Technical Report
LAX Master Plan EIS/EIR

2b. Off-Airport Surface Transportation

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Los Angeles World Airports
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Prepared by:

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LAX Master Plan

Off-Airport Existing 1996 Transportation Conditions Report

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Prepared for:

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Draft

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7 Off-Airport Transportation

This chapter summarizes existing off-airport transportation conditions. It includes summaries of existing (1996) highway and transit conditions, and describes general travel patterns in the area surrounding LAX.

7.1 EXISTING HIGHWAY CONDITIONS

Several major freeways, in addition to state highways and major arterial streets, provide local and regional access to LAX. This section describes the existing highway infrastructure, and reports current (1996) traffic volumes and levels of service.

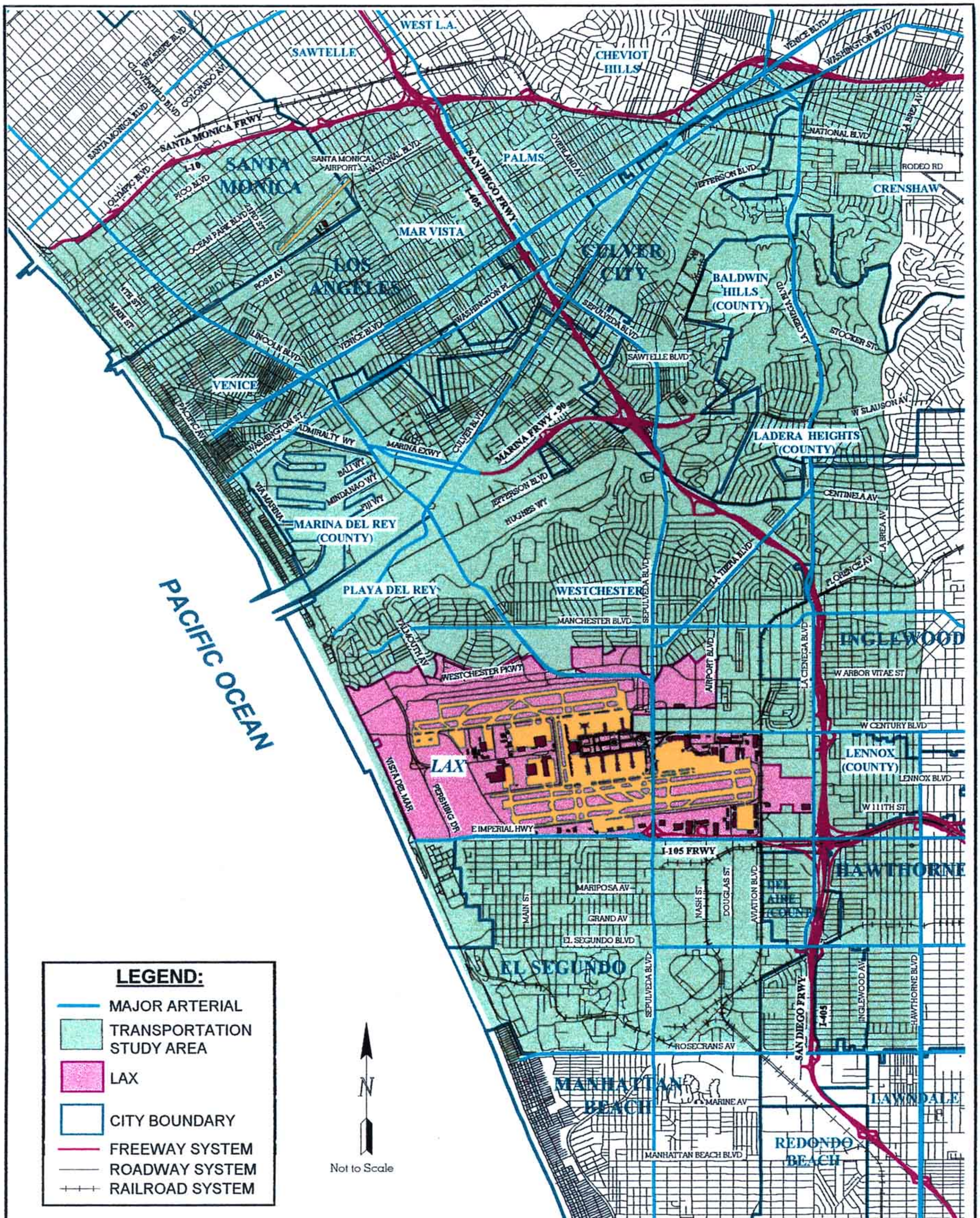
7.1.1 EXISTING HIGHWAY INFRASTRUCTURE

An extensive network of freeways, state highways and local roadways make up the highway infrastructure in the vicinity of LAX. A map of these facilities in the area around LAX is provided in **Figure II-7.1**.

7.1.1.1 FREEWAY NETWORK

Major freeways providing regional access to LAX are the San Diego Freeway (I-405), Glenn M. Anderson Freeway (I-105), Santa Monica Freeway (I-10), and Marina Freeway (SR-90). The following is a description of these major freeway facilities:

- **San Diego Freeway (I-405)** – The San Diego Freeway is a high-volume, north-south freeway providing regional access to the coastal communities on the west side of Los Angeles. It passes within close proximity of LAX and has four lanes in each direction, not including auxiliary lanes (weaving lanes used for entering and exiting the freeway). A High Occupancy Vehicle (HOV) lane is provided northbound and southbound, south of I-105. Major access to the LAX area is provided by on- and off-ramps at Howard Hughes Parkway, La Tijera Boulevard, Manchester Boulevard, La Cienega Boulevard, Century Boulevard, the Glenn M. Anderson Freeway (I-105), Imperial Highway, and El Segundo Boulevard.



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Los Angeles International Airport Master Plan	Roadway Network	FIGURE II - 7.1

Glenn M. Anderson Freeway (I-105) – The Glenn M. Anderson Freeway, first opened to traffic in October, 1993, is an east-west freeway extending from Sepulveda Boulevard on the west to the San Gabriel River Freeway (I-605) on the east. I-105 provides three mixed-flow lanes plus one HOV lane in each direction east of I-405. It continues with three mixed-flow lanes west of the I-405 to its western terminus west of Sepulveda Boulevard, immediately south of LAX. Access from I-105 to the airport area is provided by ramps at Sepulveda Boulevard, Imperial Highway and Nash Street. Metro Green Line service, located in the center median of the freeway, opened in 1995 and provides light rail service from Manhattan Beach on the west to I-605 on the east. Metro Green Line stations serving the LAX area include Aviation/I-105 and Mariposa/Nash. A connection to the Metro Blue Line is provided at Wilmington Avenue/Imperial Highway.

- **Marina Freeway (SR-90)** – The Marina Freeway is an east-west freeway extending from Slauson Avenue on the east to Lincoln Boulevard (SR-1) on the west. It is approximately three miles in length and provides four lanes in each direction. A full interchange with I-405 provides regional access to the coastal communities of Venice, Playa Del Rey, Marina Del Rey, and Culver City.

- **Santa Monica Freeway (I-10)** – The Santa Monica Freeway is a high-volume, east-west freeway providing five lanes in each direction. It extends through the entire Los Angeles metropolitan area and provides interchanges at all major north-south freeways. I-10 offers access to the airport area via a full interchange with I-405 as well as several major north-south arterials including La Cienega Boulevard and La Brea Avenue.

7.1.1.2 STATE HIGHWAY NETWORK

The principal state highways within the project area include the following:

- **Sepulveda Boulevard (SR-1)** – Sepulveda Boulevard is a major north-south arterial providing three to four lanes in each direction. It is designated as SR-1 from Lincoln Boulevard on the north to Pacific Coast Highway on the south. Sepulveda serves as a major airport access route and provides connections to I-405 north of the LAX area (via Howard Hughes Parkway) and to I-105 south of the LAX area.

- **Manchester Avenue (SR-42)** – Manchester Avenue is an east-west major arterial. It is located north of the LAX area and provides four lanes west of Hawthorne Boulevard and six lanes east of Hawthorne Boulevard. (Manchester Avenue is referred to as Manchester Boulevard within the City of Inglewood).

- **Lincoln Boulevard (SR-1)** – Lincoln Boulevard is a major north-south arterial roadway, providing three travel lanes in each direction during morning and afternoon peak hours and two travel lanes plus a parking lane during off-peak hours. It is designated as State Route 1 from Sepulveda Boulevard on the south to I-10 on the north. It provides major access to the airport area from the west side of Los Angeles.

7.1.1.3 LOCAL ROADWAY NETWORK

The principal local roadway network within the project study area includes the following facilities:

- **Venice Boulevard** – Venice Boulevard is a major east-west arterial providing three travel lanes in each direction. It is located north of the airport area and provides local and regional access between the coastal areas of Los Angeles on the west to downtown Los Angeles on the east.

- **Washington Boulevard** – Washington Boulevard is a major east-west arterial providing two travel lanes and one parking lane in each direction. Washington Boulevard is located north of LAX, one-half mile south of and parallel to Venice Boulevard.

- **Culver Boulevard** – Culver Boulevard is a divided east-west major arterial, providing two travel lanes in each direction. Culver Boulevard begins at Vista Del Mar on the west and extends to Venice Boulevard on the east.

- **Jefferson Boulevard** – Jefferson Boulevard is a major east-west arterial, extending from Lincoln Boulevard on the west to Central Avenue on the east (south of downtown Los Angeles). It is a six-lane divided roadway between Lincoln Boulevard and Centinela Avenue. Jefferson Boulevard provides access between the coastal areas of Playa Del Rey/Westchester and downtown Los Angeles.

- **La Tijera Boulevard** – La Tijera Boulevard is a six-lane divided roadway, with a northeast to southwest orientation. Its three-mile length extends from Sepulveda Boulevard on the west to Slauson Avenue on the east. It provides major access to the airport area from the north, via on- and off-ramps with I-405 and an intersection with La Cienega Boulevard.

- **Century Boulevard** – Century Boulevard is an eight-lane, east-west, divided roadway extending from the entrance to LAX at Sepulveda Boulevard on the west to Central Avenue on the east. With a full interchange at I-405, Century Boulevard serves as a major gateway for passengers to LAX as well as for other LAX-related traffic.

- **Imperial Highway** – Imperial Highway is a major six-lane arterial serving communities of Los Angeles, Inglewood, El Segundo, and Hawthorne. Imperial Highway runs east-west along the north side of I-105, extending from Vista Del Mar on the west to beyond the Los Angeles County border on the east. Throughout the region, it serves mainly industrial and commercial uses. Within the LAX area, it serves as the southern border of LAX property, thus providing access to the Imperial terminal, air cargo facilities and many other airport-related facilities. With interchanges at I-105 and I-405, Imperial Highway provides direct access for commercial uses from the airport area to the rest of the region.

- **Centinela Avenue** – Centinela Avenue is a four-lane major arterial with a northwest-to-southeast orientation. It provides access to City of Santa Monica, Mar Vista, and Culver City. Centinela Avenue extends from Florence Avenue on the south to Ocean Park Boulevard on the north, where it turns into Bundy Drive.

- **Sepulveda Boulevard (North of Lincoln Boulevard)** – Sepulveda Boulevard is a four-lane roadway north of Jefferson Boulevard and a six-lane roadway south of Jefferson Boulevard. It is designated as SR-1 from Lincoln Boulevard on the north to Pacific Coast Highway on the south. It provides major access to the airport from the north, via an interchange with I-405.

- **Aviation Boulevard** – Aviation Boulevard is a north-south, four-lane roadway, extending from Manchester Boulevard on the north to Pacific Coast Highway on the south. It's cross-section widens to six lanes between Century Boulevard and Imperial Highway, where it serves many airport-related and other industrial uses. The AT&SF rail-line runs along the westerly side of Aviation Boulevard.

- **La Cienega Boulevard** – La Cienega Boulevard is a major north-south arterial, providing two travel lanes in each direction north of I-405 and three travel lanes in each direction south of I-405. La

Cienega Boulevard runs immediately west of and parallel to I-405 within the airport area. It provides major freeway access for passengers and commercial traffic to and from LAX.

- **Airport Boulevard** – Airport Boulevard is a major north-south arterial providing three lanes in each direction between La Tijera Boulevard to Century Boulevard. It continues with two lanes in each direction from La Tijera Boulevard to 74th Street.

- **Arbor Vitae Street** – Arbor Vitae Street is a minor east-west arterial providing three travel lanes in each direction between Sepulveda Boulevard and Airport Boulevard. It continues with two lanes in each direction from Airport Boulevard to Aviation Boulevard.

7.1.2 EXISTING LEVELS OF SERVICE

This section analyzes the existing conditions of key intersections, roadway segments, freeway segments, freeway ramps. and central terminal area (CTA) ramps.

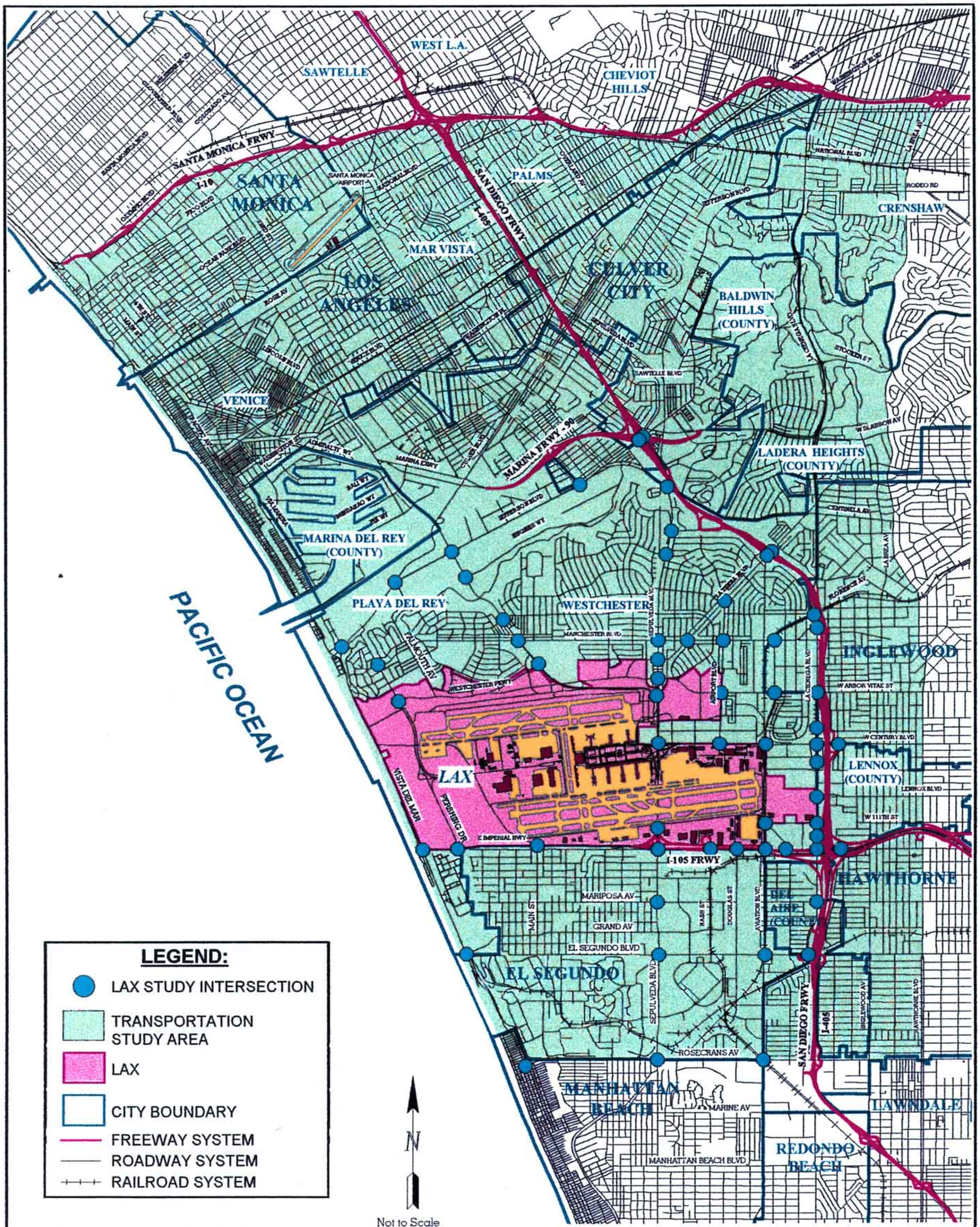
7.1.2.1 INTERSECTIONS

Level of service (LOS) analyses at 61 key intersections were conducted as part of this study. The location of the study intersections is provided in **Figure II-7.2.**

Morning, afternoon and airport peak period turning movement counts (6:00 - 9:00 AM, 4:00 - 7:00 PM and 11:00 - 12:00 noon, respectively) for the 61 intersections were either obtained from LADOT, or counted as a part of the Master Plan study. All the counts were conducted either in 1996 or 1997.

A systemwide peak was determined for all 61 analyzed intersections. The specific morning peak hour and afternoon peak hour were determined by selecting the most common peak hour among the count data for all 61 intersections during non-summer months. The systemwide peak for the morning hour was found to occur between 8:00 - 9:00 AM while the afternoon hour was between 5:00 - 6:00 PM.

A third peak hour, 11:00 AM to 12:00 Noon was also analyzed. This is the hour of highest airport vehicle trip generation during the peak summer month (a Friday in August), as documented in the chapter regarding on-airport existing conditions. The traffic volumes for this peak hour were derived from the results of transportation model analysis with August midday peak hour airport trip generation and adjusted using midday peak hour traffic counts.



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Los Angeles International Airport Master Plan	Locations of Study Intersections	FIGURE II - 7.2

The calculation of intersection level of service is a qualitative measure of the ability of an intersection to handle prevailing traffic based on given conditions at an intersection. Levels of service range from A, which represents free flow conditions, through F which represents extreme congestion with stop-and-go conditions. **Table II-7.1** summarizes the definitions of levels of service for signalized intersections, as defined by the Transportation Research Board and recognized by LADOT.

Table II-7.1

LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS[1]

Level of Service	Interpretation	ICU[2]
A	Uncongested operations; all vehicles clear in a single cycle.	0.000-0.600
B	Uncongested operations; all vehicles clear in a single cycle.	0.601-0.700
C	Light congestion; occasional backups on critical approaches.	0.701-0.800
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	0.801-0.900
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	0.901-1.000
F	Total breakdown with stop-and-go operations.	1.001 +

1 Source: *Highway Capacity Manual*, Transportation Research Board, 1985.
2 Intersection Capacity Utilization.

An MS-Windows™ based, spreadsheet-format application, developed by LADOT, was used in the process of calculating LOS for the 61 study intersections. The spreadsheet methodology, called CalcaDB (Computer assisted level of service calculations and Data Base), utilizes the Circular 212 methodology for calculating V/C ratios and levels-of-service.

For complex intersections, the spreadsheet was not used, but the same Circular 212 methodology was maintained to calculate levels of service. Manual calculations were performed at the Sepulveda Boulevard/I-105 Freeway due to configuration complexity.

Results of the level of service analysis of the 61 intersections under existing conditions during the morning (AM), afternoon (PM) and airport (AP) peak hours are summarized in **Table II-7.2.** Fifty-two of the 61 intersections currently operate at acceptable levels with LOS D or better during *both* weekday morning and afternoon peak hours.

During AM peak hour, 52 of 61 intersections currently operate at LOS D or better. The remaining intersections operate under congested conditions, with 4 intersections operating at LOS E and 5 intersections at LOS F. LOS E reflects severely congested conditions while LOS F reflects intersection breakdown. During the PM peak hour, 52 intersections operate at LOS D or better, while 5 operate at LOS E and 4 operate at LOS F. During the Airport peak hour, 51 intersections operate at LOS D or better, while 2 operate at LOS E and 8 operate at LOS F.

A summary of the AM, PM and AP peak hour intersection turning movement volumes and LOS calculations, produced by CalcaDB, are provided for all 61 intersections in **Appendix II-M.**

7.1.2.2 ROADWAY SEGMENTS

This section analyzes the link level of service at 30 key roadway segments. The location of these roadway segments is shown in **Figure II-7.3.**

AM, PM and AP peak hour traffic volumes for the key roadway segments are derived from either ground counts obtained from local jurisdictions or counts conducted as a part of this study. Capacities of these roadway facilities were based upon values recognized by the County of Los Angeles and LADOT.

Table II-7.3 provides a summary of the definitions for levels-of-service for roadway segments, as defined by the Transportation Research Board and recognized by LADOT. Similar to the definitions for intersection operation and level of service, LOS A represents favorable, free-flow conditions, while gradation to LOS F represents forced-flow conditions with considerable delays.

