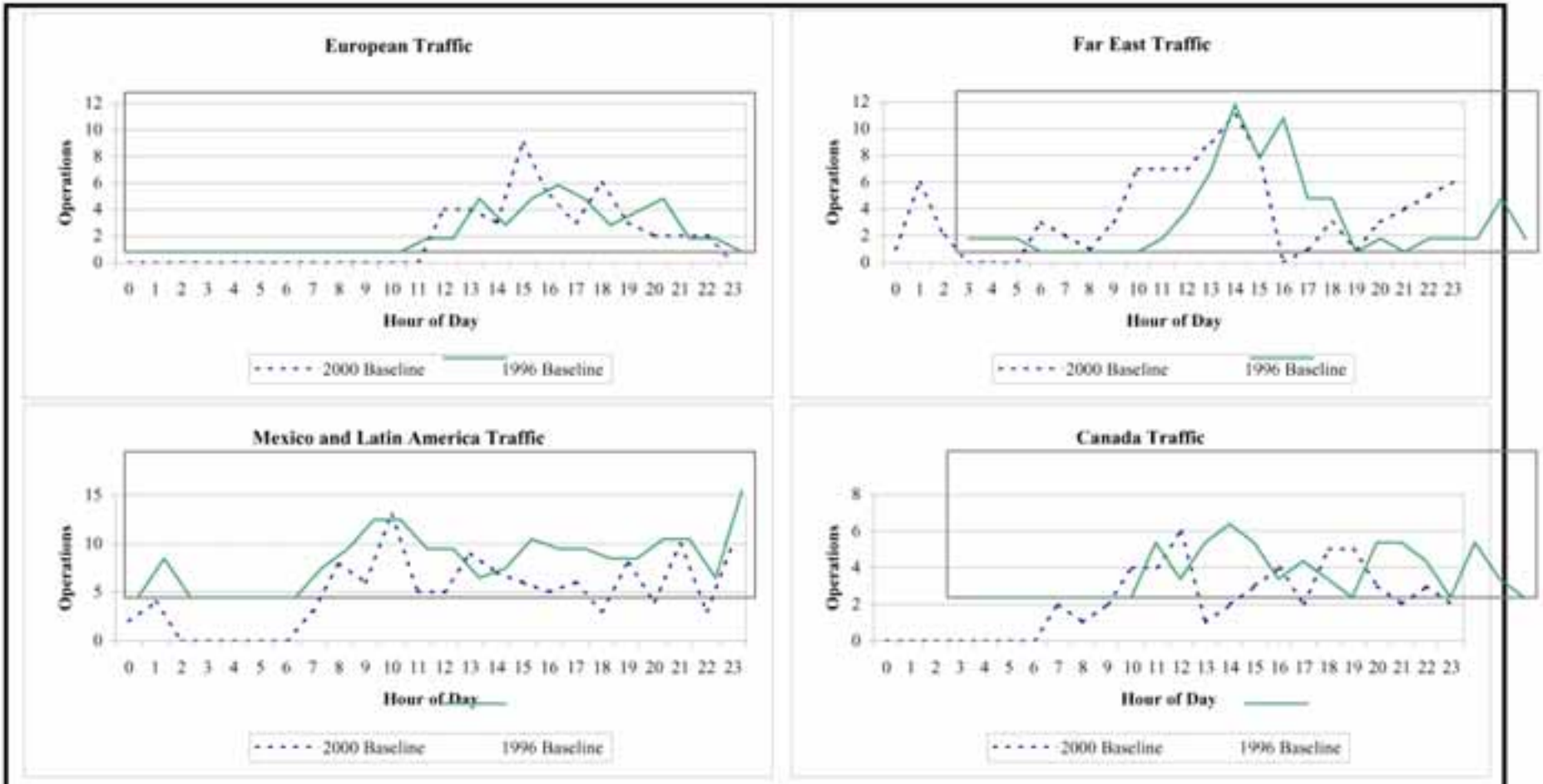
LAX Master Plan - Supplement to the Draft EIS/EIR	**Design Day Hourly Operations**	Figure **S5**



Source: 1996 and August 16 & 19, 2000 Official Airline Guide, Air Traffic Control Tower counts, and radar data.

Prepared by Landrum & Brown, May 3, 2002

LAX Master Plan - Supplement to the Draft EIS/EIR	**Hourly Distribution of Domestic Operations by Geographic/Time Zone Regions**	Figure **S6**



Source: 1996 and August 16 & 19, 2000 Official Airline Guide, Air Traffic Control Tower counts, and radar data.

Prepared by Landrum & Brown, May 3, 2002

LAX Master Plan - Supplement to the Draft EIS/EIR	**Hourly Distribution of International Operations by Geographic/Time Zone Regions**	Figure **S7**

to 253 operations. **Table S7,** Airline Code Designation, defines the carrier code identifiers. **Tables S8**, Hourly Design Day Arrival Operations By Airline - Year 2000, **S9**, Hourly Design Day Departure Operations By Airline - Year 2000, and **S10**, Hourly Design Day Total Operations By Airline - Year 2000, provide the breakdown of operations by hour for each carrier included in the 2000 design day flight schedule.

Table S7

Airline Code Designation

Airline Code	Airline	Airline Code	Airline
2T	Canada 3000	JM	Air Jamaica
AA	America Airlines	JR	Aero California
AC	Air Canada	KL	KLM - Royal Dutch Airlines
AM	Aeromexico	LC	Legend Airlines
AN	Ansett Australia	MX	Mexicana De Aviacion
AS	Alaska Airlines	N7	National Airlines
AV	Avianca Colombia	NK	Spirit Airlines
BA	British Airways	NW	Northwest Airlines
BR	EVA Airways	NZ	Air New Zealand
CA	Cargo Operations	OZ	Asiana Airlines
CM	Copa Airlines	QF	Qantas Airways
CO	Continental Airlines	SR	Swissair
CP	Canadian Airlines Int'l	SY	Sun Country Airlines
CZ	China Southern Airlines	TA	Taca International Airlines
DL	Delta Airlines	TW	Trans World Airlines
F9	Frontier Airlines	TZ	American Trans Air
FJ	Air Pacific	UA	United Airlines
GA	General Aviation	US	US Airways
HA	Hawaiian Airlines	VS	Virgin Atlantic Airways
HP	America West Airlines	WN	Southwest Airlines
IN	Foreign Flags (combined)	YX	Midwest Express Airlines
JL	Japan Airlines		

Source: Landrum & Brown, 2002.

- Narrowbody aircraft comprised the largest group in each schedule, comprising 42 percent of the activity in 1996 and 45 percent of the traffic in 2000. Prop aircraft comprised a large percentage of total operations due to intense regional activity in both years. However, in 2000, the percentage of prop aircraft decreased from 34 percent in 1996 to 26 percent. There were no regional jets in either baseline schedule. Due to LAX's status as an international gateway to the Asia-Pacific, 15 percent of operations in the 1996 schedule were composed of Jumbo and Widebody aircraft, increasing to 17 percent in the 2000 schedule. Boeing 757 jet aircraft accounted for 8 percent of the design day operations in 1996 and 11 percent in 2000. This is shown in **Tables S11**, Hourly Design Day Arrival Operations by Aircraft Type - Year 2000, **S12**, Hourly Design Day Departure Operations by Aircraft Type - Year 2000, and **S13**, Hourly Design Day Total Operations by Aircraft Type - Year 2000[7], which show the aircraft fleet in the 2000 design day schedule; and in **Figure S8**[8], Years 1996 and 2000 Fleet Mix, which illustrates the general composition of the fleet by aircraft category.

7 Not all of the original aircraft codes are included in this table. Some aircraft were grouped for simplification according to performance characteristics, including weight, speed, and wingspan.

8 In this figure, aircraft are classified according to wingspan as follows: "NLA" are New Large Aircraft with a wingspan over 215 feet, "Jumbo" aircraft have between a 172-214 foot wingspan, "Widebody" aircraft have between a 126 and 171 foot wingspan, "Narrowbody" aircraft have a wingspan of 118 feet or under, and all other aircraft are then either regional jets or props. The classification of aircraft among props, regional jets, Large, Widebody and Jumbo influences aircraft separation requirements during airspace operations. The Boeing 757 aircraft, while belonging to the large aircraft category, has greater separation requirements and therefore is shown as a separate category.

Table S8

Hourly Design Day Arrival Operations By Airline - Year 2000

Time	2T	AA	AC	AM	AN	AS	AV	BA	BR	CA	CM	CO	CP	CZ	DL	F9	FJ	GA	HA	HP	IN	JL	JM	JR	KL	LC	MX	N7	NK	NW	NZ	OZ	QF	SR	SY	TA	TW	TZ	UA	US	VS	WN	YX	Total
00:00-01:00	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	1	0	4	0	0	0	0	15
01:00-02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00-03:00	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
03:00-04:00	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
04:00-05:00	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
05:00-06:00	0	2	0	0	0	0	0	0	0	3	0	1	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	17
06:00-07:00	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	5	0	0	2	0	19
07:00-08:00	0	7	0	0	0	1	0	0	0	4	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	28	0	0	8	1	55
08:00-09:00	0	16	0	0	0	2	0	0	0	2	0	1	0	0	0	0	0	1	0	1	5	0	0	0	0	1	2	0	0	2	0	0	0	0	0	0	0	0	18	0	0	5	0	56
09:00-10:00	0	13	1	1	0	5	0	0	0	0	0	1	0	0	5	0	0	3	0	2	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	1	0	21	2	0	7	0	65
10:00-11:00	0	13	0	1	0	1	0	0	0	3	0	1	1	0	3	1	0	3	1	2	2	1	0	1	0	0	2	0	0	3	0	0	1	0	1	0	2	1	25	1	0	10	0	80
11:00-12:00	0	13	2	1	0	2	0	0	0	0	0	3	0	0	4	0	0	4	0	1	2	1	0	0	0	1	1	0	0	3	0	0	0	0	0	0	0	0	27	2	0	9	1	77
12:00-13:00	0	8	1	1	0	4	0	1	0	0	0	1	1	0	3	0	0	2	0	2	3	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	20	1	0	5	0	57
13:00-14:00	0	15	0	1	0	3	0	0	0	1	0	2	0	0	1	1	0	2	0	1	4	1	0	1	1	0	1	0	0	1	1	0	1	1	0	1	1	0	18	1	0	9	0	69
14:00-15:00	0	11	1	0	0	0	0	0	0	3	0	1	0	0	2	0	0	3	0	2	2	1	0	1	0	0	0	0	0	2	1	0	0	0	0	0	1	0	16	1	0	6	0	54
15:00-16:00	0	10	1	0	0	4	0	1	1	1	0	0	0	0	2	0	0	4	0	1	4	0	0	2	0	1	0	0	0	0	0	1	1	0	0	0	1	0	27	1	1	8	0	72
16:00-17:00	1	11	0	0	0	2	0	0	0	3	0	1	0	0	1	0	0	2	1	1	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	1	1	15	1	0	8	1	54
17:00-18:00	1	13	0	1	0	3	0	0	0	2	0	3	0	0	5	0	0	4	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	19	1	0	7	0	62
18:00-19:00	0	17	1	0	0	3	0	1	0	4	0	1	0	1	2	0	0	3	0	1	2	0	0	0	0	1	1	0	0	2	1	0	0	0	0	0	0	0	21	1	1	7	0	71
19:00-20:00	1	14	1	0	0	4	0	0	0	2	0	2	0	0	4	1	0	3	0	1	2	0	0	2	0	0	1	1	0	1	1	0	0	0	0	0	2	0	19	2	0	8	0	72
20:00-21:00	0	14	1	1	1	2	0	0	0	3	0	1	0	0	4	0	0	2	0	3	3	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	22	1	0	7	0	69
21:00-22:00	0	17	2	2	0	1	0	0	1	2	0	2	0	0	5	0	0	2	2	1	1	0	1	1	0	0	5	0	0	1	0	0	0	0	0	0	0	2	25	0	0	9	1	83
22:00-23:00	0	3	1	0	0	4	0	0	0	4	0	1	0	0	1	1	0	2	0	1	2	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	8	3	0	6	0	41
23:00-24:00	0	2	1	0	0	1	0	0	0	2	1	2	0	0	2	0	0	3	0	1	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	5	0	0	2	0	27
TOTALS	**3**	**202**	**13**	**9**	**1**	**43**	**0**	**3**	**2**	**60**	**1**	**24**	**2**	**1**	**50**	**4**	**1**	**51**	**5**	**26**	**34**	**6**	**1**	**9**	**2**	**5**	**16**	**5**	**1**	**25**	**5**	**2**	**6**	**1**	**1**	**2**	**13**	**5**	**350**	**18**	**2**	**123**	**4**	**1,137**

Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.

Table S9

Hourly Design Day Departure Operations By Airline - Year 2000

Time	2T	AA	AC	AM	AN	AS	AV	BA	BR	CA	CM	CO	CP	CZ	DL	F9	FJ	GA	HA	HP	IN	JL	JM	JR	KL	LC	MX	N7	NK	NW	NZ	OZ	QF	SR	SY	TA	TW	TZ	UA	US	VS	WN	YX	Total
00:00-01:00	0	3	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
01:00-02:00	0	0	0	0	0	0	0	0	1	2	1	1	0	0	1	0	0	1	0	0	5	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	**17**
02:00-03:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
03:00-04:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
04:00-05:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
05:00-06:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	**7**
06:00-07:00	0	11	0	0	0	2	0	0	0	5	0	1	0	0	4	0	0	1	1	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1	16	0	0	6	0	**53**
07:00-08:00	0	12	1	0	0	5	0	0	0	6	0	3	0	0	4	1	0	5	0	1	0	0	0	2	0	0	1	1	0	1	0	0	0	0	0	0	2	0	19	3	0	10	0	**77**
08:00-09:00	0	15	1	1	0	2	0	0	0	3	0	1	0	0	5	0	0	4	1	1	0	0	0	1	0	1	1	0	0	1	0	0	1	0	0	0	0	1	31	1	0	6	1	**79**
09:00-10:00	0	17	0	0	0	2	1	0	0	1	0	3	0	0	2	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	19	1	0	5	0	**58**
10:00-11:00	0	8	2	2	0	6	0	0	0	1	0	2	0	0	4	0	0	2	0	0	2	0	0	0	0	0	3	1	0	3	0	0	0	0	0	0	1	0	14	2	0	9	0	**62**
11:00-12:00	0	13	1	1	0	0	0	0	0	2	0	2	1	0	2	1	0	2	0	2	0	0	0	1	0	1	0	0	0	2	0	0	0	0	1	0	1	0	29	1	0	9	0	**72**
12:00-13:00	0	12	2	0	0	2	0	0	0	0	0	2	0	0	5	0	0	4	1	2	1	1	0	0	0	0	3	0	0	4	0	0	0	0	0	0	1	1	25	2	0	7	1	**76**
13:00-14:00	0	9	0	1	0	3	0	1	0	1	0	1	1	0	3	0	0	4	0	2	2	1	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	23	1	0	10	0	**67**
14:00-15:00	0	12	0	1	0	2	0	1	0	1	0	1	0	0	1	1	0	4	0	0	5	2	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	19	1	0	6	0	**60**
15:00-16:00	0	17	1	1	0	1	0	0	0	0	0	2	0	0	3	0	0	3	0	2	5	1	0	2	0	0	0	0	0	2	1	0	0	1	0	0	2	0	15	1	0	8	0	**68**
16:00-17:00	0	10	1	0	0	2	0	0	0	0	0	0	0	0	2	0	0	4	0	2	0	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	1	0	24	0	0	6	0	**57**
17:00-18:00	1	13	0	0	0	3	0	1	1	4	0	1	0	0	0	0	0	1	1	0	2	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	1	1	16	1	1	8	1	**60**
18:00-19:00	1	14	1	1	0	2	0	0	0	1	0	2	0	0	2	0	1	2	0	2	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	7	0	**63**
19:00-20:00	0	10	1	0	0	5	0	0	0	6	0	0	0	0	2	1	0	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	21	0	0	6	0	**56**
20:00-21:00	1	5	0	0	0	3	0	1	0	7	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	16	0	1	9	0	**48**
21:00-22:00	0	6	0	0	0	2	0	0	0	1	0	1	0	0	3	0	0	3	0	3	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	14	1	0	7	0	**46**
22:00-23:00	0	11	1	0	0	0	0	0	1	2	0	1	0	0	3	0	0	3	0	1	1	0	1	0	0	0	1	0	1	2	0	0	1	0	0	0	2	0	25	2	0	2	0	**61**
23:00-24:00	0	4	1	1	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	1	3	0	0	0	0	1	2	0	0	0	1	0	2	0	0	1	0	1	5	1	0	0	1	**29**
TOTALS	**3**	**202**	**13**	**9**	**0**	**42**	**1**	**4**	**4**	**57**	**1**	**24**	**2**	**0**	**50**	**4**	**1**	**53**	**5**	**26**	**32**	**6**	**1**	**8**	**2**	**5**	**16**	**5**	**1**	**25**	**3**	**2**	**6**	**1**	**1**	**2**	**14**	**5**	**355**	**18**	**2**	**123**	**4**	**1,138**

Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.

Table S10

Hourly Design Day Total Operations By Airline - Year 2000

Time	2T	AA	AC	AM	AN	AS	AV	BA	BR	CA	CM	CO	CP	CZ	DL	F9	FJ	GA	HA	HP	IN	JL	JM	JR	KL	LC	MX	N7	NK	NW	NZ	OZ	QF	SR	SY	TA	TW	TZ	UA	US	VS	WN	YX	Total
00:00-01:00	0	4	0	0	0	1	0	0	1	2	0	0	0	0	1	0	0	4	0	1	1	0	0	0	0	1	1	0	0	5	0	0	0	0	0	0	1	0	4	0	0	0	0	27
01:00-02:00	0	0	0	0	0	0	0	0	1	2	1	1	0	0	3	0	0	2	0	0	5	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	20
02:00-03:00	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
03:00-04:00	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
04:00-05:00	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
05:00-06:00	0	2	0	0	0	0	0	0	0	6	0	1	0	0	2	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	2	0	24
06:00-07:00	0	13	0	0	0	2	0	0	0	10	0	1	0	0	4	0	0	3	1	2	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	2	1	21	0	0	8	0	72
07:00-08:00	0	19	1	0	0	6	0	0	0	10	0	3	0	0	6	1	0	5	0	3	0	0	0	2	0	0	1	1	0	1	0	0	2	0	0	0	2	0	47	3	0	18	1	132
08:00-09:00	0	31	1	1	0	4	0	0	0	5	0	2	0	0	5	0	0	5	1	2	5	0	0	1	0	2	3	0	0	3	0	0	1	0	0	0	0	1	49	1	0	11	1	135
09:00-10:00	0	30	1	1	0	7	1	0	0	1	0	4	0	0	7	0	0	5	1	5	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	2	0	40	3	0	12	0	123
10:00-11:00	0	21	2	3	0	7	0	0	0	4	0	3	1	0	7	1	0	5	1	2	4	1	0	1	0	0	5	1	0	6	0	0	1	0	1	0	3	1	39	3	0	19	0	142
11:00-12:00	0	26	3	2	0	2	0	0	0	2	0	5	1	0	6	1	0	6	0	3	2	1	0	1	0	2	1	0	0	5	0	0	0	0	1	0	1	0	56	3	0	18	1	149
12:00-13:00	0	20	3	1	0	6	0	1	0	0	0	3	1	0	8	0	0	6	1	4	4	3	0	0	0	0	3	1	0	4	0	1	0	0	0	0	1	1	45	3	0	12	1	133
13:00-14:00	0	24	0	2	0	6	0	1	0	2	0	3	1	0	4	1	0	6	0	3	6	2	0	2	1	0	1	1	0	2	1	0	2	1	0	1	1	0	41	2	0	19	0	136
14:00-15:00	0	23	1	1	0	2	0	1	0	4	0	2	0	0	3	1	0	7	0	2	7	3	0	1	0	0	1	0	0	3	1	1	0	0	0	0	1	0	35	2	0	12	0	114
15:00-16:00	0	27	2	1	0	5	0	1	1	1	0	2	0	0	5	0	0	7	0	3	9	1	0	4	0	1	0	0	0	2	1	1	1	1	0	0	3	0	42	2	1	16	0	140
16:00-17:00	1	21	1	0	0	4	0	0	0	3	0	1	0	0	3	0	0	6	1	3	0	1	0	1	2	1	1	1	0	2	0	0	0	0	0	0	2	1	39	1	0	14	1	111
17:00-18:00	2	26	0	1	0	6	0	1	1	6	0	4	0	0	5	0	0	5	1	1	2	0	0	0	0	0	2	1	0	2	0	0	0	0	0	0	1	1	35	2	1	15	1	122
18:00-19:00	1	31	2	1	0	5	0	1	0	5	0	3	0	1	4	0	1	5	0	3	3	0	0	0	1	2	1	0	0	2	1	0	0	0	0	0	0	0	45	1	1	14	0	134
19:00-20:00	1	24	2	0	0	9	0	0	0	8	0	2	0	0	6	2	0	5	0	2	2	0	0	2	0	0	2	1	0	1	1	0	0	0	0	0	2	0	40	2	0	14	0	128
20:00-21:00	1	19	1	1	1	5	0	1	0	10	0	1	0	0	6	0	0	4	0	3	3	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0	1	0	38	1	1	16	0	117
21:00-22:00	0	23	2	2	0	3	0	0	1	3	0	3	0	0	8	0	0	5	2	4	4	0	1	1	0	0	5	0	0	1	1	0	1	0	0	0	0	2	39	1	0	16	1	129
22:00-23:00	0	14	2	0	0	4	0	0	1	6	0	2	0	0	4	1	0	5	0	2	3	0	1	0	0	0	1	1	1	3	0	0	2	0	0	0	3	0	33	5	0	8	0	102
23:00-24:00	0	6	2	1	0	1	0	0	0	5	1	2	0	0	3	0	0	3	0	2	5	0	0	0	0	1	2	0	0	1	1	0	2	0	0	2	0	2	10	1	0	2	1	56
TOTALS	**6**	**404**	**26**	**18**	**1**	**85**	**1**	**7**	**6**	**117**	**2**	**48**	**4**	**1**	**100**	**8**	**2**	**104**	**10**	**52**	**66**	**12**	**2**	**17**	**4**	**10**	**32**	**10**	**2**	**50**	**8**	**4**	**12**	**2**	**2**	**4**	**27**	**10**	**705**	**36**	**4**	**246**	**8**	**2,275**

Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.