Table II-7.4 summarizes the results of the level of service analysis for each direction of the 30 selected roadway segments. During the AM peak hour, all but 2 of the 60 directional segments operate at LOS D or better. The remaining two, which operate at LOS E, are Centinela Avenue south of Venice Boulevard and Culver Boulevard west of Jefferson Boulevard. During the PM peak hour, all but 5 of the directional roadway segments operate at LOS D or better except for Lincoln Avenue south of Venice Boulevard, Centinela Avenue south of Venice Boulevard, Centinela Avenue east of La Brea Avenue, Century

Table II - 7.2
Los Angeles International Airport Master Plan
1996 WEEKDAY PEAK HOUR LEVELS OF SERVICE FOR INTERSECTIONS

Intersection Name	BA ID Number	AM Peak Hour V/C	AM Peak Hour LoS	PM Peak Hour V/C	PM Peak Hour LoS	Airport Peak Hour V/C	Airport Peak Hour LoS
Airport Bl - Arbor Vitae St	3	0.361	A	0.549	A	0.634	B
Airport Bl - Century Bl	4	0.441	A	0.501	A	0.732	C
Airport Bl - La Tijera Bl	5	0.523	A	0.542	A	0.573	A
Airport Bl - Manchester Av	6	0.598	A	0.656	B	0.763	C
Aviation Bl - Arbor Vitae St	7	0.595	A	0.684	B	0.793	C
La Cienega Bl - Arbor Vitae St	8	0.537	A	0.637	B	0.727	C
Aviation Bl - 111th St	10	0.460	A	0.434	A	0.889	D
Aviation Bl - Century Bl	11	0.689	B	0.747	C	1.502	F
Aviation Bl - El Segundo Bl	12	0.835	D	0.917	E	0.645	B
Aviation Bl - Imperial Hwy	13	0.533	A	0.621	B	0.903	E
Aviation Bl - Manchester Av	14	0.687	B	0.643	B	1.119	F
Aviation Bl - Rosecrans Av	15	1.121	F	1.304	F	1.172	F
Jefferson Bl - Centinela Av	18	0.593	A	0.599	A	0.658	B
Sepulveda Bl - Centinela Av	22	0.945	E	0.917	E	0.682	B
La Cienega Bl - Century Bl	26	0.680	B	0.737	C	0.572	A
Sepulveda Bl - Century Bl	27	0.682	B	0.693	B	0.571	A
Culver Bl - Jefferson Bl	28	0.889	D	0.757	C	0.621	B
Culver Bl - Vista Del Mar	33	0.671	B	0.431	A	0.299	A
Douglas St - Imperial Hwy	34	0.321	A	0.380	A	0.521	A
Sepulveda Bl - El Segundo Bl	35	0.869	D	1.025	F	0.896	D
Vista Del Mar - Grand Av	36	0.749	C	0.494	A	0.357	A
La Cienega Bl - Florence Av	40	0.749	C	0.957	E	1.437	F
Highland Av/Vista Del Mar - Rosecrans Av	43	1.069	F	0.896	D	0.813	D
Sepulveda Bl - Howard Hughes Pkwy	44	0.708	C	0.690	B	0.548	A
Continental City Dr/I-105 - Imperial Hwy	45	0.434	A	0.660	B	0.661	B
Imperial Hwy - I-405 NB Ramps	46	0.239	A	0.279	A	0.579	A
Main St - Imperial Hwy	47	0.833	D	0.945	E	0.547	A
Nash St/I-105 WB Off-Ramp - Imperial Hwy	48	0.491	A	0.254	A	1.074	F
Pershing Dr - Imperial Hwy	49	0.958	E	0.835	D	0.636	B
Sepulveda Bl - Imperial Hwy	50	1.018	F	1.129	F	1.095	F
Vista Del Mar - Imperial Hwy	51	0.465	A	0.468	A	0.541	A
La Cienega Bl - Imperial Hwy	52	0.321	A	0.308	A	0.474	A
I-405 NB Ramps - Jefferson Bl	54	0.597	A	0.701	C	0.573	A
I-405 SB Ramps - Jefferson Bl	55	0.467	A	0.533	A	0.414	A
Lincoln Bl - Jefferson Bl	57	0.780	C	0.779	C	0.625	B
La Cienega Bl - 111th St	67	0.197	A	0.255	A	0.683	B
La Cienega Bl - I-405 SB Ramps S/O Century Bl	68	0.234	A	0.430	A	0.615	B
La Cienega Bl - I-405 SB Ramps N/O Imperial Hwy	69	0.267	A	0.232	A	0.457	A
La Cienega Bl - Lennox Bl	71	0.362	A	0.219	A	0.760	C
La Cienega Bl - Manchester Av	72	0.684	B	0.769	C	1.056	F
La Tijera Bl - I-405 NB Ramps	78	0.754	C	0.830	D	0.563	A
La Tijera Bl - I-405 SB Ramps	79	0.629	B	0.699	B	0.387	A
Lincoln Bl - La Tijera Bl	81	0.429	A	0.435	A	0.221	A
La Tijera Bl - Manchester Av	82	0.589	A	0.538	A	0.531	A
Sepulveda Bl - La Tijera Bl	83	0.694	B	0.644	B	0.301	A
Lincoln Bl - 83rd St	87	0.892	D	0.641	B	0.725	C
Lincoln Bl - Manchester Av	88	0.684	B	0.747	C	0.576	A
Sepulveda Bl - Lincoln Bl	93	0.583	A	0.594	A	0.439	A
Lincoln Bl - Teale St	94	0.902	E	0.825	D	0.549	A
Pershing Dr - Manchester Av	98	0.479	A	0.528	A	0.231	A
Sepulveda Bl - Manchester Av	99	0.961	E	0.870	D	0.689	B
Mariposa St - Sepulveda Bl	100	0.730	C	0.799	C	0.788	C
Pershing Dr - Westchester Pkwy	101	0.186	A	0.148	A	0.095	A
Sepulveda Bl - Rosecrans Av	103	1.220	F	1.388	F	1.436	F
Sepulveda Bl - I-105 Off Ramp N/O Imperial Hwy	105	1.106	F	0.911	E	0.911	E
Sepulveda Bl - 76th/77th St	106	0.698	B	0.594	A	0.670	B
Sepulveda Bl - Westchester Pkwy	109	0.585	A	0.627	B	0.453	A
La Cienega Bl - I-405 SB Ramps N/O Century Bl	111	0.644	B	0.663	B	0.711	C
Century Bl - I-405 NB Off Ramp	307	0.651	B	0.557	A	0.443	A
La Cienega Bl - El Segundo Bl	312	0.552	A	0.575	A	0.403	A
La Cienega Bl - 120th St	313	0.237	A	0.303	A	0.263	A

LOS Summary:	AM Peak Hour	PM Peak Hour	Airport Peak Hour
LOS "A"	29	26	28
LOS "B"	12	13	12
LOS "C"	6	8	8
LOS "D"	5	5	3
LOS "E"	4	5	2
LOS "F"	5	4	8

Boulevard west of La Brea Avenue, and Sepulveda Boulevard north of Rosecrans Avenue. During the Airport peak hour, all roadway segments operate at LOS C or better.

Table II-7.3

LEVEL OF SERVICE CRITERIA FOR ROADWAY SEGMENTS[1]

Level of Service	Interpretation	D/C[2]
A	Low volumes; primarily free-flow operations. Density is low, and vehicles can freely maneuver within the traffic stream. Drivers can maintain their desired speeds with little or no delay.	0.000-0.609
B	Stable flow with potential for some restriction of operating speeds due to traffic conditions. Maneuvering is only slightly restricted. The stopped delays are not bothersome, and drives are not subject to appreciable tension.	0.610-0.709
C	Stable operations; however, the ability to maneuver is more restricted by the increase in the traffic volumes. Relatively satisfactory operating speed prevail, but adverse signed coordination or longer queues cause delays.	0.710-0.809
D	Approaching unstable traffic flow, where small increases in volume could cause substantial delays. Most drivers are restricted in their ability to maneuver and in their selection of travel speeds. Comfort and convenience are low but tolerable.	0.810-0.909
E	Operations characterized by significant approach delays and average travel speeds of one-half to one-third the free-flow speed. Flow is unstable and potential for stoppages of brief duration.	0.910-1.000
F	Forced-flow operations with high approach delays at critical signalized intersections. Speeds are reduced substantially, and stoppages may occur for short or long periods of time because of downstream congestion.	1.010+ (meaningful)

1 Source: *Highway Capacity Manual*, Transportation Research Board, 1965.
2 Demand to Capacity Ratio

7.1.2.3 FREEWAY SEGMENTS AND RAMPS

AM, PM and AP peak hour levels of service were conducted at four key freeway mainline locations and 29 freeway ramps within the LAX area. The mainline volumes, obtained from Caltrans, were derived from loop detector count data. Ramp volumes were obtained from tube counts.

Table II-7.5 provides a summary of the definitions of level of service as outlined in the *1995 Congestion Management Program for Los Angeles County,* by the Los Angeles County Metropolitan Transportation Authority (MTA). This was used to represent freeway levels of service, while arterial level of service criteria was used for the ramps.

Table II - 7.4
Los Angeles International Airport Master Plan
1996 WEEKDAY PEAK HOUR LEVELS OF SERVICE FOR ROADWAY SEGMENTS

						AM Peak Hour						PM Peak Hour					
						NB/EB			SB/WB			NB/EB			SB/WB		
No.	Link Location		Lane Cap	No. of Lanes	Total Cap	Vol	V/C	LoS	Vol	V/C	LoS	Vol	V/C	LoS	Vol	V/C	LoS
1	Lincoln Boulevard	s/o Venice Boulevard	1000	2	2000	1615	0.808	C	1652	0.826	D	1732	0.866	D	1821	0.911	E
2	Centinela Avenue	s/o Venice Boulevard	850	2	1700	1648	0.969	E	1041	0.612	B	1313	0.772	C	1578	0.928	E
3	Sawtelle Boulevard	s/o Venice Boulevard	850	2	1700	920	0.541	A	910	0.535	A	679	0.399	A	1296	0.762	C
4	Sepulveda Boulevard	s/o Venice Boulevard	850	3	2550	1601	0.628	B	1054	0.413	A	1538	0.603	A	1578	0.619	B
5	Overland Avenue	s/o Venice Boulevard	850	2	1700	876	0.515	A	810	0.476	A	800	0.471	A	1054	0.620	B
6	Stocker Street	e/o La Brea Avenue	850	2	1700	779	0.458	A	622	0.366	A	840	0.494	A	686	0.404	A
7	Slauson Avenue	e/o La Brea Avenue	850	3	2550	948	0.372	A	1657	0.650	B	1529	0.600	A	1203	0.472	A
8	Centinela Avenue	e/o La Brea Avenue	850	2	1700	572	0.336	A	1503	0.884	D	1160	0.682	B	1969	1.158	F
9	La Cienega Boulevard	s/o Slauson Avenue	1850	3	5550	3176	0.572	A	2782	0.501	A	3287	0.592	A	3206	0.578	A
10	Manchester Boulevard	w/o La Brea Avenue	850	2	1700	1110	0.653	B	737	0.434	A	943	0.555	A	1217	0.716	C
11	Arbor Vitae	w/o La Brea Avenue	850	2	1700	423	0.249	A	391	0.230	A	493	0.290	A	609	0.358	A
12	Century Boulevard	w/o La Brea Avenue	850	2	1700	1038	0.611	B	1226	0.721	C	1639	0.964	E	1163	0.684	B
13	Imperial Highway	w/o La Brea Avenue	850	3	2550	518	0.203	A	721	0.283	A	1235	0.484	A	708	0.278	A
14	Aviation Boulevard	n/o Rosecrans Avenue	1300	2	2600	1656	0.637	B	624	0.240	A	973	0.374	A	1962	0.755	C
15	Sepulveda Boulevard	n/o Rosecrans Avenue	1300	3	3900	3449	0.884	D	1293	0.332	A	1944	0.498	A	3643	0.934	E
16	Pacific Avenue	s/o Venice Boulevard	850	2	1700	751	0.442	A	520	0.306	A	456	0.268	A	843	0.496	A
17	Washington Boulevard	e/o Lincoln Boulevard	850	2	1700	1289	0.758	C	775	0.456	A	1046	0.615	B	984	0.579	A
18	Marina Freeway	e/o Lincoln Boulevard	2000	2	4000	798	0.200	A	924	0.231	A	773	0.193	A	848	0.212	A
19	Culver Boulevard	e/o Lincoln Boulevard	1850	1	1850	1301	0.703	B	299	0.162	A	501	0.271	A	1251	0.676	B
20	Jefferson Avenue	e/o Lincoln Boulevard	850	3	2550	1123	0.440	A	547	0.215	A	790	0.310	A	1054	0.413	A
21	Lincoln Boulevard	s/o Jefferson Avenue	1000	3	3000	2524	0.841	D	1531	0.510	A	2298	0.766	C	2391	0.797	C
22	Culver Boulevard	w/o Jefferson Avenue	1300	2	2600	2369	0.911	E	558	0.215	A	1078	0.415	A	2154	0.828	D
23	Vista Del Mar	s/o Culver Boulevard	1300	2	2600	1315	0.506	A	230	0.088	A	447	0.172	A	1139	0.438	A
24	La Brea Avenue	s/o Slauson Avenue	1000	2	2000	1393	0.697	B	768	0.384	A	1201	0.601	A	1281	0.641	B
25	Jefferson Boulevard	n/o Rodeo Road	850	3	2550	612	0.240	A	788	0.309	A	665	0.261	A	711	0.279	A
26	Sepulveda Boulevard	s/o Slauson Avenue	1000	3	3000	2705	0.902	D	1153	0.384	A	1837	0.612	B	2321	0.774	C
27	Centinela Avenue	w/o Sepulveda Boulevard	850	2	1700	670	0.394	A	1120	0.659	B	1289	0.758	C	1040	0.612	B
28	El Segundo Boulevard	w/o Hawthorne Boulevard	850	3	2550	545	0.214	A	1233	0.484	A	1833	0.719	C	979	0.384	A
29	Inglewood Boulevard	n/o Rosecrans Avenue	850	2	1700	763	0.449	A	590	0.347	A	854	0.502	A	1359	0.799	C
30	Vista Del Mar	s/o Grand Avenue	1300	2	2600	1989	0.765	C	466	0.179	A	558	0.215	A	1445	0.556	A

Table II - 7.4 (Continued)
Los Angeles International Airport Master Plan
1996 WEEKDAY PEAK HOUR LEVELS OF SERVICE FOR ROADWAY SEGMENTS

						Airport Peak Hour					
						NB/EB			SB/WB		
No.	Link Location		Lane Cap	No. of Lanes	Cap	Vol	V/C	LoS	Vol	V/C	LoS
1	Lincoln Boulevard	s/o Venice Boulevard	1000	2	2000	1468	0.734	C	1495	0.748	C
2	Centinela Avenue	s/o Venice Boulevard	850	2	1700	998	0.587	A	917	0.539	A
3	Sawtelle Boulevard	s/o Venice Boulevard	850	2	1700	604	0.355	A	675	0.397	A
4	Sepulveda Boulevard	s/o Venice Boulevard	850	3	2550	1087	0.426	A	811	0.318	A
5	Overland Avenue	s/o Venice Boulevard	850	2	1700	712	0.419	A	662	0.389	A
6	Stocker Street	e/o La Brea Avenue	850	2	1700	397	0.234	A	352	0.207	A
7	Slauson Avenue	e/o La Brea Avenue	850	3	2550	880	0.345	A	1014	0.398	A
8	Centinela Avenue	e/o La Brea Avenue	850	2	1700	883	0.519	A	971	0.571	A
9	La Cienega Boulevard	s/o Slauson Avenue	1850	3	5550	1841	0.332	A	1873	0.337	A
10	Manchester Boulevard	w/o La Brea Avenue	850	2	1700	946	0.556	A	940	0.553	A
11	Arbor Vitae	w/o La Brea Avenue	850	2	1700	355	0.209	A	356	0.209	A
12	Century Boulevard	w/o La Brea Avenue	850	2	1700	748	0.440	A	965	0.568	A
13	Imperial Highway	w/o La Brea Avenue	850	3	2550	722	0.283	A	539	0.211	A
14	Aviation Boulevard	n/o Rosecrans Avenue	1300	2	2600	945	0.363	A	930	0.358	A
15	Sepulveda Boulevard	n/o Rosecrans Avenue	1300	3	3900	1925	0.494	A	2015	0.517	A
16	Pacific Avenue	s/o Venice Boulevard	850	2	1700	473	0.278	A	559	0.329	A
17	Washington Boulevard	e/o Lincoln Boulevard	850	2	1700	950	0.559	A	753	0.443	A
18	Marina Freeway	e/o Lincoln Boulevard	2000	2	4000	667	0.167	A	793	0.198	A
19	Culver Boulevard	e/o Lincoln Boulevard	1850	1	1850	434	0.235	A	797	0.431	A
20	Jefferson Avenue	e/o Lincoln Boulevard	850	3	2550	742	0.291	A	801	0.314	A
21	Lincoln Boulevard	s/o Jefferson Avenue	1000	3	3000	1636	0.545	A	1261	0.420	A
22	Culver Boulevard	w/o Jefferson Avenue	1300	2	2600	1134	0.436	A	1029	0.396	A
23	Vista Del Mar	s/o Culver Boulevard	1300	2	2600	490	0.188	A	471	0.181	A
24	La Brea Avenue	s/o Slauson Avenue	1000	2	2000	843	0.422	A	716	0.358	A
25	Jefferson Boulevard	n/o Rodeo Road	850	3	2550	354	0.139	A	419	0.164	A
26	Sepulveda Boulevard	s/o Slauson Avenue	1000	3	3000	1175	0.392	A	1198	0.399	A
27	Centinela Avenue	w/o Sepulveda Boulevard	850	2	1700	660	0.388	A	714	0.420	A
28	El Segundo Boulevard	w/o Hawthorne Boulevard	850	3	2550	868	0.340	A	883	0.346	A
29	Inglewood Boulevard	n/o Rosecrans Avenue	850	2	1700	681	0.401	A	713	0.419	A
30	Vista Del Mar	s/o Grand Avenue	1300	2	2600	667	0.257	A	606	0.233	A

Table II-7.5

LEVEL OF SERVICE CRITERIA FOR FREEWAYS[1]

Level of Service	D/C[2]
A	0.00-0.35
B	0.36-0.54
C	0.55-0.77
D	0.78-0.93
E	0.94-1.00
F(0)	1.01-1.25
F(1)	1.26-1.35
F(2)	1.36-1.45
F(3)	1.46+

1 Source: *1993 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority - MTA, November 1993.

2 Demand-to-Capacity ratio. (Note: Calculation of level of service based on D/C ratios is a surrogate for the speed-based level of service used by Caltrans for traffic operational analysis. Levels F(1) through F(3) designations are assigned where severely congested (less than 25 mph) conditions prevail for more than one hour, converted to an estimate of peak hour demand in the table above. Note that calculated level F traffic demands may therefore be greater than observed traffic volumes.)

Table II-7.6 summarizes the results of the level of service analysis and V/C ratios for the freeway mainline segments and ramps. Freeway mainline segments experience severe traffic congestion during AM, PM and AP peak hours, operating at LOS F. I-105 is a newly-built freeway and already operates under poor conditions during all AM, PM, and AP peak hours, in close proximity to the airport.

Of the eight freeway mainline segments analyzed, five operate at level of service F and the remaining three operate at LOS D or better during the AM peak hour, during the PM and AP peak-hour periods six segments operate at LOS F and two operate at LOS D or better.

Of the thirty-eight freeway ramps analyzed, 35 ramps operate at LOS D or better, one operates at LOS E and two at LOS F during the AM peak hour. During the PM peak hour 34 ramps operate at LOS D or better, 3 operate at LOS E and one at LOS F. During the AP peak 37 ramps operate at LOS D or better and the remaining one operates at LOS E.

Table II - 7.6

Los Angeles International Airport Master Plan

1996 WEEKDAY PEAK HOUR LEVELS OF SERVICE FOR FREEWAY RAMPS

No.	Freeway Ramps		Cap	AM Peak Hour Vol	AM Peak Hour V/C	AM Peak Hour LoS	PM Peak Hour Vol	PM Peak Hour V/C	PM Peak Hour LoS	Airport Peak Hour Vol	Airport Peak Hour V/C	Airport Peak Hour LoS
1	405 NB off-ramp	at Sepulveda Blvd.	1500	353	0.235	A	392	0.261	A	821	0.547	A
2	405 SB off-ramp	at Howard Hughes Pkwy.	1500	616	0.411	A	593	0.395	A	688	0.459	A
3	405 SB on-ramp	at Howard Hughes Pkwy.	1500	376	0.251	A	608	0.405	A	347	0.231	A
4	405 NB off-ramp	at Howard Hughes Pkwy.	1500	197	0.131	A	156	0.104	A	235	0.157	A
5	405 NB on-ramp	at Howard Hughes Pkwy.	1500	559	0.373	A	557	0.371	A	466	0.311	A
6	405 SB off-ramp	at La Tijera Blvd.	1500	483	0.322	A	509	0.339	A	672	0.448	A
7	405 SB on-ramp	at La Tijera Blvd.	1500	544	0.363	A	516	0.344	A	150	0.100	A
8	405 NB off-ramp	at La Tijera Blvd.	1500	544	0.363	A	715	0.477	A	469	0.313	A
9	405 NB on-ramp	at La Tijera Blvd.	1500	645	0.430	A	548	0.365	A	426	0.284	A
10	405 NB on-ramp	at Manchester Blvd. East	1500	407	0.271	A	523	0.349	A	339	0.226	A
11	405 NB on-ramp	at Manchester Blvd. West	1500	480	0.320	A	481	0.321	A	553	0.369	A
12	405 NB off-ramp	at Manchester Blvd.	1500	1,391	0.927	E	949	0.633	B	1,141	0.761	C
13	405 SB on-ramp	at Manchester Blvd.	1500	1,003	0.669	B	1,383	0.922	E	948	0.632	B
14	405 SB off-ramp	at La Cienega Blvd. (n/o Century Blvd.)	1500	815	0.543	A	724	0.483	A	1,028	0.685	B
15	405 SB on-ramp	at La Cienega Blvd. (n/o Century Blvd.)	1500	240	0.160	A	455	0.303	A	382	0.255	A
16	405 SB off-ramp	at La Cienega Blvd. (s/o Century Blvd.)	1500	160	0.107	A	309	0.206	A	82	0.055	A
17	405 SB on-ramp	at La Cienega Blvd. (s/o Century Blvd.)	1500	547	0.365	A	815	0.543	A	496	0.331	A
18	405 NB off-ramp	at Century Blvd.	1500	1,276	0.851	D	790	0.527	A	719	0.479	A
19	405 NB on-ramp	at Century Blvd. EB	1500	333	0.222	A	693	0.462	A	101	0.067	A
20	405 NB on-ramp	at Century Blvd. WB	1500	480	0.320	A	370	0.247	A	413	0.275	A
21	405 SB off-ramp	at La Cienega Blvd. (n/o Imperial Hwy.)	1500	338	0.225	A	142	0.095	A	219	0.146	A
22	405 SB on-ramp	at La Cienega Blvd. (n/o Imperial Hwy.)	1500	120	0.080	A	182	0.121	A	329	0.219	A
23	405 SB off-ramp	at La Cienega Blvd. (n/o El Segundo Blvd.)	1500	153	0.102	A	229	0.153	A	346	0.231	A
24	405 SB on-ramp	at La Cienega Blvd. (n/o El Segundo Blvd.)	1500	80	0.053	A	299	0.199	A	8	0.005	A
25	405 SB off-ramp	El Segundo Blvd.	1500	494	0.329	A	244	0.163	A	174	0.116	A
26	405 SB on-ramp	El Segundo Blvd.	1500	296	0.197	A	1,488	0.992	E	409	0.273	A
27	405 NB off-ramp	El Segundo Blvd.	1500	896	0.597	A	532	0.355	A	496	0.331	A
28	405 NB on-ramp	El Segundo Blvd. EB	1500	197	0.131	A	616	0.411	A	306	0.204	A
29	405 NB on-ramp	El Segundo Blvd. WB	1500	347	0.231	A	308	0.205	A	377	0.251	A
30	105 EB on-ramp	Sepulveda Blvd. SB	1500	639	0.426	A	1,328	0.885	D	957	0.638	B
31	105 EB on ramp	Imperial Highway (w/o Sepulveda Blvd.)	1500	1,075	0.717	C	1,437	0.958	E	1,254	0.836	D
32	105 WB off-ramp	Sepulveda Blvd. NB	1500	2,015	1.343	F	1,556	1.037	F	1,454	0.969	E
33	105 WB off-ramp	Sepulveda Blvd. SB	1500	732	0.488	A	460	0.307	A	719	0.479	A
34	105 EB on-ramp	Imperial Highway (e/o Sepulveda Blvd.)	1500	900	0.600	A	910	0.607	A	849	0.566	A
35	105 WB off-ramp	Nash St.	1500	1,647	1.098	F	303	0.202	A	844	0.563	A
36	105 EB on-ramp	Imperial Highway (e/o Hawthorne Blvd.)	1500	841	0.561	A	959	0.639	B	837	0.558	A
37	105 EB on-ramp	Hawthorne Blvd. SB	1500	310	0.207	A	340	0.227	A	285	0.190	A
38	105 WB off-ramp	Hawthorne Blvd.	1500	984	0.656	B	1,186	0.791	C	626	0.417	A

Table II - 7.6 (Continued)
Los Angeles International Airport Master Plan
1996 WEEKDAY PEAK HOUR LEVELS OF SERVICE FOR FREEWAY MAINLINE SEGMENTS

AM Peak Hour

	Link Location	Cap	Vol	NB/EB V/C	LoS	Vol	SB/WB V/C	LoS
Interstate 405	n/o Venice Blvd.	8000	9512	1.189	F(0)	8361	1.045	F(0)
Interstate 405	n/o La Tijera Blvd.	8000	8281	1.035	F(0)	8496	1.062	F(0)
Interstate 405	s/o Rosecrans Ave.	8000	9641	1.205	F(0)	7347	0.918	D
Interstate 105	e/o Crenshaw Blvd.	10000	7004	0.700	C	8768	0.877	D

PM Peak Hour

	Link Location	Cap	Vol	NB/EB V/C	LoS	Vol	SB/WB V/C	LoS
Interstate 405	n/o Venice Blvd.	8000	9321	1.165	F(0)	8253	1.032	F(0)
Interstate 405	n/o La Tijera Blvd.	8000	9239	1.155	F(0)	8586	1.073	F(0)
Interstate 405	s/o Rosecrans Ave.	8000	8435	1.054	F(0)	9713	1.214	F(0)
Interstate 105	e/o Crenshaw Blvd.	10000	8375	0.838	D	8333	0.833	D

Airport Peak Hour

	Link Location	Cap	Vol	NB/EB V/C	LoS	Vol	SB/WB V/C	LoS
Interstate 405	n/o Venice Blvd.	8000	9576	1.197	F(0)	10112	1.264	F(1)
Interstate 405	n/o La Tijera Blvd.	8000	9100	1.138	F(0)	8549	1.069	F(0)
Interstate 405	s/o Rosecrans Ave.	8000	8510	1.064	F(0)	8398	1.050	F(0)
Interstate 105	e/o Crenshaw Blvd.	10000	6043	0.604	C	6228	0.623	C

7.1.2.4 CENTRAL TERMINAL AREA (CTA) RAMPS

Access to the airport is achieved via 11 CTA ramps. These ramps were analyzed to determine existing conditions in 1996. **Table II-7.7** summarizes the results of the level of service analysis and V/C ratios for the CTA ramps. All the CTA ramps operate at LOS A except for the lower level Sepulveda Boulevard on-ramps (northbound and southbound) which operate at LOS D or LOS F.

7.2 PUBLIC TRANSIT

Public transit services providing access to and from the LAX study area include Los Angeles County Metropolitan Transportation Authority (LACMTA), Torrance Transit, Santa Monica Municipal Bus Lines (SMMBL), Culver City Municipal Bus Lines (CCMBL), and a variety of privately contracted and entrepreneurial shuttle transit services.

Figure II-7.4 shows bus routes and shuttles providing service to and from the LAX area and surrounding communities.

Four agencies currently provide public transit service to the LAX Transit Center located on 96th Street, between Sepulveda Boulevard and Airport Boulevard. These agencies include:

- LACMTA
- SMMBL
- CCMBL
- Torrance Transit

7.2.1 BUS TRANSIT SERVICES

Table II-7.8 provides a listing of bus routes serving the LAX Transit Center and total daily boarding for each bus route. LACMTA currently operates seven regular transit routes and two express routes (express route is identified by LACMTA as a bus route that has limited stops). LACMTA, in cooperation with the Los Angeles Department of Airports, oversees the operation of two shuttle services that connect stations, near the western terminus of the Metro Green Line, with the LAX Transit Center. CCMBL, SMMBL, and Torrance Transit each have one route serving the LAX Transit Center. Typical weekday demand at the LAX Transit Center totals 4,663 boardings and 4,228 alightings. Many of these riders transfer to shuttles to reach the Central Terminal Area or other airport locations. A few riders transfer at this location to other public transit buses destined for non-terminal locations in the study area. **Table II-7.9** provides a

Table 7.7
Los Angeles International Airport Master Plan
1996 WEEKDAY PEAK HOUR LEVELS OF SERVICE FOR CTA RAMPS

Ramp No.	Link Location	Lane Cap	No. of Lanes	Total Cap	AM Peak Hour			PM Peak Hour			Airport Peak Hour		
					Vol	V/C	LoS	Vol	V/C	LoS	Vol	V/C	LoS
1	Century Blvd. to Lower Level - Inbound	1500	3	4500	599	0.133	A	868	0.193	A	1629	0.362	A
2	Century Blvd. from Lower Level - Outbound	1500	3	4500	1251	0.278	A	2111	0.469	A	2410	0.536	A
3	Century Blvd. to Upper Level - Inbound	1500	2	3000	674	0.225	A	365	0.122	A	1184	0.395	A
4	Century Blvd. from Upper Level - Outbound	1500	2	3000	601	0.200	A	401	0.134	A	750	0.250	A
5	Northbound Sepulveda off-ramp to LAX or eastbound Century Blvd.	1500	2	3000	1797	0.599	A	1247	0.416	A	1764	0.588	A
6	Northbound Sepulveda on-ramp from LAX Lower Level	1500	1	1500	836	0.557	A	1319	0.879	D	1699	1.133	F
7	Sepulveda entrance to Lower Level (south of Park One)	700	1	700	64	0.091	A	117	0.167	A	26	0.037	A
8	Southbound Sepulveda off-ramp to eastbound Century Blvd.	1500	1	1500	0	0.000	A	0	0.000	A	0	0.000	A
9	Southbound Sepulveda on-ramp from Lower Level	1500	1	1500	578	0.385	A	1288	0.859	D	1350	0.900	D
10	SouthboundSepulveda on-ramp from Upper Level	1500	1	1500	540	0.360	A	300	0.200	A	491	0.327	A
11	Northbound Sepulveda to LAX Lower and Upper Levels	1500	2	3000	1221	0.407	A	840	0.280	A	1520	0.507	A

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Table II 7.8

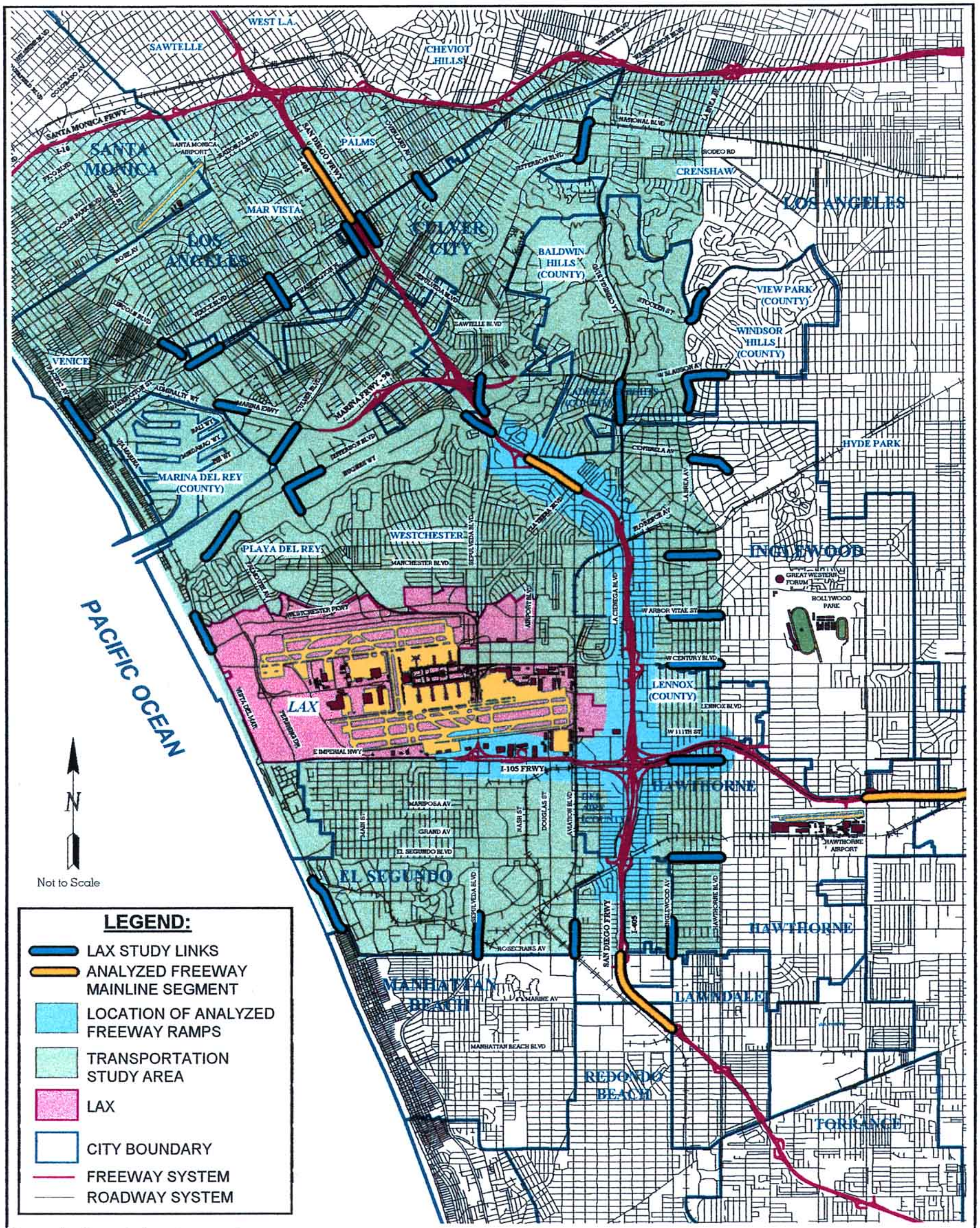
EXISTING TRANSIT ROUTES SERVING THE LAX STUDY AREA

RTE	Street	Daily Boarding*	Dir.	Agency/Route Type
111	Arbor Vitae St.-Hawthorne Blvd.. to Sepulveda Blvd.	18,400	E/W	LACMTA
117	Century Blvd.-Hawthorne Blvd. to Sepulveda Blvd.	10,429	E/W	LACMTA
120	Imperial Hwy.-Hawthorne Blvd. to Sepulveda Blvd.	4,741	E/W	LACMTA
220	Robertson Blvd./Douglas St./Sepulveda Blvd. to LAX	1,030	N/S	LACMTA
225	Aviation Blvd./Douglas St./Sepulveda Blvd. to LAX	1,909	N/S	LACMTA
232	Sepulveda Blvd.-Artesia Blvd. to LAX	5,933	N/S	LACMTA
42	Los Angeles-Westchester-LAX Bus Center (Part of Route 40 & 440)	26,643**	N/S	LACMTA
439	Santa Monica Fwy.-Olympic Blvd. to LAX	2,110	N/S	LACMTA Express CBD
625	LAX Transit Center - METRO GREEN LINE (Aviation Station)	375	N/S	LACMTA Shuttle
803	METRO GREEN LINE (Glen Anderson (105) Fwy.)	19,184	E/W	LACMTA Light Rail
561	Sepulveda - LAX	13,784	N/S	LACMTA Express CBD
CC6	Sepulveda Blvd.-Olympic Blvd. to LAX	5,100	N/S	Culver City
SM3	Lincoln Blvd.-Olympic Blvd. to LAX	4,318	N/S	Santa Monica
T8	Artesia Blvd./Aviation Blvd./Douglas St./Sepulveda Blvd. to LAX (Data for within study area only)	456	N/S	Torrance
	Airport Shuttle - METRO GREEN LINE/Aviation Blvd. to LAX w/ stops at terminals.	3000	N/S	Los Angeles Department of Airports

* All boarding values are for the entire line except Torrance Transit 8 (Study area only)

** Includes total daily ridership for entire extent of all three routes

Source: Local Transit Operators, LACMTA



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Los Angeles International Airport Master Plan	LAX Study Links & Freeway Segments	FIGURE II - 7.3

Table II 7.9

1996 WEEKDAY BOARDINGS AND ALIGHTINGS AT THE LAX TRANSIT CENTER

Line No.	Agency/Service Type		Boardings	Alightings
111	LACMTA E/W		196	223
117	LACMTA E/W		563	632
120	LACMTA E/W		259	233
220	LACMTA N/S		51	40
225/226	LACMTA N/S		86	61
232	LACMTA/N/S		414	10
42	LACMTA N/S		236	330
439 N/B	LACMTA Express Serving CBD***		144	53
439 S/B	LACMTA Express Serving CBD		129	85
625	LACMTA Shuttle N/S		188	186
561	LACMTA Express Serving CBD		69	71
CC6	Culver City		1,148*	1,148**
SM3	Santa Monica		638	576
T8	Torrance		190	228
Airport Shuttle	Los Angeles Deparment of Airports		1500	1500
		Total:	4,663	4228

Note:

* Number of boardings at LAX Transit Center is estimated by Culver City Transit to be 22.5 percent of total daily boardings.

** Number of alightings at LAX Transit Center is estimated by Culver City Transit to be 22.5 percent of total daily boardings.

*** CBD - Central Business District

Source: Local Transit Operators, LACMTA

summary of boarding and alighting occurring on each bus route at the LAX Transit Center.

Table II-7.10 summarizes data pertaining to daily maximum load-point within the study area for all transit bus routes serving the LAX Transit Center. The LAX Transit Center is not the location with highest transit loading for any of the 12 bus routes (Excluding the two shuttle routes).

7.2.2 RAIL TRANSIT SERVICES

Direct shuttle service to all terminals within the LAX Central Terminal Area is provided to air passengers and employees from the LAX Transit Center. Shuttle service between the LAX Transit Center and the Metro Green Line Station at Aviation Boulevard/I-105 commenced in August, 1995. This service is operated by the Los Angeles Department of Airports. The line stops at the LAX Transit Center and then proceeds through the airport terminal area, making various stops.

Recent statistics from the Los Angeles County Metropolitan Transportation Authority indicate that ridership on the LAX/Metro Green Line Shuttle is about 3,000 boardings per day. As **Table II - 7.11** shows, 60 percent of the Shuttle riders transferred to/from the Metro Green Line, and 40 percent used the park-and-ride lot as "airport parking."

While the total number of Shuttle riders is 3,000 boardings per day, the number of Metro Green Line trips to and from LAX is only about 60 percent of that amount, or 1,800 (900 arriving at LAX, and 900 leaving LAX).

Finally, the data was used to analyze mode of access to the Metro Green Line. Nearly 1,650 persons were observed boarding and alighting the Metro Green Line. Of those who board/alight the Metro Green Line at this station, half used the park-and-ride lot, and half transferred to/from the Shuttle.

A second shuttle, connecting the Metro Green Line with the Airport, is also operated by the LACMTA, in cooperation with the Los Angeles Department of Airports (Route 625). This shuttle provides access to the LAX Transit Center after looping out to Pershing Drive/ Westchester Parkway.

Table II 7.10
MAXIMUM LOAD POINT FOR BUSES AT THE LAX TRANSIT CENTER

	Maximum Load Point - NB/EB		Maximum Load Point - SB/WB	
Route	Location	On Board	Location	On Board
111	Florence & Western	1,474	Florence & Western	1450
117	Century & Grammercy	1,391	Century & Grammercy	1,360
120		951	Imperial & Wilton	882
220	Culver & Main	232	Worldway & Continental	243
225	Aviation & Bataan	131	Aviation & Ford	167
232	Sepulveda & 8th St.	717	Sepulveda & Rosecrans	630
42	Martin Luther King & 9th St.	673	Martin Luther King & Westside	807
439	La Cienega & Jefferson	511	La Cienega & Jefferson	470
625	LAX Transit Center	188	METRO GREEN LINE (Aviation Station)	186
803	METRO GREEN LINE (Harbor Fwy. Station)	5267	METRO GREEN LINE (Harbor Fwy. Station)	5979
561	Slauson & Sepulveda	162	80th St. & Sepulveda	108
CC6	Culver & Sepulveda	1,442	Pico & Sepulveda	1,408
SM3	Lincoln & Marine	1,622	Lincoln & Ocean Park	1,607
T8	Aviation & Manhattan Beach	456	Aviation & Manhattan Beach	456
Airport Shuttle	LAX	1500	METRO GREEN LINE & Aviation	1500

Route Study Limits (Except METRO GREEN LINE):

Eastern Boundary: Western Blvd.
Western Boundary: Pacific Ocean
Southern Boundary: Manhattan Beach Blvd.
Northern Boundary: Martin Luther King Blvd.

Source: Local Transit Operators, LACMTA

Table II - 7.11
Los Angeles International Airport Master Plan
1996 WEEKDAY GREEN LINE SHUTTLE VOLUMES

	SHUTTLE TRANSFERS				
TRANSFER	7-9 AM	11-1 PM	4-6 PM	TOTAL	PERCENTAGE
To Bus					
Rail to Bus	325	109	87	521	62%
Park to Bus	204	44	71	319	38%
Total to Bus	529	153	158	840	100%
From Bus					
Bus to Rail	66	62	315	443	61%
Bus to Park	65	75	138	278	39%
Bus to Total	131	137	453	721	100%
Total					
Bus/Rail	391	171	402	964	62%
Bus/Park	269	119	209	597	38%
Total Bus	660	290	611	1561	100%

	PARK-AND-RIDE LOT TRANSFERS				
TRANSFER	7-9 AM	11-1 PM	4-6 PM	TOTAL	PERCENTAGE
To Park					
Bus to Park	65	75	138	278	39%
Rail to Park	178	125	140	443	61%
Total to Park	243	200	278	721	100%
From Park					
Park to Bus	204	44	71	319	47%
Park to Rail	85	99	181	365	53%
Park to Total	289	143	252	684	100%
Total					
Park/Bus	269	119	209	597	42%
Park/Rail	263	224	321	808	58%
Total Park	532	343	530	1405	100%

	GREEN LINE TRANSFERS				
TRANSFER	7-9 AM	11-1 PM	4-6 PM	TOTAL	PERCENTAGE
To Rail					
Park to Rail	85	99	181	365	53%
Bus to Rail	204	44	71	319	47%
Park to Total	289	143	252	684	100%
From Rail					
Rail to Park	178	125	140	443	46%
Rail to Bus	325	109	87	521	54%
Rail to Total	503	234	227	964	100%
Total					
Rail/Park	263	224	321	808	49%
Rail/Bus	529	153	158	840	51%
Total Rail	792	377	479	1648	100%

7.3 TRAVEL PATTERNS & CHARACTERISTICS

Additional data collection efforts and analyses were performed as a part of this study to determine the characteristics of traffic growth on major highways and freeways, to identify peaking characteristics of traffic in the LAX area, and to quantify the amount of LAX-related traffic on roadways within the LAX study area.

7.3.1 DAILY PEAKING CHARACTERISTICS OF TRAFFIC IN THE LAX AREA

Extensive data efforts were undertaken for the LAX Master Plan Study, including the compilation and collection of 24-hour machine counts of freeway mainlines, freeway ramps, and arterial screenlines located throughout the LAX study area as well as LAX property driveways, visitor parking lots and employee parking lots.

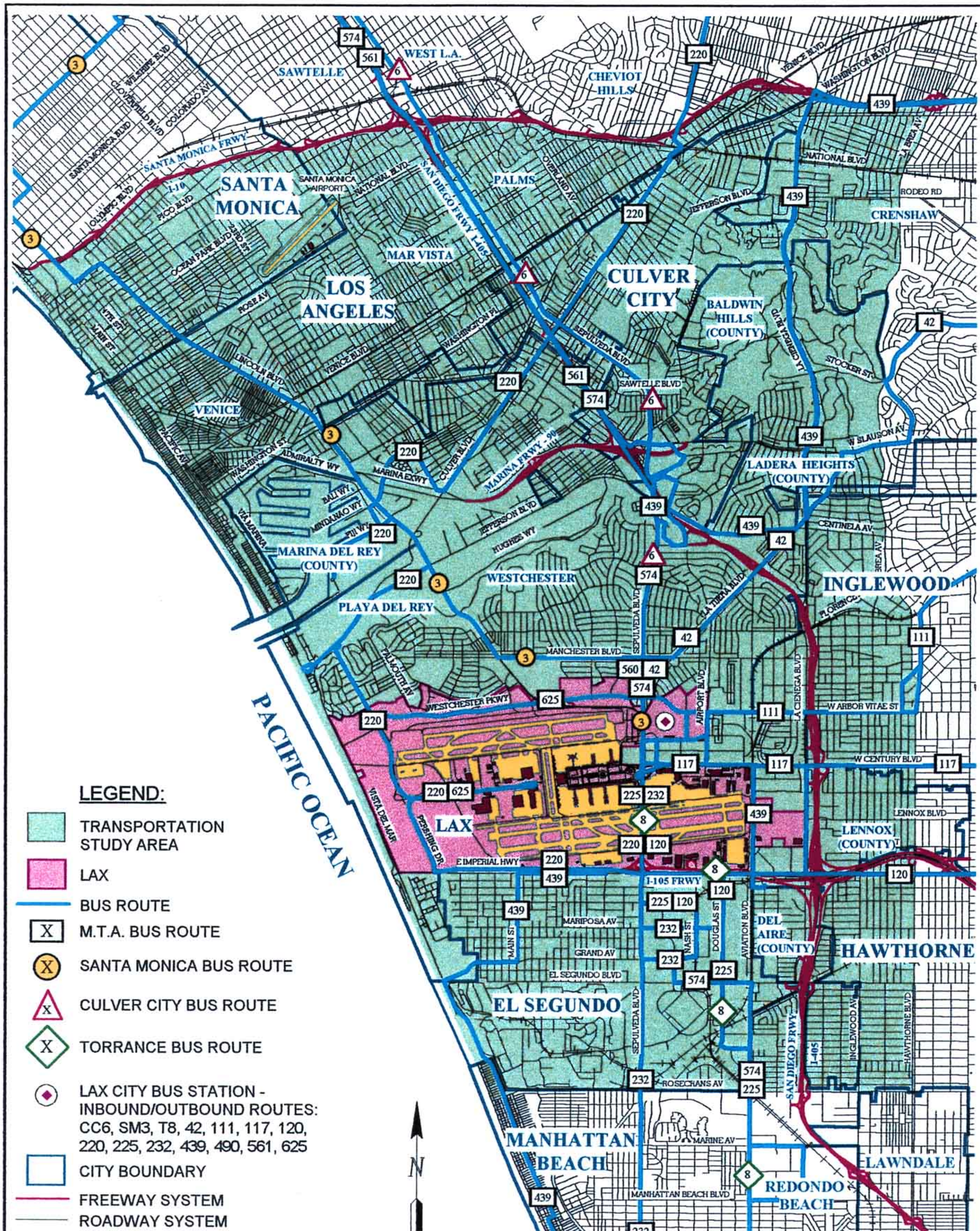
A daily profile of hourly traffic volumes showing peaking trends throughout the day were plotted for each of the above-mentioned facility groupings. The following is a summary of the trends revealed by a vast collection of data.

7.3.1.1 FREEWAYS

Mainline Freeway Volumes – A total of four freeway mainline locations on I-405 and I-105 were included in the analysis of daily peaking characteristics of traffic in the LAX area. A daily profile of hourly volumes compiled for all these freeway mainline locations is shown in **Figure II-7.5.** The morning peak occurs during a three-hour period, from 6:00 - 9:00 AM, with the highest hourly volume of the day occurring at about 7:00 AM. The afternoon peak occurs at about 5:00 PM, but spreads over a longer period of time, from about 2:00-7:00 PM. Traffic volumes stay relatively high throughout the midday, with hourly volumes remaining at or greater than 5 percent of daily volumes throughout the afternoon.

- **Freeway Ramps** – A total of 38 freeway on- and off-ramps were included in the analysis of daily trends in traffic volumes within the LAX study area.

Figure II-7.6 includes the daily profile of traffic for all on- and off-ramps. The morning peak occurs over a shorter period of time than that of the afternoon peak. Midday trips remain rather high from about 12:00 PM and steadily increase into the afternoon peak.