Table S11

Hourly Design Day Arrival Operations by Aircraft Type Year 2000

	Air Carrier Operations																																										Commuter Operations								
TIME	100	300	310	319	320	332	340	342	727	72Q	72S	733	734	735	737	738	73G	73S	741	742	744	747	74E	74M	752	757	762	763	767	772	777	AB6	D10	D8Q	D9Q	D9S	DC8	L10	M11	M1M	M80	M90	SUB-TOTAL	208	CNA	EM2	F28	GAJ	SF3	SW4	Sub-Total	Total
00:00 - 01:00	0	0	0	1	1	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	1	0	1	1	0	0	0	0	1	0	13	0	1	0	0	1	0	0	2	**15**
01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	1	**3**
02:00 - 03:00	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	**6**
03:00 - 04:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	1	0	0	0	6	0	0	0	0	1	0	0	1	**7**
04:00 - 05:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	1	**6**
05:00 - 06:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	2	0	0	0	0	2	0	0	0	0	2	0	0	0	0	13	0	1	3	0	0	0	0	4	**17**
06:00 - 07:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	3	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	11	1	1	3	0	1	2	0	8	**19**
07:00 - 08:00	0	0	0	0	1	0	0	0	0	3	0	12	0	5	0	0	1	1	0	0	2	0	0	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	30	0	0	18	1	0	6	0	25	**55**
08:00 - 09:00	1	0	1	0	4	0	0	0	0	0	0	10	0	3	0	1	2	0	0	0	3	0	0	0	0	3	0	0	1	0	0	0	0	0	0	1	0	0	2	0	8	0	40	0	1	8	0	0	7	0	16	**56**
09:00 - 10:00	0	0	0	4	7	0	0	0	0	0	0	7	3	2	0	1	1	0	0	0	1	1	0	0	0	8	1	1	1	0	2	0	0	0	0	0	0	0	1	0	11	0	52	0	0	7	0	3	3	0	13	**65**
10:00 - 11:00	0	0	0	2	2	0	0	0	1	1	2	10	0	3	1	1	3	1	1	0	4	1	0	0	0	9	2	3	1	0	0	0	2	0	0	1	0	1	0	0	7	0	59	0	2	14	0	1	4	0	21	**80**
11:00 - 12:00	0	0	0	0	5	0	0	0	0	0	0	12	0	2	0	0	3	0	0	0	3	2	0	0	0	8	3	4	2	0	0	0	1	0	0	1	0	0	1	0	4	1	52	0	1	13	0	3	8	0	25	**77**
12:00 - 13:00	1	0	0	1	2	0	0	0	0	0	1	5	2	5	1	0	2	0	0	0	6	0	0	0	0	9	1	0	0	0	1	0	0	0	0	0	0	1	1	0	7	0	46	0	1	8	0	1	1	0	11	**57**
13:00 - 14:00	0	0	0	2	3	0	0	0	0	1	1	9	1	2	0	0	2	0	0	0	2	2	1	0	0	7	1	3	0	0	1	0	1	0	0	1	0	0	3	1	7	0	51	0	2	10	1	0	5	0	18	**69**
14:00 - 15:00	0	0	0	1	5	0	0	0	0	0	0	7	0	0	0	1	2	1	0	0	2	1	0	0	0	3	2	1	0	0	2	0	2	0	0	1	2	0	0	0	3	0	36	0	2	9	0	1	6	0	18	**54**
15:00 - 16:00	0	0	0	3	3	1	0	0	0	0	1	7	2	6	0	0	2	0	0	0	5	2	1	0	0	5	0	0	1	0	0	0	1	0	0	3	0	0	0	0	7	1	51	0	2	13	0	2	4	0	21	**72**
16:00 - 17:00	0	0	0	0	4	0	0	0	0	0	0	6	1	5	0	2	0	1	0	0	1	0	0	1	1	5	0	3	0	0	1	0	2	0	0	1	0	0	0	0	6	0	40	0	0	8	0	2	4	0	14	**54**
17:00 - 18:00	1	0	0	3	2	0	0	0	0	1	1	11	2	3	0	1	3	0	0	0	0	0	0	0	0	4	2	3	0	0	0	0	0	0	0	0	0	2	1	0	7	0	47	0	2	7	0	2	4	0	15	**62**
18:00 - 19:00	0	0	0	1	3	0	1	0	0	0	2	8	1	5	0	0	0	0	0	0	2	0	0	0	0	7	1	2	1	1	0	0	3	0	0	1	0	0	2	0	7	1	49	1	1	11	1	2	6	0	22	**71**
19:00 - 20:00	0	0	0	0	8	0	0	0	0	0	2	9	1	2	0	0	4	1	0	0	3	1	0	0	0	5	2	2	2	0	1	0	1	0	0	2	0	1	0	0	8	1	56	0	1	8	0	2	4	1	16	**72**
20:00 - 21:00	0	0	1	2	2	0	0	1	0	0	0	9	0	2	0	2	1	1	0	0	2	0	0	0	0	14	5	2	1	0	0	0	1	0	0	1	0	1	0	0	5	0	53	1	2	9	0	0	4	0	16	**69**
21:00 - 22:00	1	1	0	1	3	0	0	0	0	0	2	7	0	6	0	0	5	0	0	1	1	1	0	0	0	11	2	4	0	0	1	0	4	0	0	1	0	2	0	0	8	0	62	0	1	12	0	1	7	0	21	**83**
22:00 - 23:00	0	0	0	1	2	0	0	0	0	1	0	3	2	6	0	0	3	0	0	0	2	0	0	0	0	11	1	0	0	0	0	0	2	0	0	0	0	0	0	0	1	1	36	0	0	1	0	2	0	2	5	**41**
23:00 - 24:00	0	0	0	0	5	0	0	0	0	1	1	0	0	1	0	0	4	1	0	0	0	0	0	0	0	6	0	1	0	0	0	0	0	0	1	0	0	0	0	0	3	0	24	0	2	0	0	1	0	0	3	**27**
TOTALS	**4**	**1**	**2**	**22**	**63**	**1**	**1**	**1**	**1**	**15**	**13**	**135**	**15**	**58**	**2**	**10**	**39**	**7**	**2**	**2**	**43**	**11**	**2**	**1**	**2**	**126**	**26**	**32**	**10**	**1**	**9**	**1**	**29**	**1**	**4**	**16**	**2**	**10**	**13**	**1**	**101**	**5**	**840**	**3**	**24**	**162**	**3**	**27**	**75**	**3**	**297**	**1,137**

Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.

Table S12

Hourly Design Day Departure Operations by Aircraft Type Year 2000

Air Carrier Operations

TIME	100	300	310	319	320	332	340	342	727	72Q	72S	733	734	735	737	738	73G	73S	741	742	744	747	74E	74M	752	757	762	763	767	772
00:00 - 01:00	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	1	0	0
01:00 - 02:00	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4	1	1	0	0	5	0	0	0	0
02:00 - 03:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
04:00 - 05:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 06:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
06:00 - 07:00	1	0	1	0	1	0	0	0	0	0	1	5	1	5	0	1	4	0	0	0	0	0	0	0	0	9	1	2	1	0
07:00 - 08:00	0	0	0	0	1	0	0	0	0	0	3	12	0	3	0	1	5	1	0	0	0	0	0	0	0	8	3	4	1	0
08:00 - 09:00	1	0	0	1	4	0	0	0	0	2	1	8	1	4	0	2	1	0	0	0	1	0	0	0	0	8	4	4	0	0
09:00 - 10:00	0	0	0	1	4	0	0	0	0	0	0	7	0	4	0	1	2	0	0	0	0	0	0	0	1	6	2	2	0	0
10:00 - 11:00	0	0	0	3	7	0	0	0	0	1	0	10	3	1	0	1	1	0	0	0	1	0	0	0	0	10	1	0	1	0
11:00 - 12:00	0	0	0	1	6	0	0	0	1	0	0	9	0	2	1	1	5	1	0	0	2	1	0	0	1	4	2	1	1	0
12:00 - 13:00	0	0	0	1	6	0	0	0	0	0	2	8	0	3	0	0	2	0	0	0	2	1	0	0	0	11	1	5	2	0
13:00 - 14:00	0	0	0	2	0	0	0	0	0	0	1	10	1	4	1	0	3	0	1	0	4	2	0	0	0	7	3	2	0	0
14:00 - 15:00	1	0	0	2	2	0	0	0	0	1	1	6	1	3	0	0	1	0	0	0	8	0	0	0	0	5	1	1	0	0
15:00 - 16:00	0	0	0	1	4	0	0	0	0	0	0	8	1	2	0	1	3	1	0	0	3	1	1	0	0	7	1	2	0	0
16:00 - 17:00	0	0	0	2	4	0	0	0	0	0	1	7	1	3	0	0	0	1	0	0	0	3	0	0	0	5	2	0	0	0
17:00 - 18:00	0	0	1	1	3	0	0	0	0	1	0	10	1	5	0	1	1	0	0	0	3	1	0	0	0	7	0	1	1	0
18:00 - 19:00	1	0	0	2	2	1	0	0	0	1	1	14	2	4	0	1	2	0	0	1	0	0	0	1	0	2	0	2	0	0
19:00 - 20:00	0	0	0	0	2	0	0	0	0	1	1	5	2	5	0	0	1	1	1	0	0	0	0	0	1	3	1	0	1	0
20:00 - 21:00	0	0	0	1	2	0	1	0	0	2	0	9	0	4	0	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0
21:00 - 22:00	0	0	0	0	2	0	0	1	0	1	0	8	0	2	0	0	1	1	0	0	2	1	0	0	0	8	0	0	0	0
22:00 - 23:00	0	0	0	1	4	0	0	0	0	0	0	3	0	5	0	0	2	0	0	0	4	1	0	0	0	11	3	2	1	0
23:00 - 24:00	0	1	0	2	5	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	5	1	2	0	0
TOTALS	**4**	**1**	**2**	**21**	**62**	**1**	**1**	**1**	**1**	**15**	**14**	**140**	**14**	**59**	**2**	**10**	**39**	**7**	**2**	**1**	**42**	**12**	**2**	**1**	**4**	**125**	**26**	**31**	**9**	**0**