Prepared By: Barton-Aschman Associates, Inc.

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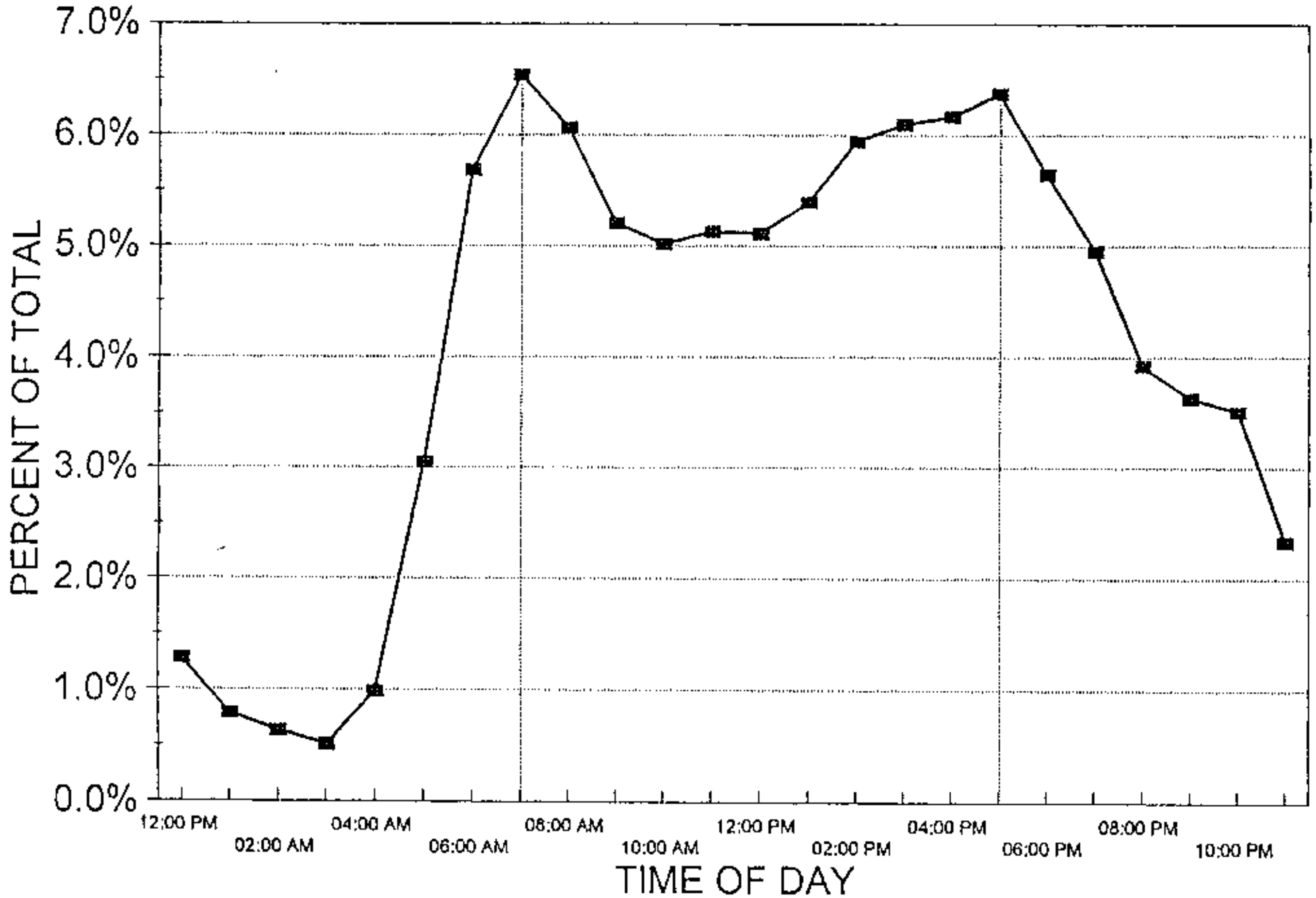
Los Angeles International Airport Master Plan	Bus Routes Serving the LAX Area	FIGURE II - 7.4



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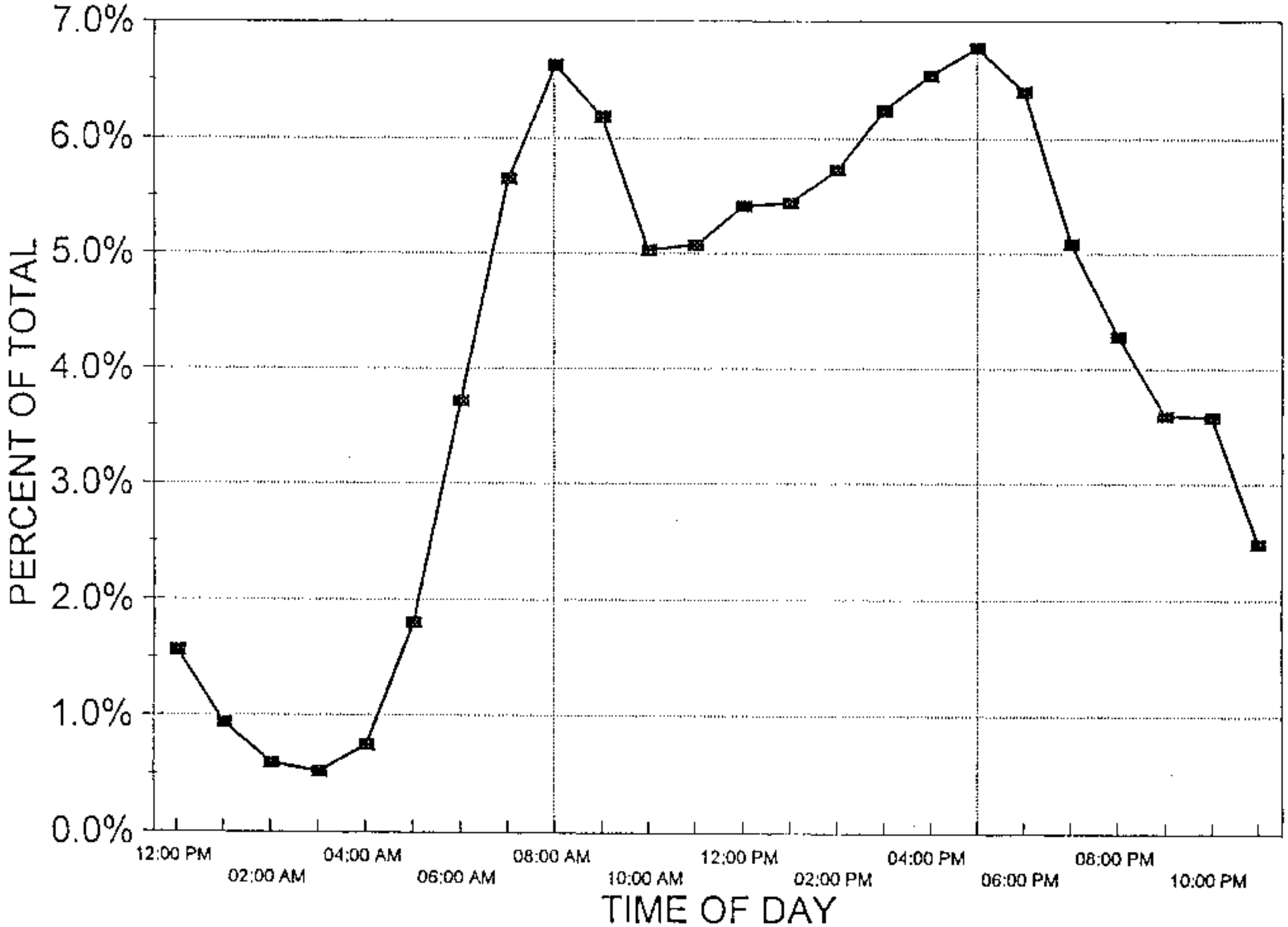
Los Angeles International Airport Master PLan	**Percent of Traffic Volumes on Mainline Freeways**	FIGURE II - 7.5



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Los Angeles International Airport Master PLan	Percent of Traffic Volumes on Freeway On and Off Ramps	FIGURE II - 7.6

Appendix II-N includes a complete listing of the mainline freeway and ramp locations included in these profiles.

7.3.1.2 ARTERIALS

Figure II-7.7 provides profile of total traffic on arterial roadways in the area. The morning peak occurs during a three-hour period, from 6:00 - 9:00 AM, with the highest hourly volume of the day occurring between 8:00 and 9:00 AM. The afternoon peak occurs over a longer period of time, from about 2:00 - 7:00 PM, with the highest hourly volume between 5:00 and 6:00 PM.

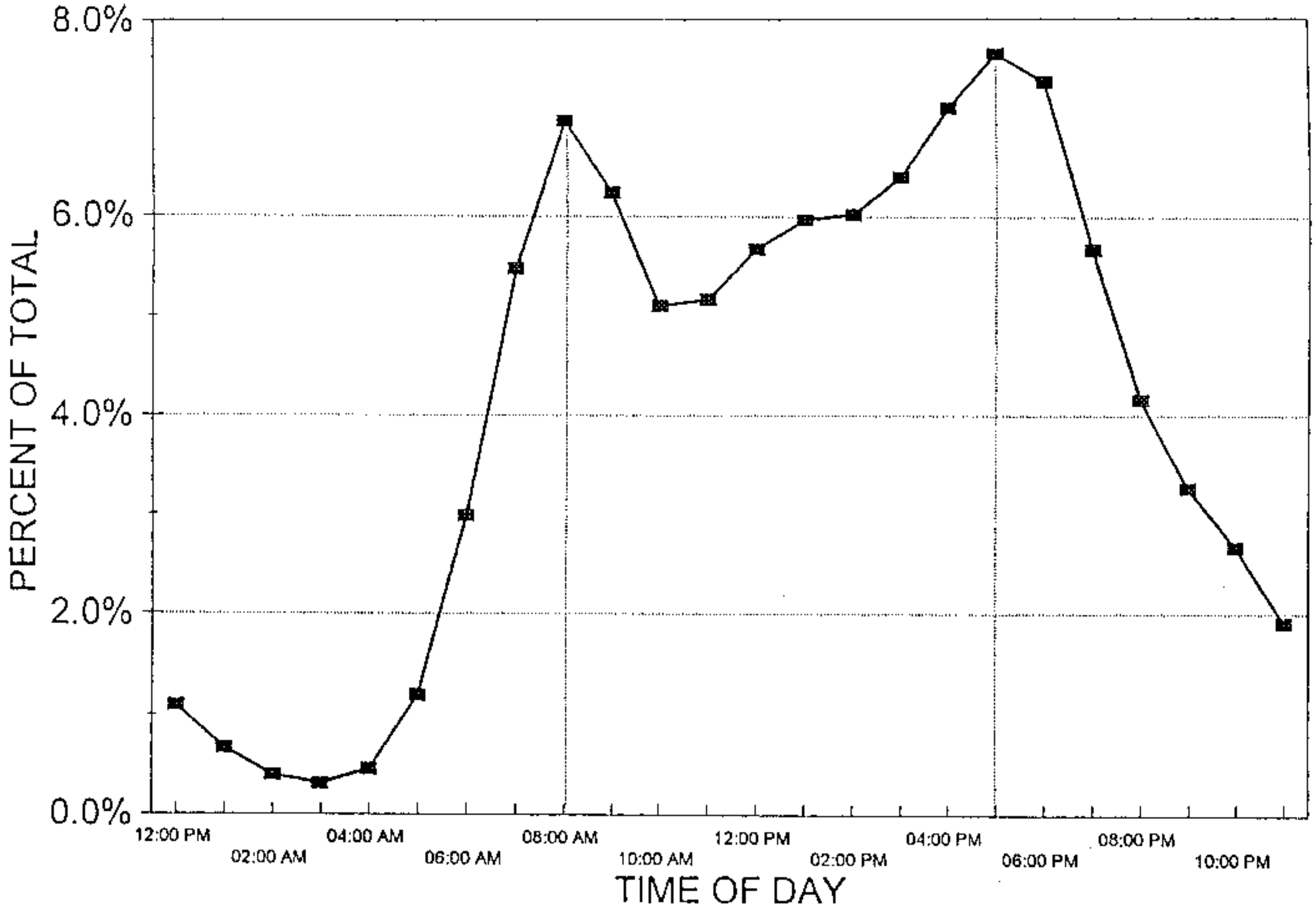
7.3.1.3 LAX CARGO AND ANCILLARY TRIPS

- **Figure II-7.8** provides a profile of all entering and exiting activity for cargo and ancillary trips. These trips enter and exit the airport at LAX property driveways, (except for the major entrances to the Central Terminal Area) along Sepulveda Boulevard, Century Boulevard and Imperial Highway. Activity in and out of the driveways remain high throughout the day, with only the highest peaks occurring during midday, from about 12:00 - 2:00 PM The driveways therefore do not exhibit the same peaking characteristics observed on arterial roadways and freeways. Activity at these driveways include air cargo, office and administration, employee parking, airline reservations, and other air freight services. Due to the unique nature of air transportation, business hours vary greatly throughout the day, as compared to other commercial and industrial uses which exhibit peaking characteristics associated with a typical 8:00 AM - 5:00 PM business day.

7.3.1.4 PASSENGER AND VISITOR PARKING FACILITIES

During March, 1995, one-day, 24-hour machine counts were conducted mid-week at several public parking facilities both on and off airport property. Although these facilities are available to the general public, they are mostly used by LAX passengers. Usage by employees may occur, but only at a minimal level. Two of the facilities included in this data are Lots B and C, which are operated by LADOA on airport property. The remaining two are within close proximity of the airport, but are privately-owned and operated.

Figure II-7.9 provides a daily profile of all traffic in and out of passenger and visitor parking facilities on a non-summer weekday. Hourly volumes fluctuate from 4.5 to 6.5 percent from 5:00 AM to 6:00 PM. The highest activity of the day occurs from 5:00 - 6:00 PM.



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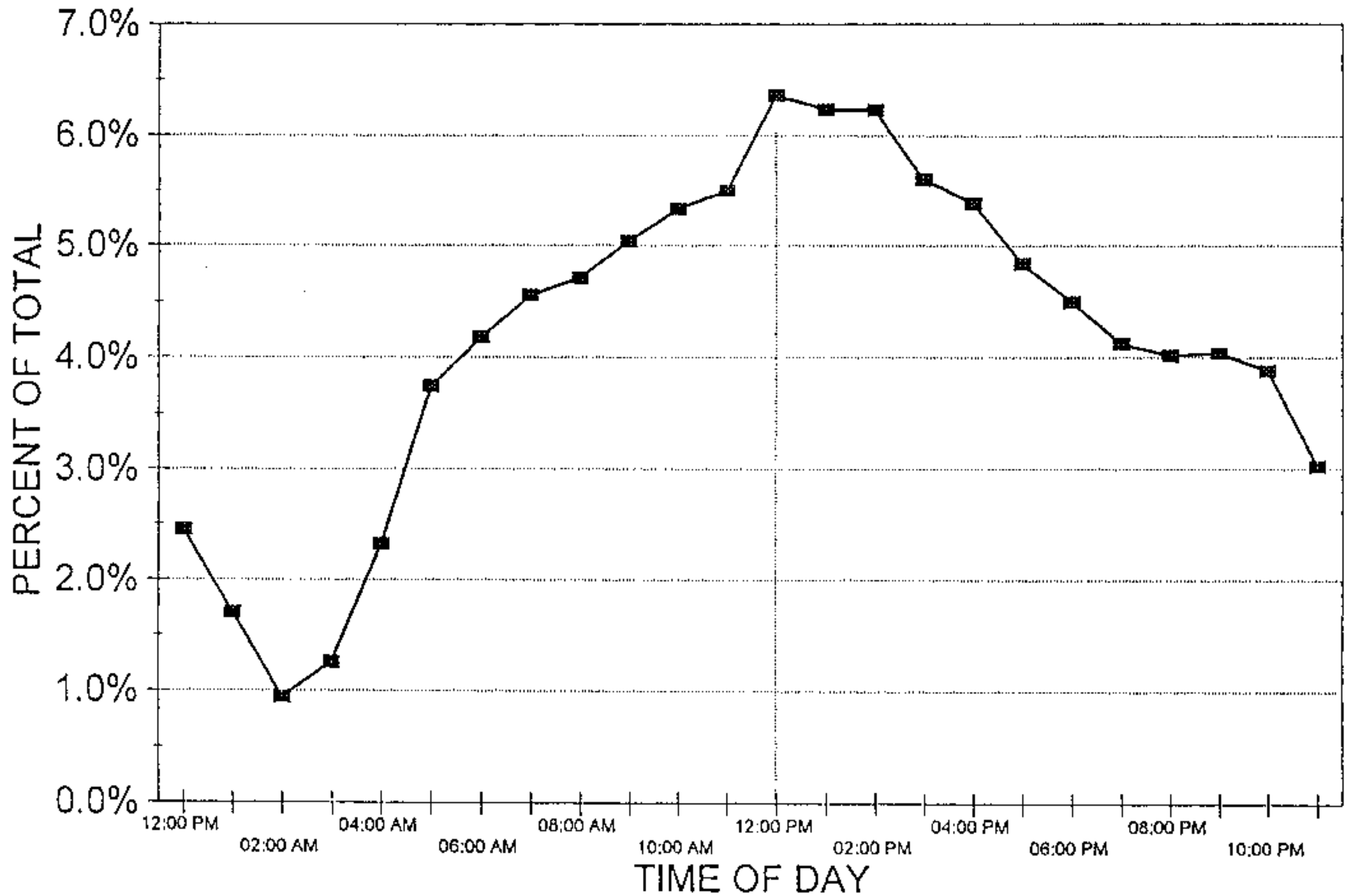
Los Angeles International Airport Master PLan

Percent of Traffic Volumes on Arterial Streets

FIGURE II - 7.7



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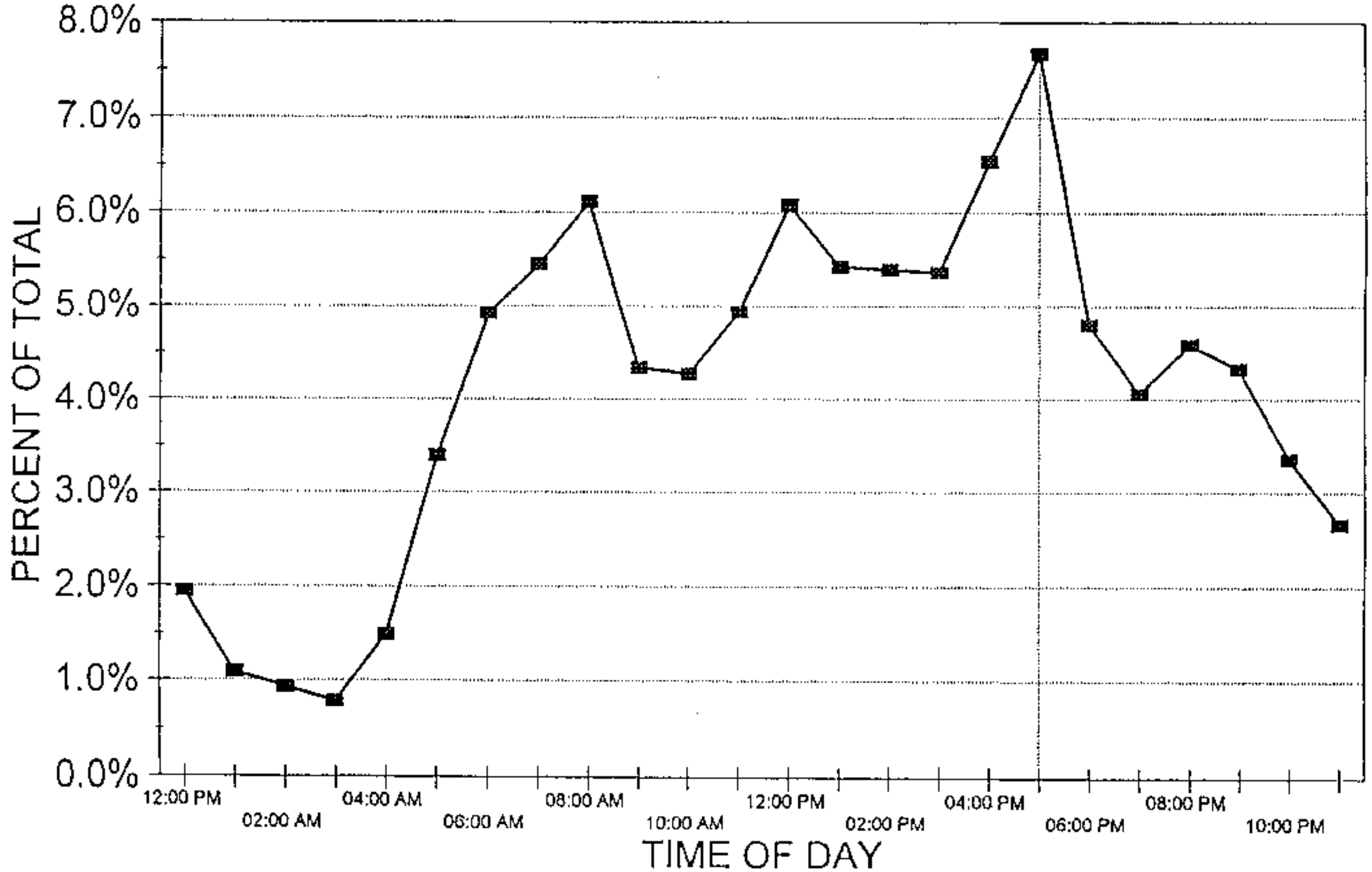
Los Angeles International Airport
Master PLan

Percent of Traffic Volumes on LAX Property Driveways

FIGURE II - 7.8



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Los Angeles International Airport Master PLan

Percent of Traffic Volumes on Passenger and Visitor Driveways

FIGURE II - 7.9

7.3.1.5 EMPLOYEE PARKING FACILITIES

A total of four employee-designated parking facilities are included in this analysis – all four are on airport property, with two operated by LADOA and two operated by airport-related employers at LAX.

Figure II-7.10 provides a daily profile of all vehicles in and out of employee lots. The three employee shifts -- day, evening, and midnight -- are clearly shown during the three peak periods of the day.

7.3.2 LAX AIRPORT TRAFFIC ON ROADWAYS WITHIN THE LAX STUDY AREA

As a part of the LAX Master Plan Study, an extensive data collection survey was undertaken to identify the percentage of trips on LAX area roadways originating from and destined to LAX airport property.