TIME	777	AB6	D10	D8Q	D9Q	D9S	DC8	L10	M11	M1M	M80	M90	SUB-TOTAL	Commuter Operations: 208	CNA	EM2	F28	GAJ	SF3	SW4	Sub-Total	Total
00:00 - 01:00	0	0	0	0	1	0	0	0	0	0	3	0	10	0	1	0	0	1	0	0	2	**12**
01:00 - 02:00	0	0	0	0	1	0	0	0	0	0	0	0	16	0	1	0	0	0	0	0	1	**17**
02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	1	2	**5**
03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	**2**
04:00 - 05:00	0	0	0	0	0	0	1	0	1	0	0	0	3	0	0	0	0	0	0	0	0	**3**
05:00 - 06:00	0	0	1	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	0	0	1	**7**
06:00 - 07:00	0	0	3	0	0	0	0	1	1	0	5	1	44	0	1	6	0	0	2	0	9	**53**
07:00 - 08:00	1	0	4	0	0	2	0	1	0	0	6	0	56	2	1	8	0	4	5	1	21	**77**
08:00 - 09:00	1	0	3	0	0	3	0	4	0	0	6	0	59	0	1	12	1	3	3	0	20	**79**
09:00 - 10:00	0	0	3	0	0	0	0	0	0	0	8	0	41	0	2	9	0	0	6	0	17	**58**
10:00 - 11:00	0	0	1	0	0	0	0	0	1	0	8	0	50	0	1	7	0	1	3	0	12	**62**
11:00 - 12:00	1	0	1	0	0	2	0	0	1	0	7	0	51	0	2	14	0	0	5	0	21	**72**
12:00 - 13:00	1	0	3	0	0	0	0	1	0	0	5	1	55	0	3	12	0	1	5	0	21	**76**
13:00 - 14:00	0	0	0	0	0	1	0	0	1	0	4	0	47	0	1	12	1	3	3	0	20	**67**
14:00 - 15:00	1	0	0	0	0	0	0	1	2	0	7	0	44	0	1	7	0	3	5	0	16	**60**
15:00 - 16:00	0	0	2	0	0	2	0	0	2	1	6	1	50	0	0	9	0	3	6	0	18	**68**
16:00 - 17:00	1	0	0	0	0	2	0	0	0	0	5	0	37	0	0	11	0	4	5	0	20	**57**
17:00 - 18:00	1	0	1	0	1	1	1	0	0	0	9	0	51	0	1	4	0	0	4	0	9	**60**
18:00 - 19:00	1	0	0	0	0	1	0	0	0	0	5	1	45	0	1	11	0	1	5	0	18	**63**
19:00 - 20:00	1	0	0	0	1	0	0	0	1	0	7	0	35	0	2	13	1	0	5	0	21	**56**
20:00 - 21:00	0	1	3	1	0	0	0	1	0	0	4	1	35	0	2	9	0	0	2	0	13	**48**
21:00 - 22:00	0	0	0	0	0	0	0	0	1	0	3	0	31	0	2	8	0	1	4	0	15	**46**
22:00 - 23:00	0	0	2	0	0	0	0	1	0	0	1	0	41	0	2	10	0	1	7	0	20	**61**
23:00 - 24:00	0	0	2	0	0	1	0	0	0	0	3	0	28	0	0	0	0	0	0	1	1	**29**
TOTALS	**9**	**1**	**29**	**1**	**4**	**15**	**2**	**10**	**11**	**1**	**102**	**5**	**839**	**3**	**27**	**162**	**3**	**26**	**75**	**3**	**299**	**1,138**

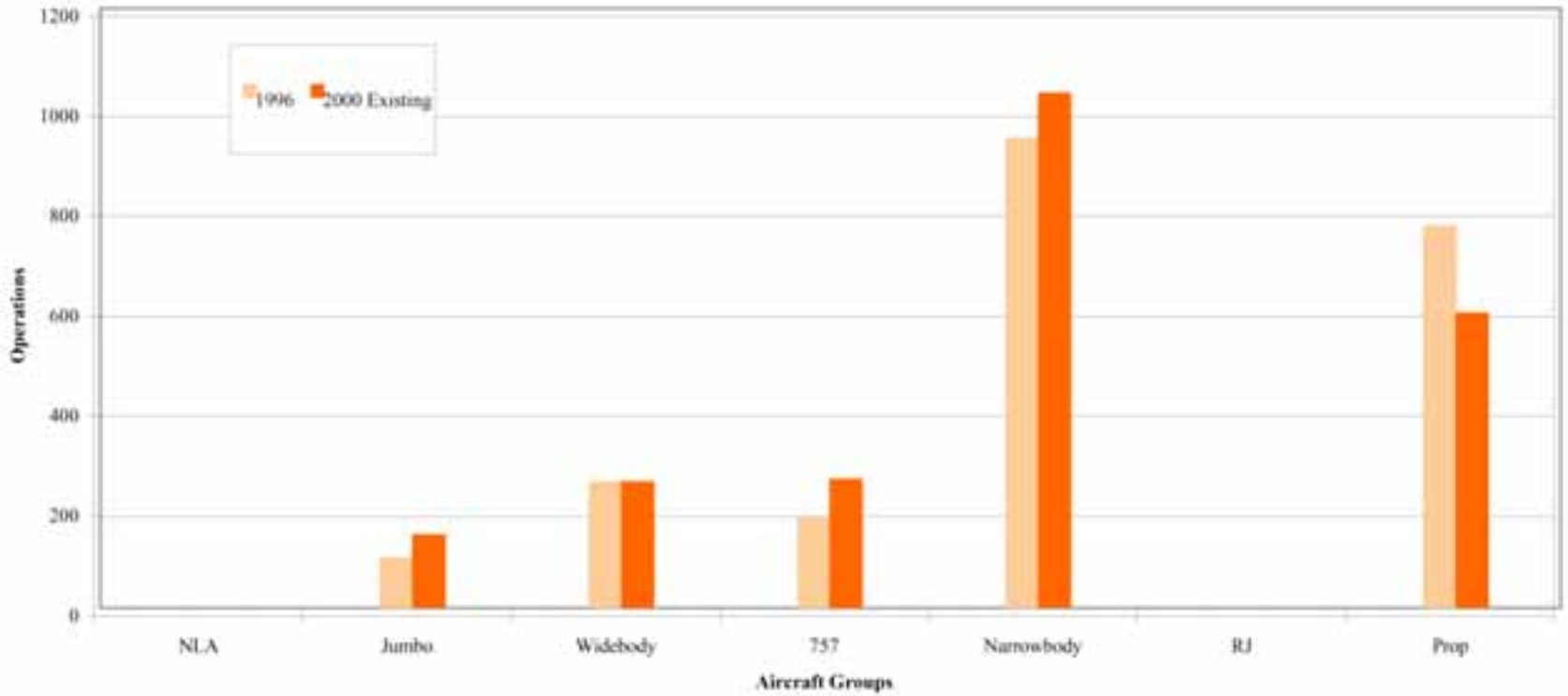
Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.