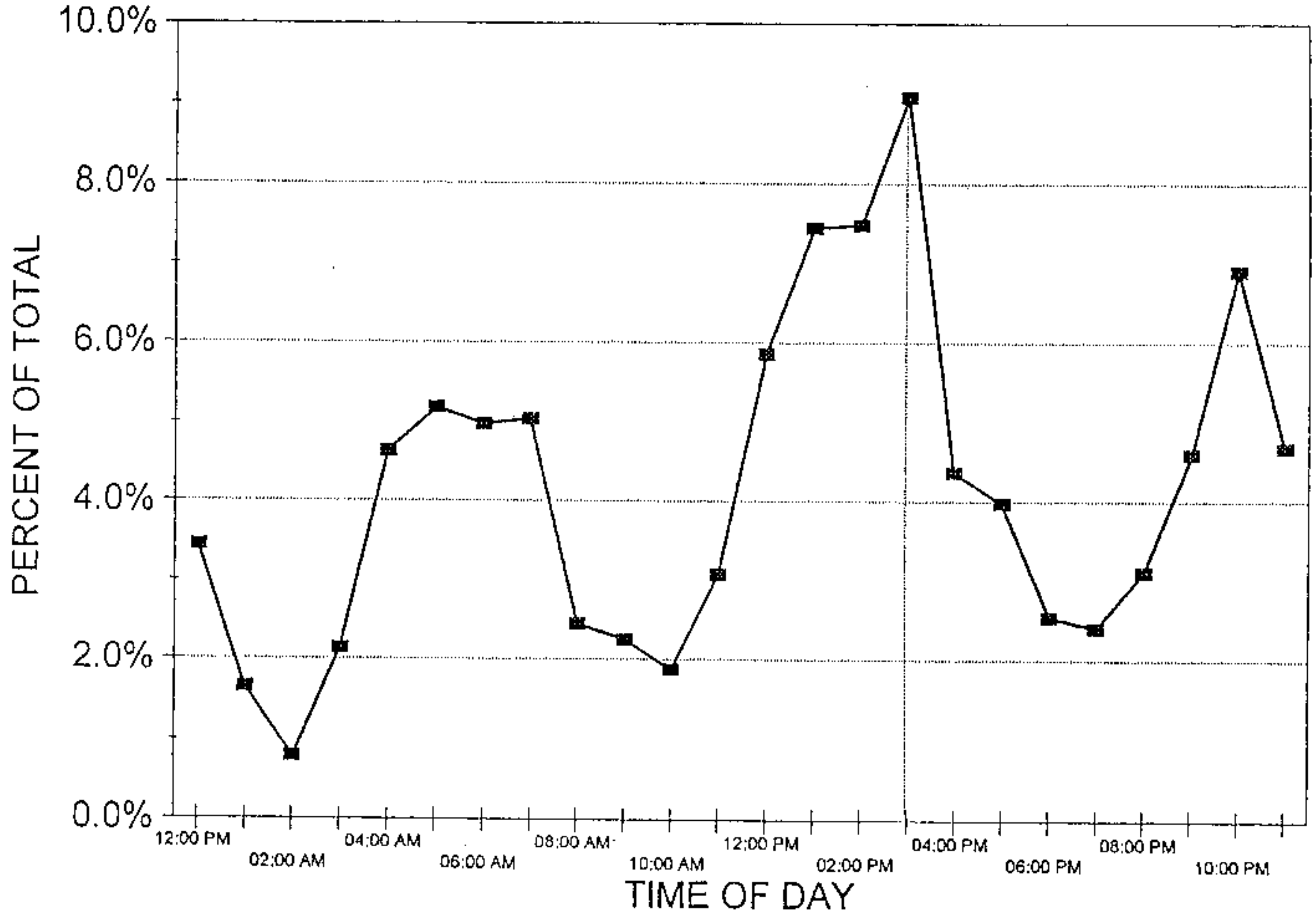
The purpose of this survey was to help identify the direction of approach (route choice) of LAX airport-related trips to/from surrounding areas and to aid in the calibration and validation of the LAX Master Plan travel model of existing conditions.

7.3.2.1 LOCATIONS OF SURVEY

A total of 18 intersections were included in the survey, shown in **Figure II-7.11**. Thirteen of the survey locations were chosen at intersections of freeway ramps with roadways which provide key access to the airport. This would not only identify the quantity of trips on key arterials in the LAX area, but help to trace the direction of approach from the region. The remaining five survey locations were chosen at intersections of major arterials which provide primary access to airport facilities. The surveys were conducted during March, 1995.

7.3.2.2 METHODOLOGY

Each intersection was surveyed for two hours during the morning peak period of traffic (7:00 - 9:00 AM) and two hours during the afternoon peak period (4:00 - 6:00 PM). Each approach of the intersection was surveyed for 30 minutes, or for approximately 20 signal cycles. A field crew of about six to seven people conducted the survey during the red signal indication shown for the approach. The crew queried the drivers in each lane of traffic, utilizing a large message sign in the crosswalk which displayed, "Are you going to or coming from LAX property?" The crew recorded drivers' response to the question through a "thumbs up" for "yes", "thumbs down" for "no", and no response received.



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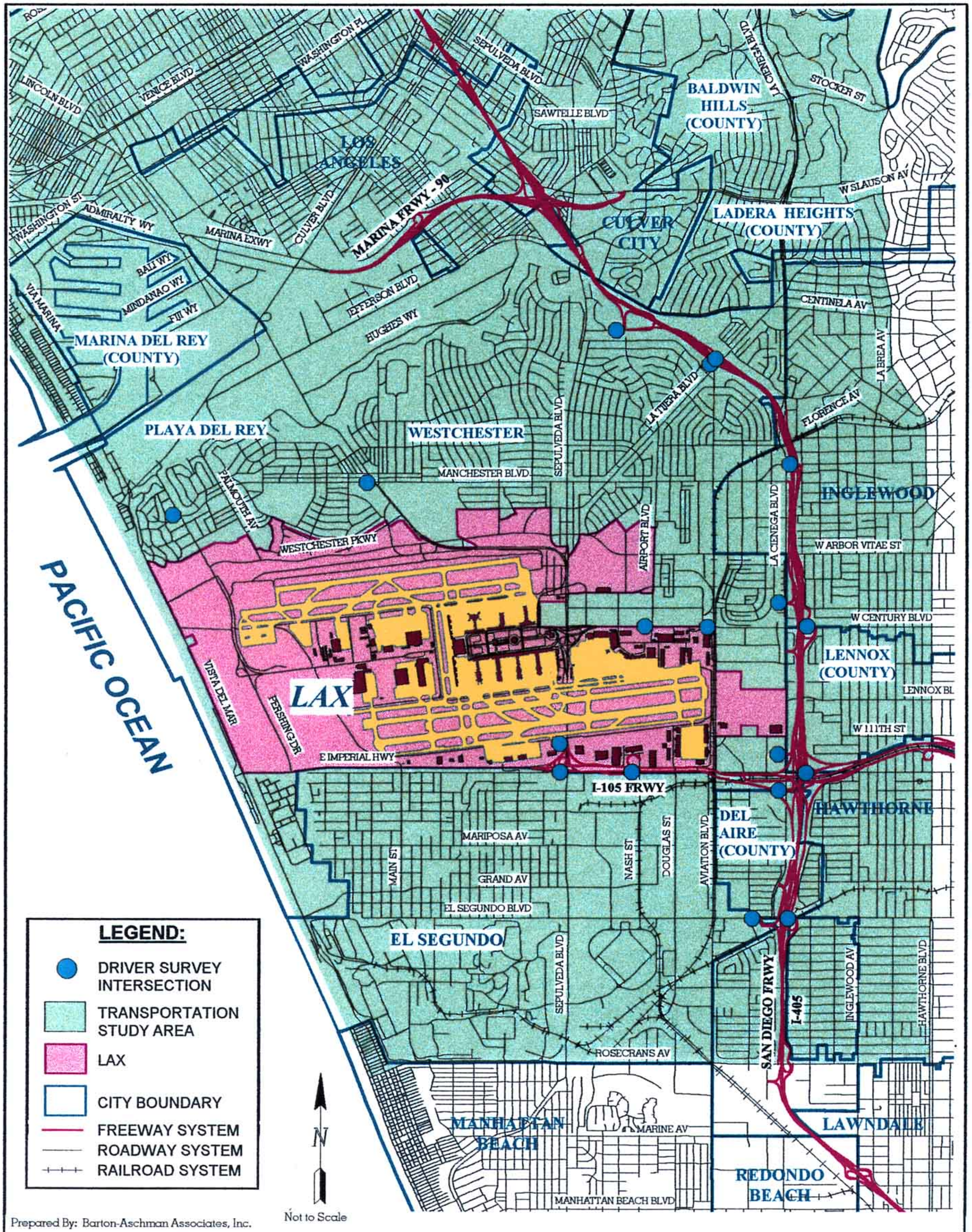
Los Angeles International Airport Master PLan	Percent of Traffic Volumes on Employee Parking Driveways	FIGURE II - 7.10



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Los Angeles International Airport Master Plan	Location of Driver Survey Intersections	FIGURE II - 7.11

From data tabulated for the percentage of LAX-related trips, the number of LAX-related trips on each approach was then calculated. Traffic volumes were compiled for all approaches at the survey intersections. For locations without available traffic volume data, one-day, 24-hour machine counts were conducted on all approaches to intersections on the day of the survey.

7.3.2.3 RESULTS OF SURVEY

Table II-7.12 provides a summary of responses for the surveyed intersections during the morning and afternoon peak periods. A calculation of the percent of LAX-related trips ("yes" responses) to total trips (total of "yes" and "no" responses) was performed for traffic entering and exiting each intersection approach during the survey period.

The survey revealed that Century Boulevard reflected the highest percentage of LAX-related trip responses, ranging from 40 to 75 percent at it's intersections with Airport and Aviation Boulevards, respectively.

Freeway ramps which had responses of 30 percent or more LAX-related trip responses during either peak periods included:

- La Cienega Boulevard north of Century Boulevard at the southbound I-405 ramps.
- La Cienega Boulevard north of Imperial Highway at the southbound I-405 ramps.
- Century Boulevard at the northbound I-405 ramps.
- Imperial Highway at the northbound I-405 ramps.
- El Segundo Boulevard at the northbound I-405 ramps.
- Nash Street at the westbound I-105 off-ramp.

A summary of the survey data collected for each intersection by lane and by approach is provided in **Appendix II-O.**

7.3.2.4 LAX PERCENTAGE AT ALL ROADWAY SEGMENTS

Using the data described above, the LAX Ground Access model was calibrated to closely match the survey data at the individual survey locations. Then, the model was used to calculate the percentage of trips on every link in the network that are LAX-related. **Table II-7.13** shows the resulting LAX percentages for 30 key roadway segments.

Table II-7.12
Results of LAX Driver Survey

Intersection	North Approach Enter %	North Approach Exit %	East Approach Enter %	East Approach Exit %	South Approach Enter %	South Approach Exit %	West Approach Enter %	West Approach Exit %
Percent of LAX-related Trips - AM PEAK HOUR								
Airport Boulevard/Century Boulevard	49	61	42	51	30	24	64	53
Imperial Hwy / Nash St / I-105 WB Off-Ramp	24	0	33	23	53	10	16	44
Howard Hughes Parkway / I-405 Ramps	17	25	5	20			25.	13
La Tijera Blvd. / I-405 SB Ramps	47		7	4		4	3	44
La Tijera Blvd. / I-405 NB Ramps		421	22	14	10		19	24
Pershing Dr. / Manchester Av.	32	6	5	28	10	24	3	5
Lincoln Blvd. / Manchester Av.	33				15	40		
Manchester Av. / NB I-405 Ramps			4	6	5	19	15	5
La Cienega/ I-405 SB Ramps	9	33	50	12	31	34		
Century Blvd./ I-405 SB Ramps			25	8	30	4	17	28
Aviation Blvd./ Century Blvd.	20	60	60	47	61	59	73	62
Sepulveda Blvd. / I-105 WB Ramps					24			
Sepulveda Blvd. / Imperial Hwy	20	23	28	14	15	18	23	35
La Cienega Blvd. / I-405 SB n/o Imperial	53	22	33	55	17	18		
La Cienega Blvd./ I-405 SB Ramps s/o I-105	15	12	5	17	18	3		
Imperial Hwy at I-405 NB Ramp			43	7	25	40	10	35
El Segundo Blvd. at I-405 SB Ramps			4	1	3	5	3	5
El Segundo Blvd. at I-405 NB Ramps			22	3	30	22	5	27

Intersection	North Approach Enter %	North Approach Exit %	East Approach Enter %	East Approach Exit %	South Approach Enter %	South Approach Exit %	West Approach Enter %	West Approach Exit %
Percent of LAX-related Trips - PM PEAK HOUR								
Airport Boulevard/Century Boulevard	40	50	43	42	33	19	63	53
Imperial Hwy / Nash St / I-105 WB Off Ramp	32	0	46	21	22	17	18	40
Howard Hughes Parkway / I-405 Ramps	20	6	7	19			10.	17
La Tijera Blvd. / I-405 SB Ramps	24		12	12		6	14	32
La Tijera Blvd. / I-405 NB Ramps		44	17	7	1		23	13
Pershing Dr. / Manchester Av.	3	7	5	6	8	3	4	0
Lincoln Blvd. / Manchester Av.	33				15	40		
Manchester Av./ NB I-405 Ramps			9	6	11	20	11	13
La Cienega/I-405 SB Ramps	12	36	14	10	16	22		
Century Blvd./ I-405 SB Ramps			25	10	37	13	12	38
Aviation Blvd./ Century Blvd.	53	60	68	55	59	52	59	64
Sepulveda Blvd. / I-105 WB Ramps					29			
Sepulveda Blvd. / Imperial Hwy	19	25	19	14	9	21	31	10
La Cienega Blvd. / I-405 SB n/o Imperial	26	35	19	50	36	11		
La Cienega Blvd./I-405 SB Ramps s/o I-105	2	4	0	5	8	0		
Imperial Hwy at I-405 NB Ramp			17	28	42	21	19	26
El Segundo Blvd. at I-405 SB Ramps			4	11	10	7	8	3
El Segundo Blvd. at I-405 NB Ramps			27	14	25	13	15	26

Table II-7.13
Percentage of LAX Trips at Key Roadway Segments

			AM PEAK HOUR						PM PEAK HOUR					
			NB/EB			SB/WB			NB/EB			SB/WB		
No	Arterial		LAX	Ground Count	LAX %	LAX	Ground Count	LAX %	LAX	Ground Count	LAX %	LAX	Ground Count	LAX %
1	Lincoln Boulevard	s/o Venice Boulevard	229	1,615	14%	173	1,652	10%	168	1,732	10%	163	1,821	9%
2	Centinela Boulevard	s/o Venice Boulevard	20	1,648	1%	20	1,041	2%	23	1,313	2%	26	1,578	2%
3	Sawtelle Boulevard	s/o Venice Boulevard	3	920	0%	38	910	4%	25	679	4%	10	1,296	1%
4	Sepulveda Bouelvard	s/o Venice Boulevard	66	1,601	4%	50	1,054	5%	63	1,538	4%	74	1,578	5%
5	Overland Avenue	s/o Venice Boulevard	16	876	2%	40	810	5%	17	800	2%	32	1,054	3%
6	Stocker Street	e/o La Brea Avenue	59	779	8%	54	622	9%	132	840	16%	29	686	4%
7	Slauson Avenue	e/o La Brea Avenue	10	948	1%	7	1,657	0%	19	1,529	1%	10	1,203	1%
8	Centinela Avenue	e/o La Brea Avenue	2	572	0%	2	1,503	0%	2	1,160	0%	1	1,969	0%
9	La Cienega Boulevard	s/o Slauson Avenue	400	3,176	13%	503	2,782	18%	625	3,287	19%	392	3,206	12%
10	Manchester Bouelvard	w/o La Brea Avenue	8	1,110	1%	19	737	3%	17	943	2%	4	1,217	0%
11	Arbor Vitae Street	w/o La Brea Avenue	29	423	7%	129	391	33%	30	493	6%	28	609	5%
12	Century Boulevard	w/o La Brea Avenue	40	1,038	4%	228	1,226	19%	212	1,639	13%	251	1,163	22%
13	Imperial Highway	w/o La Brea Avenue	22	518	4%	47	721	7%	58	1,235	5%	29	708	4%
14	Aviation Boulevard	n/o Rosecrans Avenue	164	1,656	10%	35	624	6%	121	973	12%	143	1,962	7%
15	Sepulveda Boulevard	n/o Rosecrans Avenue	316	3,449	9%	142	1,293	11%	155	1,944	8%	303	3,643	8%
16	Pacific Avenue	s/o Venice Boulevard	4	751	1%	55	520	11%	21	456	5%	16	843	2%
17	Washington Boulevard	e/o Lincoln Boulevard	49	1,289	4%	38	775	5%	40	1,046	4%	29	984	3%
18	Marina Freeway	e/o Lincoln Boulevard	7	798	1%	0	924	0%	1	773	0%	1	848	0%
19	Culver Boulevard	e/o Lincoln Boulevard	55	1,301	4%	53	299	18%	62	501	12%	27	1,251	2%
20	Jefferson Avenue	e/o Lincoln Boulevard	13	1,123	1%	9	547	2%	19	790	2%	23	1,054	2%
21	Lincoln Boulevard	s/o Jefferson Avenue	199	2,524	8%	299	1,531	20%	241	2,298	11%	295	2,391	12%
22	Culver Boulevard	e/o Jefferson Avenue	95	2,369	4%	53	558	9%	101	1,078	9%	27	2,154	1%
23	Vista Del Mar	s/o Culver Boulevard	13	1,315	1%	0	230	0%	15	447	3%	4	1,139	0%
24	La Brea Avenue	s/o Slauson Avenue	7	1,393	1%	8	768	1%	16	1,201	1%	2	1,281	0%
25	Jefferson Avenue	n/o Rodeo Road	26	612	4%	3	788	0%	7	665	1%	2	711	0%
26	Sepulveda Boulevard	s/o Slauson Avenue	544	2,705	20%	140	1,153	12%	424	1,837	23%	150	2,321	7%
27	Centinela Avenue	w/o Sepulveda Boulevard	49	670	7%	43	1,120	4%	172	1,289	13%	59	1,040	6%
28	El Segundo Bouelvard	w/o Hawthorne Boulevard	5	545	1%	24	1233	2%	13	1,833	1%	12	979	1%
29	Inglewood Boulevard	n/o Rosecrans Avenue	44	763	6%	0	590	0%	40	854	5%	17	1,359	1%
30	Vista Del Mar	s/o Grand Avenue	75	1,989	4%	14	466	3%	11	558	2%	23	1,445	2%

APPENDIX II-M

INTERSECTION ANALYSIS

CalcaDB

SUMMARY SHEET

REC NO.	INTERSECTIONS	IS NO.	AM/PM	V/C	LOS
1	AIRPORT BLVD & ARBOR VITAE ST	3	AM	0.361	A
2	AIRPORT BLVD & CENTURY BLVD	4	AM	0.441	A
3	AIRPORT BLVD & LA TIJERA BLVD	5	AM	0.523	A
4	AIRPORT BLVD & MANCHESTER AV	6	AM	0.598	A
5	AVIATION BLVD & ARBOR VITAE ST	7	AM	0.595	A
6	LA CIENEGA BLVD & ARBOR VITAE ST	8	AM	0.537	A
7	AVIATION BLVD & 111TH ST	10	AM	0.460	A
8	AVIATION BLVD & CENTURY BLVD	11	AM	0.689	B
9	AVIATION BLVD & EL SEGUNDO BLVD	12	AM	0.835	D
10	AVIATION BLVD & IMPERIAL HWY	13	AM	0.533	A
11	AVIATION BLVD & MANCHESTER AV	14	AM	0.687	B
12	AVIATION BLVD & ROSECRANS AV	15	AM	1.121	F
13	CENTINELA AV & JEFFERSON BLVD	18	AM	0.593	A
14	SEPULVEDA BLVD & CENTINELA AV	22	AM	0.945	E
15	LA CIENEGA BLVD & CENTURY BLVD	26	AM	0.680	B
16	SEPULVEDA BLVD & CENTURY BLVD	27	AM	0.682	B
17	CULVER BLVD & JEFFERSON BLVD	28	AM	0.889	D
18	VISTA DEL MAR & CULVER BLVD	33	AM	0.671	B
19	DOUGLAS ST & IMPERIAL HWY	34	AM	0.321	A
20	SEPULVEDA BLVD & EL SEGUNDO BLVD	35	AM	0.869	D
21	VISTA DEL MAR & GRAND AV	36	AM	0.749	C
22	LA CIENEGA BLVD & FLORENCE AV	40	AM	0.749	C
23	HIGHLAND AV/VISTA DEL MAR & ROSECRANS AV	43	AM	1.069	F
24	SEPULVEDA BLVD & HOWARD HUGHES PKWY	44	AM	0.708	C
25	I-105 FWY/CONTINENTAL CITY DR & IMPERIAL HWY	45	AM	0.434	A
26	I-405 FWY NB RAMPS & IMPERIAL HWY	46	AM	0.239	A
27	MAIN ST & IMPERIAL HWY	47	AM	0.833	D
28	I-105 FWY W/B OFF/NASH ST & IMPERIAL HWY	48	AM	0.491	A
29	PERSHING DR & IMPERIAL HWY	49	AM	0.958	E
30	SEPULVEDA BLVD & IMPERIAL HWY	50	AM	1.018	F
31	VISTA DEL MAR & IMPERIAL HWY	51	AM	0.455	A
32	LA CIENEGA BLVD & IMPERIAL HWY	52	AM	0.321	A
33	I-405 N/B RAMPS & JEFFERSON BLVD	54	AM	0.597	A
34	I-405 S/B RAMPS & JEFFERSON BLVD	55	AM	0.467	A
35	LINCOLN BLVD & JEFFERSON BLVD	57	AM	0.780	C
36	LA CIENEGA BLVD & 111TH ST	67	AM	0.197	A
37	LA CIENEGA BLVD & I-405 RAMPS S/O CENTURY BL	68	AM	0.284	A
38	LA CIENEGA BLVD & I-405 FWY SB N/O IMPERIAL	69	AM	0.267	A

CalcaDB

SUMMARY SHEET

REC NO.	INTERSECTIONS	IS NO.	AM/PM	V/C	LOS
39	LA CIENEGA BLVD & LENNOX BLVD	71	AM	0.362	A
40	LA CIENEGA BLVD & MANCHESTER AV	72	AM	0.684	B
41	I-405 N/B RAMPS & LA TIJERA BLVD	78	AM	0.754	C
42	I-405 S/B RAMPS & LA TIJERA BLVD	79	AM	0.629	B
43	LINCOLN BLVD & LA TIJERA BLVD	81	AM	0.429	A
44	LA TIJERA BLVD & MANCHESTER AV	82	AM	0.589	A
45	SEPULVEDA BLVD & LA TIJERA BLVD	83	AM	0.694	B
46	LINCOLN BLVD & 83RD ST	87	AM	0.892	D
47	LINCOLN BLVD & MANCHESTER AV	88	AM	0.684	B
48	SEPULVEDA BLVD & LINCOLN BLVD	93	AM	0.583	A
49	LINCOLN BLVD & TEALE ST	94	AM	0.902	E
50	PERSHING DR & MANCHESTER AV	98	AM	0.478	A
51	SEPULVEDA BLVD & MANCHESTER AV	99	AM	0.961	E
52	SEPULVEDA BLVD & MARIPOSA AV	100	AM	0.730	C
53	PERSHING DR & WESTCHESTER PKWY	101	AM	0.186	A
54	SEPULVEDA BLVD & ROSECRANS AV	103	AM	1.220	F
55	SEPULVEDA BLVD & I-105 OFF RAMP N/O IMPERIAL HW	105	AM	1.106	F
56	SEPULVEDA BLVD & 76TH/77TH ST	106	AM	0.698	B
57	SEPULVEDA BLVD & WESTCHESTER PKWY	109	AM	0.585	A
58	LA CIENEGA BLVD & I-405 SB RAMPS N/O CENTURY	111	AM	0.644	B
59	I-405 NB OFF-RAMP & CENTURY BLVD	307	AM	0.651	B
60	LA CIENEGA BLVD & EL SEGUNDO BLVD	312	AM	0.552	A
61	LA CIENEGA BLVD & 120TH ST	313	AM	0.237	A