Table S13

Hourly Design Day Total Operations by Aircraft Type Year 2000

	Air Carrier Operations																																										Commuter Operations								
TIME	100	300	310	319	320	332	340	342	727	72Q	72S	733	734	735	737	738	73G	73S	741	742	744	747	74E	74M	752	757	762	763	767	772	777	AB6	D10	D8Q	D9Q	D9S	DC8	L10	M11	M1M	M80	M90	SUB-TOTAL	208	CNA	EM2	F28	GAJ	SF3	SW4	Sub-Total	Total
00:00 - 01:00	0	0	0	1	2	0	0	0	0	0	1	2	0	0	0	1	0	0	0	0	1	0	0	0	0	5	1	1	0	0	0	0	1	0	2	1	0	0	0	0	4	0	23	0	2	0	0	2	0	0	4	**27**
01:00 - 02:00	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4	1	1	0	0	6	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	18	0	2	0	0	0	0	0	2	**20**
02:00 - 03:00	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	9	0	1	0	0	0	0	1	2	**11**
03:00 - 04:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	1	0	0	0	7	1	0	0	0	1	0	0	2	**9**
04:00 - 05:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	8	0	0	0	0	1	0	0	1	**9**
05:00 - 06:00	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	4	1	2	0	0	0	0	3	0	0	0	0	2	0	0	0	0	19	0	2	3	0	0	0	0	5	**24**
06:00 - 07:00	1	0	1	0	1	0	0	0	0	1	1	6	1	5	0	1	5	0	1	0	3	0	0	0	0	10	1	2	1	0	0	0	4	1	1	0	0	1	1	0	5	1	55	1	2	9	0	1	4	0	17	**72**
07:00 - 08:00	0	0	0	0	2	0	0	0	0	3	3	24	0	8	0	1	6	2	0	0	2	0	0	0	0	10	3	4	1	0	1	0	5	0	0	3	0	1	0	0	7	0	86	2	1	26	1	4	11	1	46	**132**
08:00 - 09:00	2	0	1	1	8	0	0	0	0	2	1	18	1	7	0	3	3	0	0	0	4	0	0	0	0	11	4	4	1	0	1	0	3	0	0	4	0	4	2	0	14	0	99	0	2	20	1	3	10	0	36	**135**
09:00 - 10:00	0	0	0	5	11	0	0	0	0	0	0	14	3	6	0	2	3	0	0	0	1	1	0	0	1	14	3	3	1	0	2	0	3	0	0	0	0	0	1	0	19	0	93	0	2	16	0	3	9	0	30	**123**
10:00 - 11:00	0	0	0	5	9	0	0	0	1	2	2	20	3	4	1	2	4	1	1	0	5	1	0	0	0	19	3	3	2	0	0	0	3	0	0	1	0	1	1	0	15	0	109	0	3	21	0	2	7	0	33	**142**
11:00 - 12:00	0	0	0	1	11	0	0	0	1	0	0	21	0	4	1	1	8	1	0	0	5	3	0	0	1	12	5	5	3	0	1	0	2	0	0	3	0	0	2	0	11	1	103	0	3	27	0	3	13	0	46	**149**
12:00 - 13:00	1	0	0	2	8	0	0	0	0	0	3	13	2	8	1	0	4	0	0	0	8	1	0	0	0	20	2	5	2	0	2	0	3	0	0	0	0	2	1	0	12	1	101	0	4	20	0	2	6	0	32	**133**
13:00 - 14:00	0	0	0	4	3	0	0	0	0	1	2	19	2	6	1	0	5	0	1	0	6	4	1	0	0	14	4	5	0	0	1	0	1	0	0	2	0	0	4	1	11	0	98	0	3	22	2	3	8	0	38	**136**
14:00 - 15:00	1	0	0	3	7	0	0	0	0	1	1	13	1	3	0	1	3	1	0	0	10	1	0	0	0	8	3	2	0	0	3	0	2	0	0	1	2	1	2	0	10	0	80	0	3	16	0	4	11	0	34	**114**
15:00 - 16:00	0	0	0	4	7	1	0	0	0	0	1	15	3	8	0	1	5	1	0	0	8	3	2	0	0	12	1	2	1	0	0	0	3	0	0	5	0	0	2	1	13	2	101	0	2	22	0	5	10	0	39	**140**
16:00 - 17:00	0	0	0	2	8	0	0	0	0	0	1	13	2	8	0	2	0	2	0	0	1	3	0	1	1	10	2	3	0	0	2	0	2	0	0	3	0	0	0	0	11	0	77	0	0	19	0	6	9	0	34	**111**
17:00 - 18:00	1	0	1	4	5	0	0	0	0	2	1	21	3	8	0	2	4	0	0	0	3	1	0	0	0	11	2	4	1	0	1	0	1	0	1	1	1	2	1	0	16	0	98	0	3	11	0	2	8	0	24	**122**
18:00 - 19:00	1	0	0	3	5	1	1	0	0	1	3	22	3	9	0	1	2	0	0	1	2	0	0	1	0	9	1	4	1	1	1	0	3	0	0	2	0	0	2	0	12	2	94	1	2	22	1	3	11	0	40	**134**
19:00 - 20:00	0	0	0	0	10	0	0	0	0	1	3	14	3	7	0	0	5	2	1	0	3	1	0	0	1	8	3	2	3	0	2	0	1	0	1	2	0	1	1	0	15	1	91	0	3	21	1	2	9	1	37	**128**
20:00 - 21:00	0	0	1	3	4	0	1	1	0	2	0	18	0	6	0	2	4	1	0	0	3	0	0	0	0	15	5	2	1	0	0	1	4	1	0	1	0	2	0	0	9	1	88	1	4	18	0	0	6	0	29	**117**
21:00 - 22:00	1	1	0	1	5	0	0	1	0	1	2	15	0	8	0	0	6	1	0	1	3	2	0	0	0	19	2	4	0	0	1	0	4	0	0	1	0	2	1	0	11	0	93	0	3	20	0	2	11	0	36	**129**
22:00 - 23:00	0	0	0	2	6	0	0	0	0	1	0	6	2	11	0	0	5	0	0	0	6	1	0	0	0	22	4	2	1	0	0	0	4	0	0	0	0	1	0	0	2	1	77	0	2	11	0	3	7	2	25	**102**
23:00 - 24:00	0	1	0	2	10	0	0	0	0	2	2	0	0	1	0	0	4	1	0	0	4	0	0	0	0	11	1	3	0	0	0	0	2	0	1	1	0	0	0	0	6	0	52	0	2	0	0	1	0	1	4	**56**
TOTALS	**8**	**2**	**4**	**43**	**125**	**2**	**2**	**2**	**2**	**30**	**27**	**275**	**29**	**117**	**4**	**20**	**78**	**14**	**4**	**3**	**85**	**23**	**4**	**2**	**6**	**251**	**52**	**63**	**19**	**1**	**18**	**2**	**58**	**2**	**8**	**31**	**4**	**20**	**24**	**2**	**203**	**10**	**1,679**	**6**	**51**	**324**	**6**	**53**	**150**	**6**	**596**	**2,275**

Source: Official Airline Guide, Air Traffic Control Tower counts, and radar data, August 16 & 19, 2000.



Aircraft Group	1996	2000	Aircraft Group	1996	2000
NLA	0	0	Narrowbody	940	1030
Jumbo	100	146	RJ	0	0
Widebody	252	252	Prop	764	590
757	179	257	**Total:**	**2235**	**2275**

Source: 1996 and August 16 & 19 Official Airline Guide, Air Traffic Control counts, and radar data.

Prepared by Landrum & Brown, May 3, 2002

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Years 1996 and 2000 Fleet Mix

Figure **S8**

- Design day passengers increased from 186,500 in the 1996 schedule to 215,645 in the 2000 schedule. The 2000 design day fleet mix and operations were translated to total design day seats (available aircraft seats), which were then multiplied by 2000 design day load factor percentages to compute the number of 2000 design day passengers. Design day passengers were then divided into O&D (origin & destination) or connecting based on the calculated annual ratios.[9] **Table S14**, Design Day Passenger Factors Summary, lists the load factors and O&D/connecting passenger percentages by region that were used to compute the 2000 design day passengers.

Table S14

Design Day Passenger Factors Summary

	1996 Assumptions			2000 Assumptions		
Region	**O&D**	**Connecting**	**Load Factor**	**O&D**	**Connecting**	**Load Factor**
Domestic						
Pacific	72.76%	27.24%	71.84%	68.10%	31.90%	73.51%
Central	72.76%	27.24%	71.84%	68.10%	31.90%	73.51%
Eastern	72.76%	27.24%	71.84%	68.10%	31.90%	73.51%
Commuter[1]	49.24%	50.76%	47.86%	49.24%	50.76%	55.75%
Hawaii	72.76%	27.24%	89.80%	68.10%	31.90%	87.13%
International						
Canada	59.73%	40.27%	76.47%	64.88%	35.12%	78.73%
Mexico	59.73%	40.27%	76.47%	64.88%	35.12%	78.73%
Europe	59.73%	40.27%	76.47%	64.88%	35.12%	78.73%
Asia-Pacific	59.73%	40.27%	76.47%	64.88%	35.12%	78.73%

1/ Based on 2000 domestic and international O&D ratios and 1994 commuter O&D ratios.

Source: Landrum & Brown, 2002.

Table S15, Design Day Passenger Summary Comparison, provides the total number of design day passengers in both the 1996 and 2000 schedules. **Table S16**, Hourly Design Day Passengers by Region - Year 2000, provides hourly passenger totals.

9 The commuter carriers do not report O&D traffic separately from the majors. Therefore, the commuter O&D percentages from 1994 are assumed to have remained constant.

Table S15

Design Day Passenger Summary Comparison

Region	1996 Passengers O&D	1996 Passengers Connecting	1996 Passengers Total	2000 Passengers O&D[1]	2000 Passengers Connecting	2000 Passengers Total
Domestic						
Central	18,255	6,971	25,226	20,556	9,446	30,002
Eastern	23,392	8,929	32,321	25,613	11,762	37,375
Commuter	3,304	4,291	7,595	3,731	4,501	8,232
Hawaii	9,074	3,442	12,516	7,892	3,588	11,480
Total Domestic:	104,448	43,080	147,528	106,509	51,768	158,277
International						
Canada	1,990	1,364	3,354	3,749	2,071	5,820
Mexico	6,105	4,181	10,286	9,326	5,128	14,454
Europe	4,739	3,226	7,965	6,974	3,816	10,790
Asia-Pacific	10,350	7,029	17,379	17,004	9,300	26,304
Total International:	23,184	15,800	38,984	37,053	20,315	57,368
Total Passengers:	**127,632**	**58,880**	**186,512**	**143,562**	**72,083**	**215,645**

[1/] Based on 2000 domestic and international O&D ratios and 1994 commuter O&D ratios.

Source: Landrum & Brown, 2002.

Highlights of the 2000 Annual Activity

- Annual passengers increased from 58.0 million in 1996 to 67.3 million in 2000. Annual operations also increased slightly over this time period, from 763,866 in 1996 to 767,473 in 2000. **Table S17**, 1996 and 2000 LAX Annual Activity, shows annual passengers and operations for 1996 and 2000.

Table S16

Hourly Design Day Passengers by Region - Year 2000

	Domestic												International			Total		
	Air Carrier			Commuter			Hawaii			Total								
Hour	O&D	Conn. Pax	Total Pax	O&D	Conn. Pax	Total Pax	O&D	Conn. Pax	Total Pax	O&D	Conn. Pax	Total Pax	O&D	Conn. Pax	Total Pax	O&D	Conn. Pax	Total Pax
0	1,318	606	1,924	-	-	-	172	78	250	1,490	684	2,174	338	186	524	1,828	870	2,698
1	566	260	826	-	-	-	-	-	-	566	260	826	1,435	785	2,220	2,001	1,045	3,046
2	162	75	237	-	-	-	-	-	-	162	75	237	421	230	651	583	305	888
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	188	88	276	21	27	48	1,420	646	2,066	1,629	761	2,390	-	-	-	1,629	761	2,390
6	3,183	1,466	4,649	99	121	220	282	128	410	3,564	1,715	5,279	591	324	915	4,155	2,039	6,194
7	5,419	2,497	7,916	281	344	625	110	50	160	5,810	2,891	8,701	714	392	1,106	6,524	3,283	9,807
8	6,189	2,848	9,037	230	280	510	808	368	1,176	7,227	3,496	10,723	1,021	560	1,581	8,248	4,056	12,304
9	5,943	2,735	8,678	193	234	427	344	156	500	6,480	3,125	9,605	1,137	624	1,761	7,617	3,749	11,366
10	6,107	2,810	8,917	210	259	469	282	128	410	6,599	3,197	9,796	2,545	1,398	3,943	9,144	4,595	13,739
11	7,664	3,507	11,171	373	426	799	110	50	160	8,147	3,983	12,130	2,044	1,122	3,166	10,191	5,105	15,296
12	6,900	3,166	10,066	240	272	512	529	240	769	7,669	3,678	11,347	2,995	1,642	4,637	10,664	5,320	15,984
13	5,774	2,658	8,432	226	278	504	-	-	-	6,000	2,936	8,936	3,139	1,716	4,855	9,139	4,652	13,791
14	3,745	1,729	5,474	211	254	465	318	145	463	4,274	2,128	6,402	3,354	1,839	5,193	7,628	3,967	11,595
15	5,104	2,355	7,459	244	298	542	515	234	749	5,863	2,887	8,750	3,457	1,892	5,349	9,320	4,779	14,099
16	4,069	1,875	5,944	214	261	475	515	234	749	4,798	2,370	7,168	1,478	811	2,289	6,276	3,181	9,457
17	5,456	2,511	7,967	149	179	328	710	323	1,033	6,315	3,013	9,328	1,385	760	2,145	7,700	3,773	11,473
18	5,130	2,365	7,495	253	308	561	110	50	160	5,493	2,723	8,216	2,138	1,172	3,310	7,631	3,895	11,526
19	5,040	2,319	7,359	228	279	507	110	50	160	5,378	2,648	8,026	1,652	907	2,559	7,030	3,555	10,585
20	4,693	2,167	6,860	180	222	402	503	229	732	5,376	2,618	7,994	1,408	773	2,181	6,784	3,391	10,175
21	5,197	2,396	7,593	239	290	529	834	379	1,213	6,270	3,065	9,335	2,072	1,136	3,208	8,342	4,201	12,543
22	4,725	2,181	6,906	140	169	309	110	50	160	4,975	2,400	7,375	1,810	992	2,802	6,785	3,392	10,177
23	2,314	1,065	3,379	-	-	-	110	50	160	2,424	1,115	3,539	1,919	1,054	2,973	4,343	2,169	6,512
Total	**94,886**	**43,679**	**138,565**	**3,731**	**4,501**	**8,232**	**7,892**	**3,588**	**11,480**	**106,509**	**51,768**	**158,277**	**37,053**	**20,315**	**57,368**	**143,562**	**72,083**	**215,645**

Source: Landrum & Brown, 2003.

Table S17

1996 and 2000 LAX Annual Activity

	Passengers		Operations	
	1996	**2000**	**1996**	**2000**
Domestic Air Carrier	41,182,037	47,008,533	386,733	436,988
Commuter	2,759,991	2,918,282	233,832	172,770
International	14,032,531	17,376,367	91,641	101,033
Cargo	N/A	N/A	23,682	37,270
General Aviation	N/A	N/A	27,978	19,412
Total	**57,974,559**	**67,303,182**	**763,866**	**767,473**

Source: LAWA records and air traffic control tower counts, 2000.

2.5 Land Use

The Geographic Information Services (GIS) off-airport land use database used in the Draft EIS/EIR has already been updated to reflect year 2000 data. That database identified parcel-level information and consisted of two major components: off-airport land uses and sensitive receptors (non-residential):

- Although the original off-airport land-use data was derived in 1994, it was updated in early 2000 with data purchased from TRW.[10]
- Working with Psomas, PCR and Landrum & Brown cooperatively updated and refined the sensitive receptors database from October 1999 to February 2000. As a result, all GIS land-use and noise grid-point databases are consistent throughout the Draft EIS/EIR.
- Through similar research techniques, PCR plans to verify and update the sensitive receptors previously identified in early 2000 (e.g., schools) if needed. Other off-airport land uses could also be updated through the purchase of GIS data from a vendor such as TRW.

2.6 Ground Transportation

On-Airport Traffic

- Airport-generated vehicle trips are primarily a function of O&D passengers, not connecting passengers. They are measured and analyzed during the peak hour of airport activity, which is 11:00 a.m. to Noon during the airport's peak month/average weekday, which is a Friday in August. As a result, vehicular traffic is only indirectly related to MAP, and the changes in vehicular traffic between years can appear counter-intuitive when comparing to MAP changes during those same years.
- To determine the change in airport-generated vehicle trips between 1996/1997 and 2000, Central Terminal Area (CTA) traffic count information was collected from LAWA's in-pavement traffic count program. The peak hour of commuter traffic is from 8:00 a.m. to 9:00 a.m. and from 5:00 p.m. to 6:00 p.m. The 1996 airport peak hour traffic data was collected in August, while the commuter peak hour traffic count data was collected in March 1997. Both inbound and outbound CTA traffic counts were collected at that time.

  To obtain year 2000 traffic count information for comparison to the 1996/1997 traffic count data, the corresponding data was obtained for the airport peak hour on Friday, August 4, 11, and 18, 2000. The data was averaged to produce traffic volumes from a representative Friday in August. A similar methodology was used to estimate the inbound and outbound CTA volumes for the commuter peak hours. That data was obtained on March 17 and 24, 2000. The 1996/1997 CTA traffic counts were then compared to the updated (year 2000) traffic counts.
- The inbound and outbound CTA traffic volumes fluctuated according to peak hour aviation activity. During the airport peak hour, CTA traffic was approximately 7 percent higher in 2000 (see **Table S18**, CTA Traffic Comparison, 1996 to 2000). During the morning commuter peak hour, CTA traffic was about 6 percent lower, and during the evening commuter peak hour, it was about 2 percent higher.

[10] PCR communication with Matt Caraway of Psomas, 2002.

These trends accurately reflect LAX aviation activity, whose hourly peaking characteristics were adjusting between 1996 and 2000, as discussed in the "Highlights of the 2000 Design Day Schedule" in Section 2.4, *Aviation at LAX*. Although the daily passenger activity increased, the activity occurring during the morning commuter peak hour decreased, as activity shifted to adjacent hours.

Table S18

CTA Traffic Comparison, 1996 to 2000

Time Period	CTA Traffic[1] Inbound	Outbound	Total
August 1996			
Airport Peak Hour[2]	5,910	5,380	11,290
March 1997			
A.M. Commuter Peak Hour[3]	4,100	3,280	7,380
P.M. Commuter Peak Hour[4]	4,160	4,480	8,640
August 2000			
Airport Peak Hour[5]	6,500	5,600	12,100
March 2000			
A.M. Commuter Peak Hour[6]	3,760	3,170	6,930
P.M. Commuter Peak Hour[7]	4,390	4,410	8,800

1 Los Angeles World Airport, LAX AVI traffic count data.
2 Peak hour defined as 11:00 a.m. to 12:00 noon.; Source: Update Existing Conditions to 1996, On- Airport Transportation; June 9, 1998; Leigh Fisher Associates.
3 Peak hour defined as 8:00 a.m. to 9:00 a.m.; Source: Update Existing Conditions to 1996, On-Airport Transportation; June 9, 1998; Leigh Fisher Associates.
4 Peak hour defined as 5:00 p.m. to 6:00 p.m.; Source: Update Existing Conditions to 1996, On-Airport Transportation; June 9, 1998; Leigh Fisher Associates
5 Average of peak hour traffic on August 4, 11, and 18, 2000.
6 Average of peak hour traffic on March 17 and 24, 2000.
7 Average of peak hour traffic on March 17 and 24, 2000.

Source: Landrum & Brown, 2002.

Off-Airport Traffic

- Off-airport traffic analyses use the Adjusted Environmental Baseline scenario to determine traffic impacts and mitigation under CEQA. The Adjusted Environmental Baseline scenario does not use baseline off-airport traffic conditions. Rather, it combines future off-airport traffic conditions with baseline on-airport traffic conditions. Therefore, the off-airport traffic analysis is only dependant on the baseline year as it pertains to the on-airport traffic, which is discussed above. As a result, unlike the analyses for the other disciplines, which use an existing baseline condition, the potential changes in off-airport conditions that may have transpired since 1996 are irrelevant for the off-airport surface transportation analyses.
- However, even though the Adjusted Environmental Baseline Alternative uses only future traffic conditions, the regional traffic facilities that are incorporated into the modeling of these alternatives; roadway lanes, turning lanes, traffic signal improvements, etc. should reflect the most recent changes in the area's road network. Therefore, in coordination with the Los Angeles Department of Transportation (LADOT), the roadway network facility improvements that were implemented after 1996 were identified. A lane configuration change on Lincoln Boulevard at Venice Boulevard was the only change that took place on off-airport roadways since 1996.

3. AIRPORT FACILITY CHANGES

The baseline year used in the current analyses is defined as the airport activity that existed in 1996 and the facilities that existed in 1997, which is the year of the Notice of Intent (NOI)/NOP. The facility changes at LAX which have become operational since 1997 are illustrated on **Figure S9**, Changes in Existing Conditions 1997 to 2000. These facility changes are briefly summarized below.

3.1 Airport Property

Since 1997, LAWA has acquired property under the Aircraft Noise Mitigation Program (ANMP) in two areas, Manchester Square and the Belford area. The land uses in the property acquisition areas are primarily residential and have remained fairly static. Changes that have occurred between 1997 and 2000 are:

- LAWA has acquired approximately 289 units of 2000 total units in Manchester Square, which is bounded by Century Boulevard to the north, Arbor Vitae Street to the south, Aviation Boulevard to the east, and La Cienega Boulevard to the west.
- LAWA has acquired approximately 245 of 585 units in the Belford Area, which is bounded by Arbor Vitae Street to the north, 98th Street to the south, Bellanca Avenue to the east, and Airport Boulevard to the west.

Land acquisition for the ANMP is ongoing, and LAWA does not intend to use these parcels for aviation purposes in the No Action/No Project Alternative.