96AM

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August 28, 1997 ,Thursday 12:52:06 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD   W/E: ARBOR VITAE ST   I/S No: 3

AM/PM: AM   Comments:

COUNT DATE: 4/16/94   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	57	345	89	92	791	84	155	321	87	46	340	159
AMBIENT												
RELATED												
PROJECT												
TOTAL	57	345	89	92	791	84	155	321	87	46	340	159

LANE NORTHBOUND	1	0	1	0	1	0	0
LANE SOUTHBOUND	1	0	3	0	0	1	0
LANE WESTBOUND	1	0	1	0	1	0	0
LANE EASTBOUND	1	0	2	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	264	92
EastBound	170	46
WestBound	204	155
NorthBound	217	57

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)
West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{57 + 264 + 155 + 170}{*1500} = 0.361$$

LOS = A

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96AM

CalcaDB

August 28, 1997 ,Thursday 12:52:06 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD   W/E: CENTURY BLVD   I/S No: 4

AM/PM: AM   Comments:

COUNT DATE: 4/18/95   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	67	109	33	403	112	263	62	1151	317	305	925	65
AMBIENT												
RELATED												
PROJECT												
TOTAL	67	109	33	403	112	263	62	1151	317	305	925	65

LANE NORTHBOUND	1	0	2	0	0	1	0
LANE SOUTHBOUND	2	1	1	0	0	1	0
LANE WESTBOUND	1	0	4	0	0	1	0
LANE EASTBOUND	2	0	4	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Split	Auto
SOUTHBOUND	Split	Auto
WESTBOUND	Prot-Var	OLA
EASTBOUND	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	179	141
EastBound	198	168
WestBound	288	62
NorthBound	55	67

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)
West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{67 + 179 + 288 + 168}{*1375} = 0.441$$

LOS = A

Developed by Chun Wong, 12/94

96AM

August 25, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD W/E: LA TIJERA BLVD IS No: 5

AM/PM: AM Comments:

COUNT DATE: 4/23/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	65	137	312	65	150	20	667	793	17	14	603	26
AMBIENT												
RELATED												
PROJECT												
TOTAL	65	137	312	65	150	20	667	793	17	14	603	26

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 1 0	0 1 0 0 1 0 0	2 0 1 0 1 0 0	1 0 2 0 1 0 0
SIGNAL Phasing	Perm	Perm	Prot-Var	Prot-Var
SIGNAL RTOR	<none>	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	150	65
EastBound	210	14
WestBound	405	367
NorthBound	174	65

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{174 + 65 + 367 + 210}{*1375} = 0.523$$

LOS = A

Developed by Chun Wong, 12/94

96AM

August 28, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD W/E: MANCHESTER AV IS No: 6

AM/PM: AM Comments:

COUNT DATE: 4/16/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	88	370	110	92	756	19	124	937	83	16	746	51
AMBIENT												
RELATED												
PROJECT												
TOTAL	88	370	110	92	756	19	124	937	83	16	746	51

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	388	92
EastBound	399	16
WestBound	510	124
NorthBound	240	88

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{88 + 388 + 510 + 16}{*1500} = 0.598$$

LOS = A

Developed by Chun Wong, 12/94

96AM

August 29, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD

W/E: ARBOR VITAE ST

I/S No: 7

AM/PM: AM

Comments:

COUNT DATE: 4/18/94

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	284	476	118	44	340	90	87	399	43	57	304	95
AMBIENT												
RELATED												
PROJECT												
TOTAL	284	476	118	44	340	90	87	399	43	57	304	95

LANE							
NORTHBOUND	1	0	2	0	0	1	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	1	0	0	0	1	0	0
EASTBOUND	1	0	1	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	215	44
EastBound	200	57
WestBound	442	87
NorthBound	238	284

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{284 + 215 + 442 + 57}{*1500} = 0.595 \qquad LOS = A$$

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August 28, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD

W/E: ARBOR VITAE ST

I/S No: 8

AM/PM: AM

Comments:

COUNT DATE: 4/18/94

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	320	434	69	42	321	55	105	387	110	90	217	169
AMBIENT												
RELATED												
PROJECT												
TOTAL	320	434	69	42	321	55	105	387	110	90	217	169

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	1	0	2	0	0	1	0
EASTBOUND	1	0	1	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	188	42
EastBound	193	90
WestBound	194	105
NorthBound	252	320

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{320 + 188 + 105 + 193}{1500} = 0.537 \qquad LOS = A$$

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August 28, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: 111TH ST US No: 10

AM/PM: AM Comments:

COUNT DATE: 10/4/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	26	1044	50	76	500	76	28	70	96	74	44	8
AMBIENT												
RELATED												
PROJECT												
TOTAL	26	1044	50	76	500	76	28	70	96	74	44	8

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 1 0 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	288	76
EastBound	52	74
WestBound	98	28
NorthBound	547	28

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{547 + 76 + 98 + 74}{*1500} = 0.460$$ LOS = A

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96AM

August 28, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: CENTURY BLVD US No: 11

AM/PM: AM Comments:

COUNT DATE: 4/16/97 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	518	575	57	54	370	133	52	1751	140	100	1128	244
AMBIENT												
RELATED												
PROJECT												
TOTAL	518	575	57	54	370	133	52	1751	140	100	1128	244

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 1 0 0	2 0 2 0 0 1 0	1 0 3 0 1 0 0	1 0 3 0 1 0 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	185	30
EastBound	343	100
WestBound	473	52
NorthBound	316	285

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{285 + 185 + 473 + 100}{*1375} = 0.689$$ LOS = B

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96AM August 28, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: EL SEGUNDO BLVD I/S No: 12

AM/PM: AM Comments:

COUNT DATE: 4/3/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	191	605	113	104	276	106	202	1490	276	96	338	77
AMBIENT												
RELATED												
PROJECT												
TOTAL	191	605	113	104	276	106	202	1490	276	96	338	77

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 2 0 0 1 0	2 0 2 0 1 0 0	1 0 3 0 0 1 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	138	104
EastBound	113	96
WestBound	589	111
NorthBound	359	191

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{359 + 104 + 589 + 96}{1375} = 0.835$$

LOS = D

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98AM August 28, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: IMPERIAL HWY I/S No: 13

AM/PM: AM Comments:

COUNT DATE: 4/8/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	194	551	124	138	336	175	133	764	484	126	281	76
AMBIENT												
RELATED												
PROJECT												
TOTAL	194	551	124	138	336	175	133	764	484	126	281	76

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 0 1 0	2 0 1 0 1 1 0	2 0 3 0 0 1 0	2 0 2 0 1 0 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	OLA	OLA	OLA	Auto

Critical Movements Diagram

	A	B
SouthBound	170	76
EastBound	119	69
WestBound	408	73
NorthBound	276	107

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{276 + 76 + 408 + 69}{*1375} = 0.533$$

LOS = A

Developed by Chun Wong, 12/94

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August 28, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: MANCHESTER AV I/S No: 14

AM/PM: AM Comments:

COUNT DATE: 4/16/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	185	214	91	2	364	262	112	847	14	188	617	125
AMBIENT												
RELATED												
PROJECT												
TOTAL	185	214	91	2	364	262	112	847	14	188	617	125

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	0	0	2	0	0	1	0
WESTBOUND	1	0	2	0	0	1	0
EASTBOUND	1	0	2	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	<none>	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	182	0
EastBound	309	188
WestBound	424	112
NorthBound	153	185

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{185 + 182 + 424 + 188}{1425} = 0.687 \qquad LOS = B$$

Developed by Chun Wong, 12/94

96AM

August 23, 1997 ,Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: ROSECRANS AV I/S No: 15

AM/PM: AM Comments:

COUNT DATE: 4/30/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	250	1028	480	62	352	210	458	1584	444	184	872	74
AMBIENT												
RELATED												
PROJECT												
TOTAL	250	1028	480	62	352	210	458	1584	444	184	872	74

LANE							
NORTHBOUND	1	0	2	0	1	0	0
SOUTHBOUND	1	0	2	0	1	0	0
WESTBOUND	2	0	2	0	0	1	0
EASTBOUND	1	0	2	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	Auto
SOUTHBOUND	Prot-Var	Auto
WESTBOUND	Prot-Var	Auto
EASTBOUND	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	210	62
EastBound	315	184
WestBound	792	252
NorthBound	503	250

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{503 + 62 + 792 + 184}{1375} = 1.121 \qquad LOS = F$$

Developed by Chun Wong, 12/94

96AM

August 28, 1997 Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: CENTINELA AV   W/E: JEFFERSON BLVD   I/S No: 18

AM/PM: AM   Comments:

COUNT DATE: 3/28/95   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	282	0	500	0	689	389	365	614	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	282	0	500	0	689	389	365	614	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 3 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	<none>	<none>	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	299	155
EastBound	205	201
WestBound	345	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 299 + 345 + 201}{1425} = 0.593$$

LOS = A

Developed by Chun Wong, 12/94

96AM

August 28, 1997 Thursday 12:52:06 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD   W/E: CENTINELA AV   I/S No: 22

AM/PM: AM   Comments:

COUNT DATE: 5/8/95   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	637	1719	327	164	889	141	259	625	272	188	505	412
AMBIENT												
RELATED												
PROJECT												
TOTAL	637	1719	327	164	889	141	259	625	272	188	505	412

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 3 0 0 1 0	2 0 3 0 0 1 0	2 0 1 0 1 0 0	1 0 3 0 0 2 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	OLA

Critical Movements Diagram

	A	B
SouthBound	296	90
EastBound	168	188
WestBound	449	142
NorthBound	573	350

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{573 + 90 + 449 + 188}{1375} = 0.945$$

LOS = E

Developed by Chun Wong, 12/94

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August 23, 1997 ,Thursday 12:52:06 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: CENTURY BLVD I/S No: 25

AM/PM: AM Comments:

COUNT DATE: 4/22/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	164	479	232	80	309	708	129	1181	478	129	724	436
AMBIENT												
RELATED												
PROJECT												
TOTAL	164	479	232	80	309	708	129	1181	478	129	724	436

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 0 2 0	1 0 3 0 1 0 0	1 0 3 0 0 2 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	OLA	OLA	Auto	OLA

Critical Movements Diagram

	A	B
SouthBound	260	80
EastBound	241	129
WestBound	478	129
NorthBound	160	164

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{164 + 260 + 478 + 129}{*1375} = 0.680$$

LOS = B

Developed by Chun Wong, 12/94

96AM

CalcaDB

August 23, 1997 ,Thursday 12:52:06 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: CENTURY BLVD I/S No: 27

AM/PM: AM Comments:

COUNT DATE: 4/15/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	3697	18	0	2134	39	372	25	331	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	3697	18	0	2134	39	372	25	331	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 3 0 1 0 0	0 0 4 0 0 1 0	1 1 0 0 0 2 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Split	<none>
SIGNAL RTOR	Auto	Auto	Auto	<none>

Critical Movements Diagram

	A	B
SouthBound	534	0
EastBound	0	0
WestBound	199	199
NorthBound	929	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{929 + 0 + 199 + 0}{*1500} = 0.682$$

LOS = B

Developed by Chun Wong, 12/94

96AM August 23, 1997, Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 23

AM/PM: AM Comments:

COUNT DATE: 5/6/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	0	1846	523	13	286	0	272	0	0	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1845	523	13	286	0	272	0	0	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 0 0	0 1 1 0 0 0 0	1 0 0 0 0 0 1	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Split	<none>
SIGNAL RTOR	Auto	Auto	Auto	<none>

Critical Movements Diagram

	A	B
SouthBound	176	13
EastBound	0	0
WestBound	136	136
NorthBound	1185	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)
West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{1185 + 13 + 136 + 0}{1500} = 0.889$$

LOS = D

Developed by Chun Wong, 12/94

96AM August 23, 1997, Thursday 01:11:51 PM

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INTERSECTION DATA SUMMARY SHEET

N/S: VISTA DEL MAR W/E: CULVER BLVD I/S No: 33

AM/PM: AM Comments:

COUNT DATE: 5/6/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	0	3	1312	126	12	1	218	43	18	1	195	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	3	1312	126	12	1	218	43	18	1	195	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 0 2 0	0 0 0 1 0 0 0	1 1 0 0 1 0 0	0 1 0 0 1 0 0
SIGNAL Phasing	Split	Split	Split	Split
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	139	126
EastBound	98	1
WestBound	61	120
NorthBound	662	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)
West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{662 + 139 + 120 + 98}{*1375} = 0.671$$

LOS = B

Developed by Chun Wong, 12/94

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August 28, 1997 ,Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: DOUGLAS ST W/E: IMPERIAL HWY I/S No: 34

AM/PM: AM Comments:

COUNT DATE: 4/8/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	92	51	108	31	0	25	0	939	62	30	301	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	92	51	108	31	0	25	0	939	62	30	301	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 0 2 0	1 0 0 0 0 1 1	0 0 2 0 1 0 0	1 0 3 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

SouthBound A: 4 B: 19

EastBound A: 100 B: 30

WestBound A: 334 B: 0

NorthBound A: 59 B: 51

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{59 + 19 + 334 + 30}{1375} = 0.321 \qquad LOS = A$$

Developed by Chun Wong, 12/94

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August 28, 1997 ,Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: EL SEGUNDO BLVD I/S No: 35

AM/PM: AM Comments:

COUNT DATE: 4/3/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	212	2781	141	215	921	91	96	306	179	65	191	143
AMBIENT												
RELATED												
PROJECT												
TOTAL	212	2781	141	215	921	91	96	306	179	65	191	143

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 1 0 0	1 0 4 0 0 1 0	1 1 1 0 0 1 0	1 1 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 230 B: 215

EastBound A: 96 B: 65

WestBound A: 153 B: 96

NorthBound A: 731 B: 212

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{731 + 215 + 153 + 96}{1375} = 0.869 \qquad LOS = D$$

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INTERSECTION DATA SUMMARY SHEET

N/S: VISTA DEL MAR W/E: GRAND AV I/S No: 36

AM/PM: AM Comments:

COUNT DATE: 5/2/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	1827	160	42	343	5	112	5	86	1	1	11
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	1827	160	42	343	5	112	5	86	1	1	11

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 1 0 0 0 1 0	0 0 0 1 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 174 B: 42

EastBound A: 13 B: 1

WestBound A: 86 B: 59

NorthBound A: 994 B: 2

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{994 + 42 + 86 + 1}{1500} = 0.749 \qquad LOS = C$$

Developed by Chun Wong, 12/94

98AM August 28, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: FLORENCE AV I/S No: 40

AM/PM: AM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	35	484	73	429	535	359	225	538	72	81	396	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	35	484	73	429	535	359	225	538	72	81	396	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 1 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Split	Split	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 321 B: 321

EastBound A: 205 B: 81

WestBound A: 305 B: 225

NorthBound A: 279 B: 35

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{279 + 321 + 225 + 205}{1375} = 0.749 \qquad LOS = C$$

Developed by Chun Wong, 12/94

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August 28, 1997 ,Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: HIGHLAND AV/VISTA DEL MAR W/E: ROSECRANS AV I/S No: 43

AM/PM: AM Comments:

COUNT DATE: 5/6/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	4	956	69	210	217	8	86	131	699	207	100	6
AMBIENT												
RELATED												
PROJECT												
TOTAL	4	956	69	210	217	8	86	131	699	207	100	6

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	0	0	1	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 217 B: 210

EastBound A: 106 B: 207

WestBound A: 594 B: 86

NorthBound A: 513 B: 4

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{513 + 210 + 594 + 207}{1425} = 1.069 \qquad LOS = F$$

Developed by Chun Wong, 12/94

96AM

CalcaDB

August 29, 1997 ,Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: HOWARD HUGHES PKWY I/S No: 44

AM/PM: AM Comments:

COUNT DATE: 5/8/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	2502	753	182	1293	0	498	0	174	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2502	753	182	1293	0	498	0	174	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	3	0	0	1	0	2	0	3	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>	Split	Auto	<none>	<none>

Critical Movements Diagram

SouthBound A: 431 B: 100

EastBound A: 0 B: 0

WestBound A: 124 B: 174

NorthBound A: 834 B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{834 + 100 + 174 + 0}{{}^{*}1425} = 0.708 \qquad LOS = C$$

Developed by Chun Wong, 12/94

96AM

August 23, 1997 ,Thursday 01:11:51 PM

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INTERSECTION DATA SUMMARY SHEET

N/S: I-105 FWY/CONTINENTAL CITY DR W/E: IMPERIAL HWY I/S No: 45

AM/PM: AM Comments:

COUNT DATE: 3/2/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	669	0	422	0	0	0	88	742	0	0	368	283
AMBIENT												
RELATED												
PROJECT												
TOTAL	669	0	422	0	0	0	88	742	0	0	368	283

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 0 0 0 2 0	0 0 0 0 0 0 0	1 0 3 0 0 0 0	0 0 2 0 1 1 0
SIGNAL Phasing	Split	<none>	Prot-Fix	Perm
SIGNAL RTOR	OLA	<none>	<none>	OLA

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	163	0
WestBound	247	88
NorthBound	144	368

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{368 + 0 + 88 + 163}{1425} = 0.434 \quad LOS = A$$

Developed by Chun Wong, 12/94

96AM

August 23, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 FWY NB RAMPS W/E: IMPERIAL HWY I/S No: 46

AM/PM: AM Comments:

COUNT DATE: 5/6/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	289	0	55	0	0	0	0	557	166	0	443	83
AMBIENT												
RELATED												
PROJECT												
TOTAL	289	0	55	0	0	0	0	557	166	0	443	83

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 0 0 1	0 0 0 0 0 0 0	0 0 2 0 1 1 0	0 0 2 0 1 1 0
SIGNAL Phasing	Split	<none>	Perm	Perm
SIGNAL RTOR	Auto	<none>	Free	Free

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	148	0
WestBound	186	0
NorthBound	172	172

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{172 + 0 + 186 + 0}{1500} = 0.239 \quad LOS = A$$

Developed by Chun Wong, 12/94

98AM

August 28, 1997, Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: MAIN ST W/E: IMPERIAL HWY I/S No: 47

AM/PM: AM Comments:

COUNT DATE: 5/2/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	293	0	534	0	0	0	287	559	0	0	1019	133
AMBIENT												
RELATED												
PROJECT												
TOTAL	293	0	534	0	0	0	287	559	0	0	1019	133

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 0 0 0 1 0	0 0 0 0 0 0 0	1 0 2 0 0 0 0	0 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	<none>	<none>	Prot-Fix	<none>	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 510 B: 0

WestBound A: 280 B: 287

NorthBound A: 390 B: 151

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{390 + 0 + 287 + 510}{1425} = 0.833$$

LOS = D

Developed by Chun Wong, 12/94

98AM

August 28, 1997, Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: I-105 FWY W/B OFF/NASH ST W/E: IMPERIAL HWY I/S No: 48

AM/PM: AM Comments:

COUNT DATE: 2/24/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	196	1006	451	198	778	0	0	294	188
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	196	1006	451	198	778	0	0	294	188

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	1 1 0 0 1 1 0	2 0 3 0 0 0 0	0 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	<none>	<none>	Split	Auto	Prot-Fix	<none>	Perm	Auto

Critical Movements Diagram

SouthBound A: 503 B: 196

EastBound A: 188 B: 0

WestBound A: 259 B: 109

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 503 + 109 + 188}{*1425} = 0.491$$

LOS = A

Developed by Chun Wong, 12/94

98AM August 28, 1997 ,Thursday 01:11:51 PM

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INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: IMPERIAL HWY I/S No: 49

AM/PM: AM Comments:

COUNT DATE: 5/2/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	545	0	105	0	214	758	334	594	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	545	0	105	0	214	758	334	594	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 1 0 0 0	1 0 0 1 0 1 0	1 0 2 0 0 1 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	OLA	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	273	273
EastBound	297	334
WestBound	758	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 273 + 758 + 334}{1425} = 0.958$$ LOS = E

Developed by Chun Wong, 12/94

98AM August 28, 1997 ,Thursday 01:11:51 PM

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INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: IMPERIAL HWY I/S No: 50

AM/PM: AM Comments:

COUNT DATE: 4/3/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	40	2057	564	419	2110	33	154	160	396	369	239	106
AMBIENT												
RELATED												
PROJECT												
TOTAL	40	2057	564	419	2110	33	154	160	396	369	239	106

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	2 0 3 0 1 0 0	2 0 3 0 0 1 0	2 0 3 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	536	230
EastBound	86	203
WestBound	281	85
NorthBound	686	40

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{686 + 230 + 281 + 203}{1375} = 1.018$$ LOS = F

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INTERSECTION DATA SUMMARY SHEET

N/S: VISTA DEL MAR W/E: IMPERIAL HWY I/S No: 51

AM/PM: AM Comments:

COUNT DATE: 5/2/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	1253	570	46	164	0	125	0	57	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1253	570	46	164	0	126	0	57	0	0	0

LANE							
NORTHBOUND	1	0	2	0	0	1	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	1	1	0	0	0	1	0
EASTBOUND	0	0	0	1	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Split	Auto
EASTBOUND	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	82	46
EastBound	0	0
WestBound	63	63
NorthBound	627	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{627 + 46 + 63 + 0}{*1375} = 0.465 \qquad LOS = A$$

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: IMPERIAL HWY I/S No: 52

AM/PM: AM Comments:

COUNT DATE: 4/8/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	64	198	37	67	121	230	25	688	383	285	178	68
AMBIENT												
RELATED												
PROJECT												
TOTAL	64	198	37	67	121	230	25	688	383	285	178	68

LANE							
NORTHBOUND	2	0	1	0	1	1	0
SOUTHBOUND	2	0	1	0	1	1	0
WESTBOUND	2	0	3	0	0	2	0
EASTBOUND	2	0	3	0	0	2	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	Auto
SOUTHBOUND	Prot-Var	Auto
WESTBOUND	Prot-Var	OLA
EASTBOUND	Prot-Var	OLA

Critical Movements Diagram

	A:	B:
SouthBound	117	37
EastBound	59	157
WestBound	229	14
NorthBound	99	35

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{35 + 117 + 229 + 157}{*1375} = 0.321 \qquad LOS = A$$

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August 23, 1997 ,Thursday 01:11:51 PM

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INTERSECTION DATA SUMMARY SHEET

N/S: I-405 N/B RAMPS W/E: JEFFERSON BLVD I/S No: 54

AM/PM: AM Comments:

COUNT DATE: 5/7/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	76	3	79	0	0	0	0	892	365	269	633	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	76	3	79	0	0	0	0	892	365	269	633	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	1	0	3	0	0	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	<none>	<none>	Perm	Auto	Prot-Fix	<none>

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 211 B: 269

WestBound A: 365 B: 0

NorthBound A: 82 B: 76

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{82 + 0 + 365 + 269}{1200} = 0.597$$

LOS = A

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95AM

August 23, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 S/B RAMPS W/E: JEFFERSON BLVD I/S No: 55

AM/PM: AM Comments:

COUNT DATE: 5/7/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	116	1	169	338	625	0	0	805	125
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	116	1	169	338	625	0	0	805	125

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	2	0	0	0	0	0	0	3	0	1	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	<none>	<none>	Split	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 95 B: 95

EastBound A: 233 B: 0

WestBound A: 313 B: 338

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 95 + 338 + 233}{1425} = 0.467$$