3.2 Airfield

Since 1997, no changes were made on the north airfield and seven modest modifications were made to the taxiways on the south airfield:

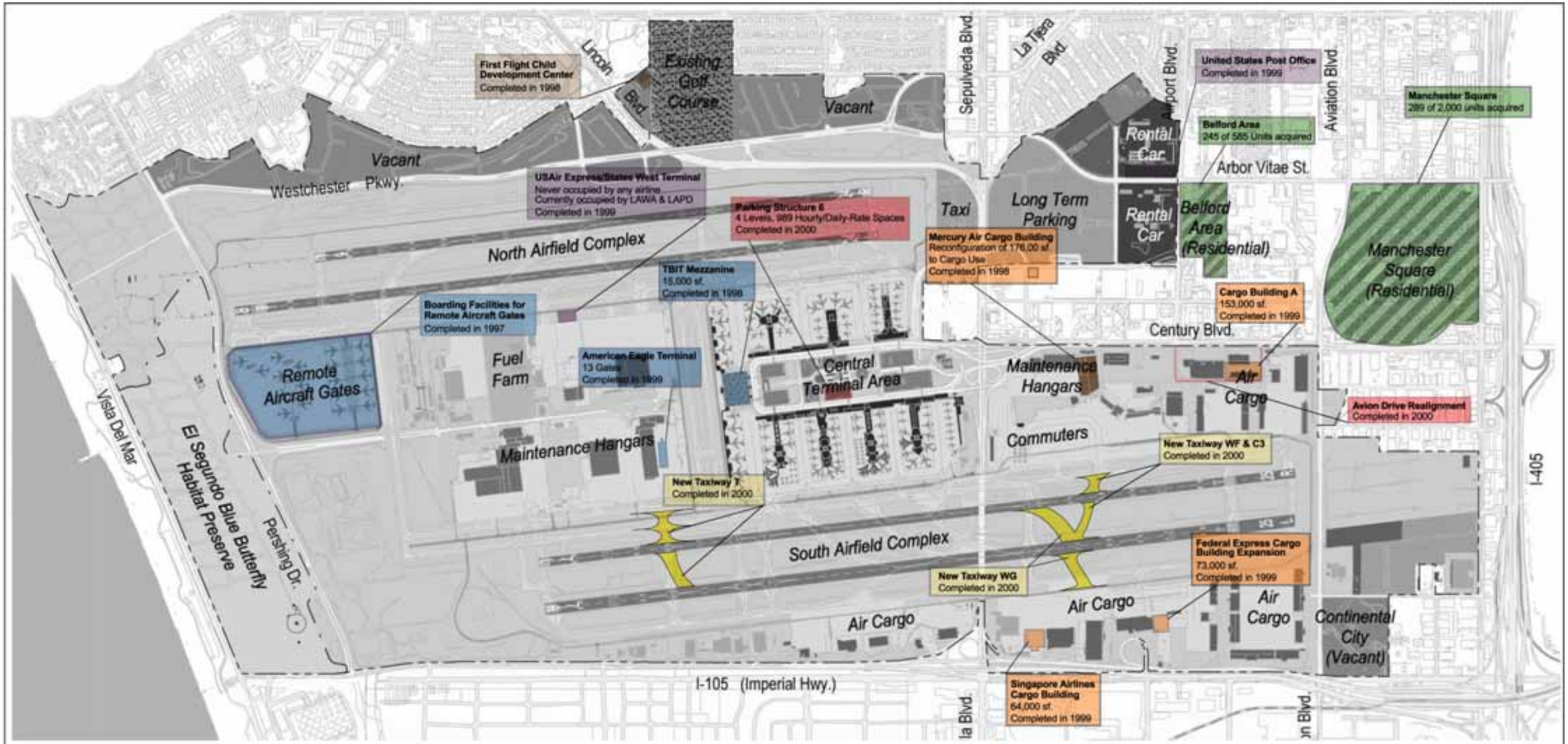
- New Taxiway A4 was constructed and began operation in 2000. Taxiway A4 connects Runway 7R and Taxiway A and is 100 feet wide.
- New Taxiway C3 was constructed and began operation in 2000. Taxiway C3 connects Runway 25R to Taxiway B and is also 100 feet wide.
- New Taxiway WF was constructed and began operation in 2000. Taxiway WF connects Runways 25R and 25L and is 175 feet wide.
- New Taxiway WG was constructed and began operation in 2000. Taxiway WG is 150 feet wide, and connects Runways 25R and 25L.
- New Taxiway T was constructed and began operation in 2000. Taxiway T is 150 feet wide and connects Runways 25R and 25L.
- Taxiway T High-Speed Exit was repaved and widened and began operation in 2000. The Taxiway T Exit connects Taxiway T from Runway 25R to Taxiway C.

3.3 Terminal

There have been several reconstruction and renovation projects within the existing terminal buildings during the period from 1997 to 2000. These projects focused principally upon adding international arrivals processing facilities or Federal Inspection Services (FIS) facilities and improvements to passenger convenience. These improvements did not create additional passenger handling capacity. A brief description of the terminal improvements completed between 1997 and 2000 are provided below:

Terminal 1

- Terminal 1 modifications have been limited to relocations of airline ticket counter positions, airline gate positions, and ATO Office space. Several concessionaires have been replaced and updated with new concession opportunities. In 1996, six commuter aircraft affiliated with US Airways operated out of Gate 14. In 1999, USAir Express and States West (the commuter affiliate of TWA Airlines in Terminal 3) constructed a commuter aircraft facility containing five aircraft parking positions in the TWA maintenance facility west of the Tom Bradley International Terminal (TBIT) for joint-use. This



Prepared by: Landrum & Brown, April 2003

LAX Master Plan - Supplement to the Draft EIS/EIR	**Changes In Existing Conditions - 1997 to 2000**	Figure **S9**

new facility was never utilized and the regional component of these airlines is now being served via United Express as part of the United Airlines Commuter Facility located in the United Maintenance Area. Gate 14 at Terminal 1 is currently being used by Southwest Airlines. There have been various concessions redevelopment within the terminal, which resulted in no new net additional square footage to the terminal building.

Terminals 2, 3, and 5

- No additional aircraft parking positions or net square footage have been added to Terminals 2, 3, or 5. However, like Terminal 1, airlines have relocated to and within these terminals, and there has been concessions redevelopment in each.

Tom Bradley International Terminal (TBIT)

- The Tom Bradley International Terminal had a concessions expansion and renovation project completed in 1998, although no aircraft gates or parking positions were added. This project added approximately 15,000 square feet of terminal area, representing a 1.5 percent addition to the existing 993,244 square feet. This area was limited to news and gifts stores, food and beverage concessions and seating areas. As part of this redevelopment the security screening areas were modified to accommodate new passenger circulation. On the arrivals level a new Interline Baggage Recheck facility was expanded to provide a better level of service for passengers transferring from international flights to domestic flights.

Terminal 4

- In 1999, America Airlines constructed a remote commuter apron area with 13 aircraft parking positions in the area immediately east of their low-bay hangar west of the TBIT building. These aircraft parking positions were previously located in the apron area around Gate 46. This provided American Airlines one additional gate position upon the relocation of the commuter aircraft. This terminal is also undergoing a renovation project that will be completed in 2002. The project includes expanding the ticket lobby and baggage claim areas; and adding holdroom seating space, concessions areas, and an FIS processing area to accommodate international flights. A separate environmental analysis done prior to commencement of this project determined that there was no capacity increase inherent in the project.

Commuter Terminal

- United Airlines commuter operations located in the maintenance area east of Sepulveda Boulevard remained unchanged from its configuration in 1997.

3.4 Roads and Parking

- The only roadway change at LAX was the realignment of Avion Drive, which provides internal access to the Century Cargo Complex located south of Century Boulevard. The primary circulation roadway (World Way West) and the primary access roads (Lincoln Boulevard, Sepulveda Boulevard, Westchester Parkway/Arbor Vitae Street, Pershing Drive, and Imperial Highway) remain unchanged.
- The number of short-term parking spaces in the CTA increased due to the construction of Parking Structure 6. Located adjacent to Terminal 6, the structure was opened in 2000. This hourly/daily-rate garage includes 989 stalls; however, it adds only 686 new spaces to the CTA since it replaced a 295-stall surface parking lot. This parking garage was accounted for in the Draft EIS/EIR as part of the future No Action/No Project Alternative.

3.5 Cargo

- Some changes have occurred in the Century Cargo Complex and the South Cargo Complex East. The existing cargo facilities are concentrated in four areas: the Century Cargo Complex (located between Century Boulevard and the south airfield), the Imperial Cargo Complex (on the northwest corner of Imperial Highway and Aviation Boulevard), the South Cargo Complex West (along Imperial Highway west of Sepulveda), and the South Cargo Complex East (along Imperial Highway east of Sepulveda). Changes that have occurred since between 1997 and 2000 are:

- Singapore Airlines Cargo Building – New 64,000–square foot building located in the South Cargo Complex East and opened in 1999.
- Mercury Air Cargo Building – Renovated 176,000–square foot building located in the Century Cargo Complex and opened in 1998.
- FedEx Expansion – 73,000–square foot expansion of the existing facility located in the South Cargo Complex East and opened in 1999.
- Cargo Building A – New 153,000–square foot building located in the Century Cargo Complex replaced Cargo Buildings 5 and 6 and opened in 1999.

All of these cargo changes were accounted for in the Draft EIS/EIR as part of the future No Action/No Project Alternative.

3.6 Ancillary Facilities

- Two new ancillary facilities have come online between 1997 and 2000:
  - USAir Express and States West (the commuter affiliate of TWA Airlines in Terminal 3) constructed a commuter aircraft facility in 1999 containing five aircraft parking positions in the TWA maintenance facility west of the TBIT for joint-use. This new facility was never utilized by the airlines and is now being used by the LAWA Emergency Coordinator and the LAPD.
  - A new United States Post Office opened in 1999 on the corner of Arbor Vitae Street and Airport Boulevard.

3.7 Collateral Facilities

- Collateral facility changes focus primarily on the Manchester Square and Belford areas. These changes are discussed in the Airport Property section above.
- A new 9,000-square foot First Flight Child Development Center was constructed on vacant land in 1997 to 1998. It opened in 1999 and is located at 9320 Lincoln Boulevard.

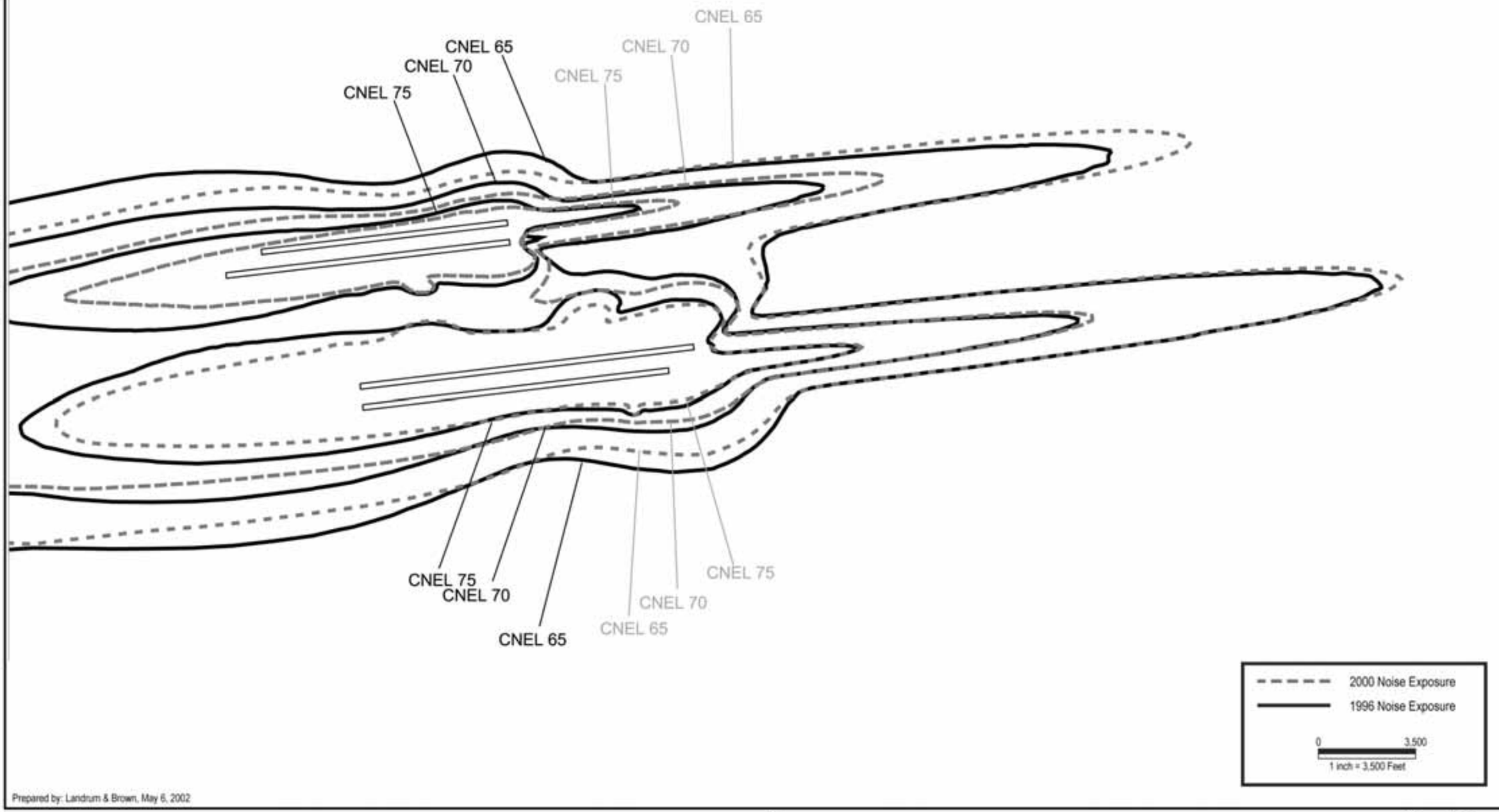
4. OPERATIONAL CHANGES

4.1 Noise Abatement

Under FAA guidelines, aircraft noise analysis must be conducted for the average annual day, and not for the design day. The issues presented below recognize this FAA requirement.

Changes in Fleet Mix (Encompassing Stage 2 Phase Out and Conversion to Heavies)

- Since 1996, heavy aircraft operations increased by only seven per day (351 operations per day in 1996 and 358 operations per day in 2000). Prop aircraft have been reduced from 705 per day in 1996 to 560 in 2000, with a commensurate increase in medium and light jet operations (from 1,021 daily in 1996 to 1,228 per day in 2000). Note that these fleet mix statistics differ from the design day schedule information presented earlier in the "Highlights of the 2000 Design Day Schedule" section of this report. This is due to the fact that the design day schedule is based on the Peak Month Average Weekday and was modified for the analysis to include several heavy international flights that occur on Saturdays, as explained in that section. By contrast, the aircraft noise analysis is based on the Average Annual Day fleet mix.
- The "4Q2000" input files used in LAWA's Quarterly Report for the final quarter of 2000 were obtained and served as the basis for the baseline contours for 2000, after quality control checks and insertion of ground noise sources. With the exception of 21 jet aircraft not subject to the phase out provisions of ANCA, the jet fleet was composed of Stage 3 aircraft. Therefore the noise levels would be expected to be reduced from previous years, particularly in those areas principally impacted by noise from departing aircraft. Using this assumption, a comparison of the flight portion of the 2000 contour with the 1996 baseline reveals the following observations (see **Figure S10**, Comparison of Year 2000 and 1996 Noise Exposure Contours).



LAX Master Plan - Supplement to the Draft EIS/EIR	**Comparison of Year 2000 and 1996 Noise Exposure Contours**	Figure **S10**

- The noise contours along the approaches to both the north and south runway complexes were somewhat longer under the 2000 baseline condition than they were under the 1996 baseline. This is likely a function of the addition of approximately 200 more jets to the operational mix each day and a shift of traffic to the evening and night hours.
- Conversely, the noise contours to the north and south of the airport were narrower under 2000 conditions than in 1996. This is a direct result of the completion of the phase out of Stage 2 jets, which were noticeably louder on takeoff than are Stage 3 jets. Impact computations have not yet been conducted.

Additional assessments will be completed as impact calculations are prepared.

Changes of Runway Loadings

- Since 1996, there has been a slight shift of landings from the inboard runways to the outboard runways, and of takeoffs from the outboard to the inboard runways during both the nighttime and 24-hour period. It is unlikely that these shifts will present substantive effects on the shape of the baseline noise contour pattern.

Changes in Time Of Day Distributions

- An evaluation of the distribution of operations between the day, evening and night hours indicates a modest shift of between 2 percent and 4 percent of daytime operations into the evening and nighttime hours among all three primary aircraft groups (heavy jet, medium/light jet, and propeller aircraft). Owing to the penalty on evening and night activity imposed by the CNEL noise metric, this shift may result in a tendency to increase the contour size from 1996 baseline conditions. However, this tendency is likely to be over-shadowed by the contour reduction occasioned by the completion of the conversion from Stage 2 to Stage 3 jets at the end of 1999, particularly along the sidelines of the contour in El Segundo and Westchester. The contour extensions to the east are less changed because the Stage 2 to Stage 3 conversion is less pronounced along flight tracks that are predominantly used for landings.

Changes in Run-Up Activity and Location

- Ground noise for the baseline condition was estimated based on the assumptions of the future No Project/No Action conditions. Because LAWA no longer maintains records of the ground run-up activity at the airport, ground noise can no longer be based on records of actual activity.

Potential Changes in Land Use Patterns and Availability of 2000 Census for Impact Determination

- As discussed in the Land Use section above, the land use patterns used as underlays for the noise maps were last updated in 1999 to 2000. The land uses in the impact areas are largely built out, and therefore fairly static. The United States Census for 2000 has become available since the Draft EIS/EIR was released for public review. Year 2000 population and dwelling unit information for the 2000 year have been developed.

Changes in Traffic Routes With Impacts from Changes in Flight Tracks

- Although the air traffic routes from LAX have been modified since 1996, the noise contour patterns developed by LAWA for the preparation of the “4Q2000” Quarterly Report do not indicate that areas of the South Bay communities would be affected at noise levels in excess of 60 CNEL.

Changes in Night Traffic/East Flow Characteristics

- During 2000, the number of over-ocean arrivals during the late night hours increased by approximately 10 percent. This percentage change did not result in a corresponding reduction of the number of late night arrivals over land. This was because total nighttime landings increased from 129 to 141 nightly.
- The number of departures to the east at night increased. The Automated Radar Terminal System (ARTS) data files used in the development of the Quarterly contours for 2000 indicate that the

number of east departures at night averaged 1.7 per night (614 annually) in 1996, as compared to 2.9 per night (1,069 annually) in 2000.

4.2 Air Traffic Control

From an airspace and air traffic control perspective, the years between 1996 and 2000 have seen minimal changes:

- The combination of five major approach control facilities, four from the immediate Los Angles metropolitan area and the San Diego facility, have produced little in the way of airspace modifications. The combination of these facilities, completed in late 1996, has not resulted in substantive modification to routes or procedures. The internal coordination among the facilities has been enhanced by the imposition of a single management team; however, airspace boundaries between the five facilities have changed little.
- There have been six airspace changes since 1996. The two principal changes include an actual change in the airspace structure and a change in how airspace is managed. The first change involved a modification to the Los Angeles Class B airspace that occurred on July 7, 1997. This modification involved an extension of the Class B airspace to the southeast to better contain turbojet and turboprop departures. Since much of this modification took place offshore, there has been little impact on the general aviation operation. A smaller airspace modification occurred in 1998 with the closure of Marine Corps Air Station (MCAS) El Toro. As a result of the relocation of the Marine aviation units to MCAS Miramar, the El Toro Class C airspace was rescinded, thus making additional airspace available east of John Wayne Airport.
- A jurisdiction change was made in airspace between the Los Angeles ARTCC (ZLA) and Southern California TRACON (SOCAL). Airspace east of LAX in the vicinity of ARNES intersection was redelegated from ZLA to SOCAL. A new sector was established within SOCAL. This sector is identified as East Feeder. As part of the operating procedures for this sector, a new arrival route (Paradise 4 Arrival) was established. This provided SOCAL an opportunity to fine-tune arrivals from the east and determine, at a much earlier stage, what runway complex would be utilized for the final approach and landing.
- Another procedural change has been the elimination of some of the confusion surrounding initial altitude assignments to LAX departures. Depending on enroute traffic offshore, LAX departures were subject to departure restrictions of either 2,000 feet or 3,000 feet. The 2,000-foot restriction has been removed and all departures now climb to 3,000 feet. This has eliminated coordination for the controller and reduced the confusion that sometimes surrounded this procedure.
- Air traffic has established a Visual Flight Rules (VFR) route over the eastern boundary of LAX. Los Angeles ATCT controls this route for several hours in the early morning, and the rest of the time the route is controlled by SOCAL. The intent of this route was to allow departures to climb to a higher altitude; however, this has not become reality. The major stumbling block at this point is a debate between the Tower and SOCAL as to how much control tower staffing is required to make this procedure effective. This must be solved in order to get LAX departures climbing as rapidly as possible.
- Runway incursions have plagued LAX for the last seven years, with the airport ranking among the highest in the nation for runway incursions. As a result, a new approach to the control of arriving aircraft has evolved. Prior to 1996 SOCAL often assigned runway complexes convenient to where the arrival aircraft would park. This often resulted in an overloaded south runway complex. The concern for runway incursions and the establishment of the East Feeder Sector at SOCAL has resulted in a more balanced runway assignment for arriving aircraft. Though this sometimes has a negative impact on the ground movement of aircraft, it provides airborne efficiencies.
- Technological advancements have not materialized to the point that airspace capacity has been enhanced. The Center Terminal Automation System (CTAS) has been installed at SOCAL, but it is not used beyond that of a look-ahead device to see what traffic is coming. The Traffic Management Advisor (TMA) and Descent Advisor (DA) functions have not been integrated into the daily operation. The Passive Final Approach Spacing Tool (Pfast) designed to assist the control in establishing landing sequences is not functional, and in fact, has been withdrawn from local live testing for more development of the required algorithms.

- Area Navigation (RNAV) procedures have been developed to take advantage of the automation on board the aircraft, but with few exceptions, there are no pure RNAV routes and no separation standards have been developed.

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