LOS = A

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96AM

August 23, 1997 ,Thursday 02:21:13 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 57

AM/PM: AM Comments:

COUNT DATE: 5/2/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1	1961	593	293	1226	177	252	85	210	118	237	12
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	1961	593	293	1226	177	252	85	210	118	237	12

LANE							
NORTHBOUND	1	0	3	0	0	1	0
SOUTHBOUND	2	0	3	0	0	1	0
WESTBOUND	2	0	2	0	0	1	0
EASTBOUND	1	0	2	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	OLA
SOUTHBOUND	Prot-Var	OLA
WESTBOUND	Split	OLA
EASTBOUND	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	409	161
EastBound	63	118
WestBound	49	139
NorthBound	654	1

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) ‹ B(E/B)

$$V/C = \frac{654 + 161 + 139 + 118}{1375} = 0.780 \qquad LOS = C$$

Developed by Chun Wong, 12/94

96AM

August 23, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: 111TH ST I/S No: 67

AM/PM: AM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	143	636	0	0	353	91	0	0	0	151	0	63
AMBIENT												
RELATED												
PROJECT												
TOTAL	143	636	0	0	353	91	0	0	0	151	0	63

LANE							
NORTHBOUND	1	0	2	0	0	0	0
SOUTHBOUND	0	0	2	0	1	0	0
WESTBOUND	0	0	0	0	0	0	0
EASTBOUND	2	0	0	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	<none>
SOUTHBOUND	Perm	Auto
WESTBOUND	<none>	<none>
EASTBOUND	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	148	0
EastBound	63	83
WestBound	0	0
NorthBound	318	143

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{318 + 0 + 0 + 83}{1500} = 0.197 \qquad LOS = A$$

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96AM

August 28, 1997, Thursday 03:21:52 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: I-405 RAMPS S/O CENTURY BL I/S No: 63

AM/PM: AM Comments:

COUNT DATE: 4/22/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	478	189	358	500	0	0	0	160	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	478	189	358	500	0	0	0	160	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 0 0	2 0 2 0 0 0 0	0 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>	Perm	OLA	<none>	<none>

Critical Movements Diagram

SouthBound A: 250 B: 197

EastBound A: 0 B: 0

WestBound A: 0 B: 0

NorthBound A: 334 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{334 + 197 + 0 + 0}{*1500} = 0.284$$

LOS = A

Developed by Chun Wong, 12/94

96AM

August 28, 1997, Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: I-405 FWY SB N/O IMPERIAL I/S No: 69

AM/PM: AM Comments:

COUNT DATE: 5/7/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	23	678	53	59	331	0	139	5	80	0	0	6
AMBIENT												
RELATED												
PROJECT												
TOTAL	23	678	53	59	331	0	139	5	80	0	0	6

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	1 0 2 0 1 0 0	2 0 0 0 0 1 0	0 0 0 1 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	OLA	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 110 B: 59

EastBound A: 6 B: 0

WestBound A: 50 B: 76

NorthBound A: 339 B: 23

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{339 + 59 + 76 + 6}{*1425} = 0.267$$

LOS = A

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96AM

August 28, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: LENNOX BLVD I/S No: 71

AM/PM: AM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	680	85	94	456	0	71	0	81	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	680	85	94	456	0	71	0	81	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 0 0	1 0 3 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>	Split	Auto	<none>	<none>

Critical Movements Diagram

SouthBound A: 152 B: 94

EastBound A: 0 B: 0

WestBound A: 34 B: 39

NorthBound A: 383 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)
West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{383 + 94 + 39 + 0}{1425} = 0.362 \quad LOS = A$$

Developed by Chun Wong, 12/94

96AM

August 28, 1997 ,Thursday 02:22:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: MANCHESTER AV I/S No: 72

AM/PM: AM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	91	395	167	227	443	68	392	976	118	71	473	28
AMBIENT												
RELATED												
PROJECT												
TOTAL	91	395	167	227	443	68	392	976	118	71	473	28

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 1 1 0 1 0 0	2 0 2 0 1 0 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	OLA	Split	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

SouthBound A: 223 B: 223

EastBound A: 167 B: 71

WestBound A: 365 B: 216

NorthBound A: 281 B: 91

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)
West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{281 + 223 + 365 + 71}{1375} = 0.684 \quad LOS = B$$

Developed by Chun Wong, 12/94

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 N/B RAMPS W/E: LA TIJERA BLVD I/S No: 73

AM/PM: AM Comments:

COUNT DATE: 4/23/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	162	0	382	0	0	0	0	1520	311	334	1283	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	162	0	382	0	0	0	0	1520	311	334	1283	0

LANE							
NORTHBOUND	1	0	0	0	0	1	0
SOUTHBOUND	0	0	0	0	0	0	0
WESTBOUND	0	0	3	0	1	0	0
EASTBOUND	1	0	3	0	0	0	0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	<none>	<none>	<none>	Perm	Auto	Prot-Fix	<none>

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	426	334
WestBound	458	0
NorthBound	382	162

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{382 + 0 + 458 + 334}{*1425} = 0.754$$

LOS = C

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 S/B RAMPS W/E: LA TIJERA BLVD I/S No: 79

AM/PM: AM Comments:

COUNT DATE: 4/23/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	105	0	378	315	1367	0	0	1527	229
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	105	0	378	315	1367	0	0	1527	229

LANE							
NORTHBOUND	0	0	0	0	0	0	0
SOUTHBOUND	0	0	0	0	0	1	1
WESTBOUND	1	0	3	0	0	0	0
EASTBOUND	0	0	3	0	1	0	0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	<none>	<none>	Split	<none>	Prot-Fix	<none>	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	242	105
EastBound	439	0
WestBound	456	315
NorthBound	0	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 242 + 315 + 439}{*1425} = 0.629$$

LOS = B

96AM

August 28, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: LA TIJERA BLVD | I/S No: 81

AM/PM: AM | Comments:

COUNT DATE: 5/7/95 | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	36	1623	3	13	1132	70	0	0	3	55	2	42
AMBIENT												
RELATED												
PROJECT												
TOTAL	36	1623	3	13	1132	70	0	0	3	55	2	42

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0
SIGNAL Phasing	Prot-Var	Prot-Var	Split	Split
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 401 B: 13

EastBound A: 32 B: 29

WestBound A: 3 B: 0

NorthBound A: 542 B: 20

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{542 + 13 + 3 + 32}{1375} = 0.429 \qquad LOS = A$$

Developed by Chun Wong, 12/94

96AM

August 28, 1997 ,Thursday 01:11:51 PM

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INTERSECTION DATA SUMMARY SHEET

N/S: LA TIJERA BLVD | W/E: MANCHESTER AV | I/S No: 82

AM/PM: AM | Comments:

COUNT DATE: 4/16/94 | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	31	326	135	31	569	227	94	859	11	155	553	12
AMBIENT												
RELATED												
PROJECT												
TOTAL	31	326	135	31	569	227	94	859	11	155	553	12

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	1 0 2 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 285 B: 31

EastBound A: 283 B: 155

WestBound A: 435 B: 94

NorthBound A: 163 B: 31

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{31 + 285 + 435 + 155}{*1375} = 0.589 \qquad LOS = A$$

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August 28, 1997, Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD   W/E: LA TIJERA BLVD   I/S No: 83

AM/PM: AM   Comments:

COUNT DATE: 4/15/94   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	28	1851	90	73	1053	65	241	266	47	129	254	72
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	1851	90	73	1053	65	241	266	47	129	254	72

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 373 B: 73

EastBound A: 127 B: 129

WestBound A: 157 B: 241

NorthBound A: 647 B: 28

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{647 + 73 + 241 + 127}{*1425} = 0.694 \qquad LOS = B$$

Developed by Chun Wong, 12/94

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August 28, 1997, Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD   W/E: 83RD ST   I/S No: 87

AM/PM: AM   Comments:

COUNT DATE: 4/16/00   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	29	2033	31	100	1336	25	33	54	217	368	72	25
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	2033	31	100	1336	25	33	54	217	368	72	25

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 0 1 0	1 0 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	Auto	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 454 B: 100

EastBound A: 97 B: 368

WestBound A: 167 B: 33

NorthBound A: 688 B: 29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{688 + 100 + 167 + 368}{*1375} = 0.892 \qquad LOS = D$$

Developed by Chun Wong, 12/94

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CalcaDB

August 28, 1997 ,Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MANCHESTER AV I/S No: 68

AM/PM: AM Comments:

COUNT DATE: 4/16/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	58	1681	109	149	1046	89	64	417	257	120	450	69
AMBIENT												
RELATED												
PROJECT												
TOTAL	58	1681	109	149	1046	89	64	417	257	120	450	69

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 2 0 0 1 0	1 0 2 0 0 1 0
SIGNAL Phasing	Perm	Prot-Fix	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 378 B: 149

EastBound A: 225 B: 120

WestBound A: 209 B: 64

NorthBound A: 597 B: 58

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{597 + 149 + 209 + 120}{*1425} = 0.684$$

LOS = B

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August 28, 1997 ,Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: LINCOLN BLVD I/S No: 93

AM/PM: AM Comments:

COUNT DATE: 4/15/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	1560	0	2	0	1765	2015	0	1365	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	1560	0	2	0	1765	2015	0	1365	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	3 0 0 0 0 0 1	0 0 3 0 0 3 0	0 0 3 0 0 0 0
SIGNAL Phasing	<none>	Perm	Perm	Perm
SIGNAL RTOR	<none>	<none>	Free	<none>

Critical Movements Diagram

SouthBound A: 391 B: 391

EastBound A: 455 B: 0

WestBound A: 588 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 391 + 588 + 0}{*1500} = 0.583$$

LOS = A

Developed by Chun Wong, 12/94

96AM

August 28, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: TEALE ST I/S No: 94

AM/PM: AM Comments:

COUNT DATE: 5/2/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2514	11	22	1509	0	7	0	10	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2514	11	22	1509	0	7	0	10	0	0	0

LANE

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	1 0 2 0 0 0 0	1 0 0 0 0 1 1	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Split	<none>
SIGNAL RTOR	Auto	<none>	OLA	<none>

Critical Movements Diagram

SouthBound A: 755 B: 22

EastBound A: 0 B: 0

WestBound A: 0 B: 6

NorthBound A: 1257 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{1257 + 22 + 6 + 0}{1425} = 0.902 \qquad LOS = E$$

Developed by Chun Wong, 12/94

96AM

August 28, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: MANCHESTER AV I/S No: 95

AM/PM: AM Comments:

COUNT DATE: 5/2/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	28	648	89	129	204	8	91	47	319	31	40	30
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	648	89	129	204	8	91	47	319	31	40	30

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 0 1 0	0 1 0 0 1 0 0
SIGNAL Phasing	Perm	Prot-Fix	Split	Split
SIGNAL RTOR	Auto	Auto	OLA	Auto

Critical Movements Diagram

SouthBound A: 106 B: 129

EastBound A: 66 B: 31

WestBound A: 190 B: 91

NorthBound A: 369 B: 28

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{369 + 129 + 190 + 66}{*1375} = 0.478 \qquad LOS = A$$

Developed by Chun Wong, 12/94

96AM

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August 28, 1997, Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD   W/E: MANCHESTER AV   I/S No: 99

AM/PM: AM   Comments:

COUNT DATE: 4/16/94   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	74	1862	48	100	1245	108	60	762	393	103	668	77
AMBIENT												
RELATED												
PROJECT												
TOTAL	74	1862	48	100	1245	108	60	762	393	103	668	77

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Prot-Var	Prot-Var	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	451	100
EastBound	373	103
WestBound	578	60
NorthBound	637	74

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{637 + 100 + 578 + 103}{*1375} = 0.961 \qquad LOS = E$$

Developed by Chun Wong, 12/94

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August 28, 1997, Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD   W/E: MARIPOSA AV   I/S No: 100

AM/PM: AM   Comments:

COUNT DATE: 4/3/95   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	21	2870	68	302	1859	51	14	17	31	103	72	33
AMBIENT												
RELATED												
PROJECT												
TOTAL	21	2870	68	302	1859	51	14	17	31	103	72	33

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	1 0 1 0 0 1 0	1 0 0 0 1 0 0
SIGNAL Phasing	Prot-Var	Prot-Var	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	478	166
EastBound	105	103
WestBound	17	14
NorthBound	718	21

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{718 + 166 + 17 + 103}{1375} = 0.730 \qquad LOS = C$$

Developed by Chun Wong, 12/94

96AM August 23, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: WESTCHESTER PKWY I/S No: 101

AM/PM: AM Comments:

COUNT DATE: 5/2/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	0	558	251	66	340	0	34	0	157	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	558	251	66	340	0	34	0	157	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 2 0	1 0 2 0 0 0 0	2 0 0 0 0 1 1	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Split	<none>
SIGNAL RTOR	OLA	<none>	OLA	<none>

Critical Movements Diagram

SouthBound A: 170 B: 66

EastBound A: 0 B: 0

WestBound A: 20 B: 19

NorthBound A: 279 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{279 + 66 + 20 + 0}{*1425} = 0.186$$ LOS = A

Developed by Chun Wong, 12/94

96AM August 25, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: ROSECRANS AV I/S No: 103

AM/PM: AM Comments:

COUNT DATE: 4/30/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	123	2939	365	271	940	82	166	301	274	236	676	105
AMBIENT												
RELATED												
PROJECT												
TOTAL	123	2939	365	271	940	82	166	301	274	236	676	105

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	1 0 2 0 0 1 0	1 0 2 0 1 0 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 341 B: 271

EastBound A: 260 B: 236

WestBound A: 151 B: 166

NorthBound A: 980 B: 123

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{980 + 271 + 166 + 260}{1375} = 1.220$$ LOS = F

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August 28, 1997 ,Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: I-105 OFF RAMP N/O IMPERIAL HW I/S No: 105

AM/PM: AM Comments:

COUNT DATE: 5/6/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2800	0	0	1358	1179	0	0	2075	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2800	0	0	1358	1179	0	0	2075	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 3 0 0 0 0	0 0 1 0 1 1 0	0 0 0 0 0 3 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	<none>	Perm	<none>
SIGNAL RTOR	<none>	<none>	<none>	<none>

Critical Movements Diagram

SouthBound A: 848 B: 0

EastBound A: 0 B: 0

WestBound A: 726 B: 0

NorthBound A: 933 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{933 + 848 + 726 + 0}{1500} = 1.106$$

1453 / 1375

LOS = F

Developed by Chun Wong, 12/94

95AM

CalcaDB

August 28, 1997 ,Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: 76TH/77TH ST I/S No: 106

AM/PM: AM Comments:

COUNT DATE: 4/16/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	49	2024	10	32	1268	152	47	69	84	420	31	56
AMBIENT												
RELATED												
PROJECT												
TOTAL	49	2024	10	32	1268	152	47	69	84	420	31	56

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 0 0 1 0 0	2 0 1 0 0 1 0
SIGNAL Phasing	Perm	Perm	Perm	Prot-Fix
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 473 B: 32

EastBound A: 56 B: 231

WestBound A: 153 B: 47

NorthBound A: 678 B: 49

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{678 + 32 + 153 + 231}{*1425} = 0.698$$

LOS = B

Developed by Chun Wong, 12/94

96AM CalcaDB August 28, 1997, Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: WESTCHESTER PKWY I/S No: 109

AM/PM: AM Comments:

COUNT DATE: 4/15/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	116	1689	38	142	1286	46	129	155	59	14	233	39
AMBIENT												
RELATED												
PROJECT												
TOTAL	116	1689	38	142	1286	46	129	155	59	14	233	39

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 444 B: 142

EastBound A: 136 B: 14

WestBound A: 107 B: 129

NorthBound A: 576 B: 116

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{576 + 142 + 129 + 136}{*1500} = 0.595$$

LOS = A

Developed by Chun Wong, 12/94

96AM CalcaDB August 28, 1997, Thursday 02:23:31 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: I-405 SB RAMPS N/O CENTURY I/S No: 111

AM/PM: AM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1034	94	146	409	0	706	0	109	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1034	94	146	409	0	706	0	109	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 1 0 1 1 0	1 0 2 0 0 0 0	1 0 0 0 0 0 1	0 0 0 0 0 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Perm	Auto	Perm	Auto	<none>	<none>

Critical Movements Diagram

SouthBound A: 205 B: 146

EastBound A: 0 B: 0

WestBound A: 408 B: 408

NorthBound A: 517 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{517 + 146 + 408 + 0}{*1500} = 0.644$$

LOS = B

Developed by Chun Wong, 12/94

96AM

CalcaDB

August 28, 1997, Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 NB OFF-RAMP W/E: CENTURY BLVD I/S No: 307

AM/PM: AM Comments:

COUNT DATE: 4/18/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	1100	8	168	0	0	10	0	1086	0	0	699	341
AMBIENT												
RELATED												
PROJECT												
TOTAL	1100	8	168	0	0	10	0	1086	0	0	699	341

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 0 0 0 1 0	0 0 0 0 0 0 1	0 0 2 0 1 0 0	1 0 2 0 1 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Split	<none>	<none>	Auto	<none>	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 10 B: 0

EastBound A: 260 B: 0

WestBound A: 362 B: 0

NorthBound A: 168 B: 605

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{605 + 10 + 362 + 260}{1500} = 0.651$$

LOS = B

Developed by Chun Wong, 12/94

96AM

CalcaDB

August 28, 1997, Thursday 01:11:51 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: EL SEGUNDO BLVD I/S No: 312

AM/PM: AM Comments:

COUNT DATE: 4/23/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	0	0	0	203	0	412	0	1433	188	40	431	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	203	0	412	0	1433	188	40	431	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 0 0 0 0 0	2 0 0 0 0 2 0	0 0 2 0 1 0 0	1 0 3 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	<none>	<none>	Split	Auto	Perm	Auto	Prot-Fix	<none>

Critical Movements Diagram

SouthBound A: 207 B: 112

EastBound A: 144 B: 40

WestBound A: 540 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 207 + 540 + 40}{1425} = 0.552$$

LOS = A

Developed by Chun Wong, 12/94

96AM

August 29, 1997 ,Thursday 01:11:51 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: 120TH ST I/S No: 313

AM/PM: AM Comments:

COUNT DATE: 4/30/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	50	139	42	32	49	34	81	232	73	50	116	44
AMBIENT												
RELATED												
PROJECT												
TOTAL	50	139	42	32	49	34	81	232	73	50	116	44

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

SouthBound A: 42 B: 32

EastBound A: 80 B: 50

WestBound A: 153 B: 81

NorthBound A: 91 B: 50

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{91 + 32 + 153 + 50}{1375} = 0.237$$

LOS = A

Developed by Chur Wong, 12/94

96PM

August 28, 1997 ,Thursday 02:39:52 PM

CalcaDB

SUMMARY SHEET

REC NO.	INTERSECTIONS	IS NO.	AM/PM	V/C	LOS
1	AIRPORT BLVD & ARBOR VITAE ST	3	PM	0.549	A
2	AIRPORT BLVD & CENTURY BLVD	4	PM	0.501	A
3	AIRPORT BLVD & LA TIJERA BLVD	5	PM	0.542	A
4	AIRPORT BLVD & MANCHESTER AV	6	PM	0.656	B
5	AVIATION BLVD & ARBOR VITAE ST	7	PM	0.684	B
6	LA CIENEGA BLVD & ARBOR VITAE ST	8	PM	0.637	B
7	AVIATION BLVD & 111TH ST	10	PM	0.434	A
8	AVIATION BLVD & CENTURY BLVD	11	PM	0.747	C
9	AVIATION BLVD & EL SEGUNDO BLVD	12	PM	0.917	E
10	AVIATION BLVD & IMPERIAL HWY	13	PM	0.621	B
11	AVIATION BLVD & MANCHESTER AV	14	PM	0.643	B
12	AVIATION BLVD & ROSECRANS AV	15	PM	1.304	F
13	CENTINELA AV & JEFFERSON BLVD	18	PM	0.599	A
14	SEPULVEDA BLVD & CENTINELA AV	22	PM	0.917	E
15	LA CIENEGA BLVD & CENTURY BLVD	26	PM	0.737	C
16	SEPULVEDA BLVD & CENTURY BLVD	27	PM	0.693	B
17	CULVER BLVD & JEFFERSON BLVD	28	PM	0.757	C
18	VISTA DEL MAR & CULVER BLVD	33	PM	0.431	A
19	DOUGLAS ST & IMPERIAL HWY	34	PM	0.380	A
20	SEPULVEDA BLVD & EL SEGUNDO BLVD	35	PM	1.025	F
21	VISTA DEL MAR & GRAND AV	36	PM	0.494	A
22	LA CIENEGA BLVD & FLORENCE AV	40	PM	0.957	E
23	HIGHLAND AV/VISTA DEL MAR & ROSECRANS AV	43	PM	0.896	D
24	SEPULVEDA BLVD & HOWARD HUGHES PKWY	44	PM	0.690	B
25	I-105 FWY/CONTINENTAL CITY DR & IMPERIAL HWY	45	PM	0.660	B
26	I-405 FWY NB RAMPS & IMPERIAL HWY	46	PM	0.279	A
27	MAIN ST & IMPERIAL HWY	47	PM	0.945	E
28	I-105 FWY W/B OFF/NASH ST & IMPERIAL HWY	48	PM	0.254	A
29	PERSHING DR & IMPERIAL HWY	49	PM	0.835	D
30	SEPULVEDA BLVD & IMPERIAL HWY	50	PM	1.129	F
31	VISTA DEL MAR & IMPERIAL HWY	51	PM	0.468	A
32	LA CIENEGA BLVD & IMPERIAL HWY	52	PM	0.308	A
33	I-405 N/B RAMPS & JEFFERSON BLVD	54	PM	0.701	C
34	I-405 S/B RAMPS & JEFFERSON BLVD	55	PM	0.533	A
35	LINCOLN BLVD & JEFFERSON BLVD	57	PM	0.779	C
36	LA CIENEGA BLVD & 111TH ST	67	PM	0.255	A
37	LA CIENEGA BLVD & I-405 RAMPS S/O CENTURY BL	68	PM	0.430	A
38	LA CIENEGA BLVD & I-405 FWY SB N/O IMPERIAL	69	PM	0.232	A

96PM

August 28, 1997 ,Thursday 02:39:52 PM

CalcaDB

SUMMARY SHEET

REC NO.	INTERSECTIONS	IS NO.	AM/PM	V/C	LOS
39	LA CIENEGA BLVD & LENNOX BLVD	71	PM	0.219	A
40	LA CIENEGA BLVD & MANCHESTER AV	72	PM	0.769	C
41	I-405 N/B RAMPS & LA TIJERA BLVD	78	PM	0.830	D
42	I-405 S/B RAMPS & LA TIJERA BLVD	79	PM	0.699	B
43	LINCOLN BLVD & LA TIJERA BLVD	81	PM	0.435	A
44	LA TIJERA BLVD & MANCHESTER AV	82	PM	0.538	A
45	SEPULVEDA BLVD & LA TIJERA BLVD	83	PM	0.644	B
46	LINCOLN BLVD & 83RD ST	87	PM	0.641	B
47	LINCOLN BLVD & MANCHESTER AV	88	PM	0.747	C
48	SEPULVEDA BLVD & LINCOLN BLVD	93	PM	0.594	A
49	LINCOLN BLVD & TEALE ST	94	PM	0.825	D
50	PERSHING DR & MANCHESTER AV	98	PM	0.526	A
51	SEPULVEDA BLVD & MANCHESTER AV	99	PM	0.870	D
52	SEPULVEDA BLVD & MARIPOSA AV	100	PM	0.799	C
53	PERSHING DR & WESTCHESTER PKWY	101	PM	0.148	A
54	SEPULVEDA BLVD & ROSECRANS AV	103	PM	1.388	F
55	SEPULVEDA BLVD & I-105 OFF RAMP N/O IMPERIAL HW	105	PM	.911 ~~1.269~~	~~F~~ E
56	SEPULVEDA BLVD & 76TH/77TH ST	106	PM	0.594	A
57	SEPULVEDA BLVD & WESTCHESTER PKWY	109	PM	0.627	B
58	LA CIENEGA BLVD & I-405 SB RAMPS N/O CENTURY	111	PM	0.663	B
59	I-405 NB OFF-RAMP & CENTURY BLVD	307	PM	0.557	A
60	LA CIENEGA BLVD & EL SEGUNDO BLVD	312	PM	0.575	A
61	LA CIENEGA BLVD & 120TH ST	313	PM	0.303	A

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD   W/E: ARBOR VITAE ST   I/S No: 3

AM/PM: PM   Comments:

COUNT DATE: 4/16/94   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	104	858	122	103	560	49	150	329	101	101	372	136
AMBIENT												
RELATED												
PROJECT												
TOTAL	104	858	122	103	560	49	150	329	101	101	372	136

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 3 0 0 1 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	187	103
EastBound	186	101
WestBound	215	150
NorthBound	490	104

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{490 + 103 + 150 + 186}{*1500} = 0.549$$

LOS = A

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD   W/E: CENTURY BLVD   I/S No: 4

AM/PM: PM   Comments:

COUNT DATE: 4/17/95   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	112	180	62	577	92	299	74	976	280	412	1192	80
AMBIENT												
RELATED												
PROJECT												
TOTAL	112	180	62	577	92	299	74	976	280	412	1192	80

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	2 1 1 0 0 1 0	1 0 4 0 0 1 0	2 0 4 0 1 0 0
SIGNAL Phasing	Split	Split	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	OLA	Auto

Critical Movements Diagram

	A	B
SouthBound	186	202
EastBound	254	227
WestBound	244	74
NorthBound	90	112

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{112 + 202 + 244 + 227}{*1375} = 0.501$$

LOS = A

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD W/E: LA TIJERA BLVD I/S No: 5

AM/PM: PM Comments:

COUNT DATE: 4/23/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	28	121	598	33	99	21	486	689	12	20	621	14
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	121	598	33	99	21	486	689	12	20	621	14

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 1 0	0 1 0 0 1 0 0	2 0 1 0 1 0 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	<none>	Perm	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

SouthBound A: 110 B: 33

EastBound A: 212 B: 20

WestBound A: 351 B: 267

NorthBound A: 329 B: 28

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{329 + 33 + 267 + 212}{*1375} = 0.542 \quad LOS = A$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD W/E: MANCHESTER AV I/S No: 6

AM/PM: PM Comments:

COUNT DATE: 4/16/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	100	635	95	73	513	29	136	822	57	27	968	61
AMBIENT												
RELATED												
PROJECT												
TOTAL	100	635	95	73	513	29	136	822	57	27	968	61

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 271 B: 73

EastBound A: 515 B: 27

WestBound A: 440 B: 136

NorthBound A: 365 B: 100

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{365 + 73 + 136 + 515}{*1500} = 0.656 \quad LOS = B$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: ARBOR VITAE ST I/S No: 7

AM/PM: PM Comments:

COUNT DATE: 4/17/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	242	541	110	76	543	108	136	297	33	121	570	284
AMBIENT												
RELATED												
PROJECT												
TOTAL	242	541	110	76	543	108	136	297	33	121	570	284

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	1 0 1 0 1 0 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	326	76
EastBound	427	121
WestBound	330	136
NorthBound	271	242

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{242 + 326 + 136 + 427}{*1500} = 0.684 \qquad LOS = B$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: ARBOR VITAE ST I/S No: 8

AM/PM: PM Comments:

COUNT DATE: 4/17/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	176	524	200	136	746	70	63	343	95	78	420	195
AMBIENT												
RELATED												
PROJECT												
TOTAL	176	524	200	136	746	70	63	343	95	78	420	195

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	408	136
EastBound	308	78
WestBound	172	63
NorthBound	362	176

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{176 + 408 + 63 + 308}{1500} = 0.637 \qquad LOS = B$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: 111TH ST I/S No: 10

AM/PM: PM Comments:

COUNT DATE: 10/4/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	13	792	43	98	1032	80	53	45	88	91	79	20
AMBIENT												
RELATED												
PROJECT												
TOTAL	13	792	43	98	1032	80	53	45	88	91	79	20

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 1 0 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 556 B: 98

EastBound A: 99 B: 91

WestBound A: 96 B: 53

NorthBound A: 418 B: 13

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{13 + 556 + 96 + 91}{*1500} = 0.434 \quad LOS = A$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: CENTURY BLVD I/S No: 11

AM/PM: PM Comments:

COUNT DATE: 4/16/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	388	589	85	91	548	200	85	1182	124	159	1857	349
AMBIENT												
RELATED												
PROJECT												
TOTAL	388	589	85	91	548	200	85	1182	124	159	1857	349

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 1 0 0	2 0 2 0 0 1 0	1 0 3 0 1 0 0	1 0 3 0 1 0 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 274 B: 50

EastBound A: 552 B: 159

WestBound A: 327 B: 85

NorthBound A: 337 B: 213

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{213 + 274 + 85 + 552}{*1375} = 0.747 \quad LOS = C$$

Developed by Chun Wong, 12/94

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: EL SEGUNDO BLVD I/S No: 12

AM/PM: PM Comments:

COUNT DATE: 4/29/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	131	609	216	150	761	100	218	466	42	142	1734	328
AMBIENT												
RELATED												
PROJECT												
TOTAL	131	609	216	150	761	100	218	466	42	142	1734	328

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 2 0 0 1 0	2 0 2 0 1 0 0	1 0 3 0 0 1 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	381	150
EastBound	578	142
WestBound	169	120
NorthBound	413	131

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)
West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{413 + 150 + 120 + 578}{1375} = 0.917$$

LOS = E

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: IMPERIAL HWY I/S No: 13

AM/PM: PM Comments:

COUNT DATE: 1/31/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	138	483	333	422	734	150	141	409	330	214	914	241
AMBIENT												
RELATED												
PROJECT												
TOTAL	138	483	333	422	734	150	141	409	330	214	914	241

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 0 1 0	2 0 1 0 1 1 0	2 0 3 0 0 1 0	2 0 2 0 1 0 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	OLA	OLA	OLA	Auto

Critical Movements Diagram

	A	B
SouthBound	367	232
EastBound	385	118
WestBound	136	78
NorthBound	255	76

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)
West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{255 + 232 + 78 + 385}{1375} = 0.621$$

LOS = B

96PM

CalcaDB

August 29, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: MANCHESTER AV I/S No: 14

AM/PM: PM Comments:

COUNT DATE: 4/17/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	166	323	132	0	375	221	66	641	7	207	991	175
AMBIENT												
RELATED												
PROJECT												
TOTAL	166	323	132	0	375	221	66	641	7	207	991	175

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	0 0 2 0 0 1 0	1 0 2 0 0 1 0	1 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	<none>	Auto	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	188	0
EastBound	496	207
WestBound	321	66
NorthBound	228	166

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{228 + 188 + 66 + 496}{1425} = 0.643$$

LOS = B

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: ROSECRANS AV I/S No: 15

AM/PM: PM Comments:

COUNT DATE: 4/29/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	174	548	480	407	1232	323	618	1297	88	337	1569	128
AMBIENT												
RELATED												
PROJECT												
TOTAL	174	548	480	407	1232	323	618	1297	88	337	1569	128

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	2 0 2 0 1 0 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	518	407
EastBound	566	337
WestBound	462	340
NorthBound	480	174

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{480 + 407 + 340 + 566}{1375} = 1.304$$

LOS = F

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CENTINELA AV W/E: JEFFERSON BLVD I/S No: 18

AM/PM: PM Comments:

COUNT DATE: 4/30/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	517	0	384	0	651	395	444	794	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	517	0	384	0	651	395	444	794	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 3 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	<none>	<none>	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	140	284
EastBound	265	244
WestBound	326	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 284 + 326 + 244}{1425} = 0.599 \qquad LOS = A$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: CENTINELA AV I/S No: 22

AM/PM: PM Comments:

COUNT DATE: 4/23/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	417	1264	216	175	1623	143	347	480	174	164	596	529
AMBIENT												
RELATED												
PROJECT												
TOTAL	417	1264	216	175	1623	143	347	480	174	164	596	529

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 3 0 0 1 0	2 0 3 0 0 1 0	2 0 1 0 1 0 0	1 0 3 0 0 2 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	OLA

Critical Movements Diagram

	A	B
SouthBound	541	96
EastBound	199	164
WestBound	327	191
NorthBound	421	229

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{229 + 541 + 327 + 164}{1375} = 0.917 \qquad LOS = E$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: CENTURY BLVD I/S No: 26

AM/PM: PM Comments:

COUNT DATE: 4/22/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	173	388	470	183	577	390	129	767	270	181	1371	824
AMBIENT												
RELATED												
PROJECT												
TOTAL	173	388	470	183	577	390	129	767	270	181	1371	824

LANE							
NORTHBOUND	1	0	3	0	0	1	0
SOUTHBOUND	1	0	2	0	0	2	0
WESTBOUND	1	0	3	0	1	0	0
EASTBOUND	1	0	3	0	0	2	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	OLA
SOUTHBOUND	Prot-Var	OLA
WESTBOUND	Prot-Var	Auto
EASTBOUND	Prot-Var	OLA

Critical Movements Diagram

SouthBound A: 269 B: 183

EastBound A: 457 B: 181

WestBound A: 270 B: 129

NorthBound A: 341 B: 173

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{341 + 183 + 129 + 457}{*1375} = 0.737 \qquad LOS = C$$

Developed by Chun Wong 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: CENTURY BLVD I/S No: 27

AM/PM: PM Comments:

COUNT DATE: 4/15/96 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	3143	6	0	2937	80	677	37	364	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	3143	6	0	2937	80	677	37	364	0	0	0

LANE							
NORTHBOUND	0	0	3	0	1	0	0
SOUTHBOUND	0	0	4	0	0	1	0
WESTBOUND	1	1	0	0	0	2	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Split	Auto
EASTBOUND	<none>	<none>

Critical Movements Diagram

SouthBound A: 734 B: 0

EastBound A: 0 B: 0

WestBound A: 357 B: 357

NorthBound A: 787 B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{787 + 0 + 357 + 0}{*1500} = 0.693 \qquad LOS = B$$

Developed by Chun Wong 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 28

AM/PM: PM Comments:

COUNT DATE: 5/6/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	883	195	21	1230	0	924	0	9	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	883	195	21	1230	0	924	0	9	0	0	0

LANE:

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 0 0	0 1 1 0 0 0 0	1 0 0 0 0 0 1	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	<none>	<none>

Critical Movements Diagram

	A	B
SouthBound	668	21
EastBound	0	0
WestBound	467	467
NorthBound	539	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{0 + 668 + 467 + 0}{1500} = 0.757$$

LOS = C

Developed by Chun Wong, 12/94

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VISTA DEL MAR W/E: CULVER BLVD I/S No: 33

AM/PM: PM Comments:

COUNT DATE: 5/5/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	5	30	365	85	20	4	856	154	66	4	130	9
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	30	365	85	20	4	856	154	66	4	130	9

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 0 2 0	0 0 0 1 0 0 0	1 1 0 0 1 0 0	0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	109	85
EastBound	74	4
WestBound	220	471
NorthBound	35	5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{35 + 109 + 471 + 74}{*1375} = 0.431$$

LOS = A

Developed by Chun Wong, 12/94

96PM

August 28, 1997, Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: DOUGLAS ST W/E: IMPERIAL HWY I/S No: 34

AM/PM: PM Comments:

COUNT DATE: 4/16/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	153	37	381	74	0	63	0	618	48	45	694	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	153	37	381	74	0	63	0	618	48	45	694	0

LANE							
NORTHBOUND	2	0	2	0	0	2	0
SOUTHBOUND	1	0	0	0	0	1	1
WESTBOUND	0	0	2	0	1	0	0
EASTBOUND	1	0	3	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Split	Auto
SOUTHBOUND	Split	Auto
WESTBOUND	Prot-Var	Auto
EASTBOUND	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	23	46
EastBound	231	45
WestBound	222	0
NorthBound	210	84

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{210 + 46 + 222 + 45}{1375} = 0.380$$

LOS = A

Developed by Chun Wong, 12/94

96PM

August 28, 1997, Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: EL SEGUNDO BLVD I/S No: 35

AM/PM: PM Comments:

COUNT DATE: 4/16/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	247	1905	50	177	2701	56	560	233	128	44	360	203
AMBIENT												
RELATED												
PROJECT												
TOTAL	247	1905	50	177	2701	56	560	233	128	44	360	203

LANE							
NORTHBOUND	1	0	3	0	1	0	0
SOUTHBOUND	1	0	4	0	0	1	0
WESTBOUND	1	1	1	0	0	1	0
EASTBOUND	1	1	1	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	Auto
SOUTHBOUND	Prot-Var	Auto
WESTBOUND	Split	Auto
EASTBOUND	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	675	177
EastBound	180	44
WestBound	233	308
NorthBound	489	247

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{247 + 675 + 308 + 180}{1375} = 1.025$$

LOS = F

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VISTA DEL MAR W/E: GRAND AV I/S No: 36

AM/PM: PM Comments:

COUNT DATE: 4/30/97 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	0	478	80	69	1270	5	175	8	61	4	6	1
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	478	80	69	1270	5	175	8	61	4	6	1

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	638	69
EastBound	11	4
WestBound	92	92
NorthBound	279	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 638 + 92 + 11}{1500} = 0.494 \quad LOS = A$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: FLORENCE AV I/S No: 40

AM/PM: PM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	29	484	94	460	993	286	264	492	73	184	509	22
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	484	94	460	993	286	264	492	73	184	509	22

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	1	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	497	460
EastBound	266	184
WestBound	283	264
NorthBound	289	29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{289 + 497 + 264 + 266}{1375} = 0.957 \quad LOS = E$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: HIGHLAND AV/VISTA DEL MAR W/E: ROSECRANS AV I/S No: 43

AM/PM: PM Comments:

COUNT DATE: 5/6/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	8	348	78	32	919	495	172	79	323	43	80	34
AMBIENT												
RELATED												
PROJECT												
TOTAL	8	348	78	32	919	495	172	79	323	43	80	34

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 0 1 0	1 0 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 919 B: 32

EastBound A: 114 B: 43

WestBound A: 307 B: 172

NorthBound A: 213 B: 8

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{8 + 919 + 307 + 43}{1425} = 0.896 \qquad LOS = D$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: HOWARD HUGHES PKWY I/S No: 44

AM/PM: PM Comments:

COUNT DATE: 4/23/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1799	588	487	1931	0	613	0	76	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1799	588	487	1931	0	613	0	76	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 3 0 0 1 0	2 0 3 0 0 0 0	3 0 0 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>	Split	Auto	<none>	<none>

Critical Movements Diagram

SouthBound A: 644 B: 268

EastBound A: 0 B: 0

WestBound A: 0 B: 215

NorthBound A: 600 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{600 + 268 + 215 + 0}{*1425} = 0.690 \qquad LOS = B$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: I-105 FWY/CONTINENTAL CITY DR W/E: IMPERIAL HWY I/S No: 45

AM/PM: PM Comments:

COUNT DATE: 3/2/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	280	0	148	0	0	0	311	463	0	0	1070	830
AMBIENT												
RELATED												
PROJECT												
TOTAL	280	0	148	0	0	0	311	463	0	0	1070	830

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 0 0 0 2 0	0 0 0 0 0 0 0	1 0 3 0 0 0 0	0 0 2 0 1 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	OLA	<none>	<none>	Prot-Fix	<none>	Perm	OLA

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 475 B: 0

WestBound A: 154 B: 311

NorthBound A: 0 B: 154

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{154 + 0 + 311 + 475}{1425} = 0.660$$

LOS = B

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 FWY NB RAMPS W/E: IMPERIAL HWY I/S No: 46

AM/PM: PM Comments:

COUNT DATE: 5/6/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	112	0	134	0	0	0	0	363	166	0	854	114
AMBIENT												
RELATED												
PROJECT												
TOTAL	112	0	134	0	0	0	0	363	166	0	854	114

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 0 0 1	0 0 0 0 0 0 0	0 0 2 0 1 1 0	0 0 2 0 1 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	<none>	<none>	Perm	Free	Perm	Free

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 285 B: 0

WestBound A: 132 B: 0

NorthBound A: 134 B: 112

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{134 + 0 + 0 + 285}{1500} = 0.279$$

LOS = A

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MAIN ST W/E: IMPERIAL HWY I/S No: 47

AM/PM: PM Comments:

COUNT DATE: 4/30/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	328	0	509	0	0	0	853	877	0	0	570	403
AMBIENT												
RELATED												
PROJECT												
TOTAL	328	0	509	0	0	0	853	877	0	0	570	403

LANE: Northbound 2 0 0 0 0 1 0; Southbound 0 0 0 0 0 0 0; Westbound 1 0 2 0 0 0 0; Eastbound 0 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	<none>	<none>	Prot-Fix	<none>	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	313	0
WestBound	439	853
NorthBound	82	180

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{180 + 0 + 853 + 313}{1425} = 0.945$$

LOS = E

Developed by Chun Wong 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: I-105 FWY W/B OFF/NASH ST W/E: IMPERIAL HWY I/S No: 48

AM/PM: PM Comments:

COUNT DATE: 2/24/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	63	141	238	115	882	0	0	720	98
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	63	141	238	115	882	0	0	720	98

LANE: Northbound 0 0 0 0 0 0 0; Southbound 1 1 0 0 1 1 0; Westbound 2 0 3 0 0 0 0; Eastbound 0 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	<none>	<none>	Split	Auto	Prot-Fix	<none>	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	126	63
EastBound	273	0
WestBound	294	63
NorthBound	0	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 126 + 63 + 273}{*1425} = 0.254$$

LOS = A

Developed by Chun Wong, 12/94

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: IMPERIAL HWY I/S No: 49

AM/PM: PM Comments:

COUNT DATE: 4/30/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	656	0	249	0	649	736	126	334	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	656	0	249	0	649	736	126	334	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 1 0 0 0	1 0 0 1 0 1 0	1 0 2 0 0 1 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Prot-Fix
SIGNAL RTOR	Auto	OLA	Auto	Auto

Critical Movements Diagram

SouthBound A: 328 B: 328

EastBound A: 167 B: 126

WestBound A: 736 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 328 + 736 + 126}{1425} = 0.835 \quad LOS = D$$

Developed by Chun Wang, 12/94

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: IMPERIAL HWY I/S No: 50

AM/PM: PM Comments:

COUNT DATE: 2/2/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	102	1755	910	396	2432	82	208	329	481	200	204	90
AMBIENT												
RELATED												
PROJECT												
TOTAL	102	1755	910	396	2432	82	208	329	481	200	204	90

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	2 0 3 0 1 0 0	2 0 3 0 0 1 0	2 0 3 0 0 1 0
SIGNAL Phasing	Prot-Var	Prot-Var	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 629 B: 218

EastBound A: 68 B: 110

WestBound A: 372 B: 114

NorthBound A: 853 B: 102

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{853 + 218 + 372 + 110}{1375} = 1.129 \quad LOS = F$$

Developed by Chun Wang, 12/94

96PM

August 28, 1997 ,Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: VISTA DEL MAR W/E: IMPERIAL HWY I/S No: 51

AM/PM: PM Comments:

COUNT DATE: 2/23/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	359	205	98	929	0	549	0	130	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	359	205	98	929	0	549	0	130	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	1 0 1 0 1 0 0	1 1 0 0 0 1 0	0 0 0 1 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	465	98
EastBound	0	0
WestBound	275	275
NorthBound	180	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{0 + 465 + 275 + 0}{*1375} = 0.468 \qquad LOS = A$$

Developed by Chun Wong, 12/94

96PM

August 28, 1997 ,Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: IMPERIAL HWY I/S No: 52

AM/PM: PM Comments:

COUNT DATE: 2/16/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	42	136	140	183	400	254	19	325	167	200	808	222
AMBIENT												
RELATED												
PROJECT												
TOTAL	42	136	140	183	400	254	19	325	167	200	808	222

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 1 1 0	2 0 1 0 1 1 0	2 0 3 0 0 2 0	2 0 3 0 0 2 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	OLA	Prot-Var	OLA

Critical Movements Diagram

	A	B
SouthBound	218	101
EastBound	269	110
WestBound	108	10
NorthBound	92	23

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{23 + 218 + 10 + 269}{*1375} = 0.308 \qquad LOS = A$$

Developed by Chun Wong, 12/94

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 N/B RAMPS   W/E: JEFFERSON BLVD   I/S No: 54

AM/PM: PM   Comments:

COUNT DATE: 5/6/94   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	102	3	201	0	0	0	0	1085	242	275	784	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	102	3	201	0	0	0	0	1085	242	275	784	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 1 0 0 0	0 0 0 0 0 0 0	0 0 3 0 0 1 0	1 0 3 0 0 0 0
SIGNAL Phasing	Perm	<none>	Perm	Prot-Fix
SIGNAL RTOR	Auto	<none>	Auto	<none>

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 261 B: 275

WestBound A: 362 B: 0

NorthBound A: 204 B: 102

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{204 + 0 + 362 + 275}{1200} = 0.701 \qquad LOS = C$$

Developed by Chun Wong, 12/94

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 S/B RAMPS   W/E: JEFFERSON BLVD   I/S No: 55

AM/PM: PM   Comments:

COUNT DATE: 5/6/94   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	144	0	145	390	732	0	0	919	172
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	144	0	145	390	732	0	0	919	172

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	1 0 0 1 0 1 0	1 0 2 0 0 0 0	0 0 3 0 1 0 0
SIGNAL Phasing	<none>	Split	Prot-Fix	Perm
SIGNAL RTOR	<none>	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 96 B: 96

EastBound A: 273 B: 0

WestBound A: 366 B: 390

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 96 + 390 - 273}{1425} = 0.533 \qquad LOS = A$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 57

AM/PM: PM Comments:

COUNT DATE: 5/1/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	60	1829	409	277	1878	619	478	223	353	42	104	35
AMBIENT												
RELATED												
PROJECT												
TOTAL	60	1829	409	277	1878	619	478	223	353	42	104	35

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	3	0	0	1	0	2	0	3	0	0	1	0	2	0	2	0	0	1	0	1	0	2	0	1	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Var	OLA	Prot-Var	OLA	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 625 B: 152

EastBound A: 46 B: 42

WestBound A: 201 B: 263

NorthBound A: 610 B: 60

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{610 + 152 + 263 + 46}{1375} = 0.779$$

LOS = C

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: 111TH ST I/S No: 67

AM/PM: PM Comments:

COUNT DATE: 2/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	105	384	0	0	568	89	0	0	0	154	0	164
AMBIENT												
RELATED												
PROJECT												
TOTAL	105	384	0	0	568	89	0	0	0	154	0	164

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	<none>	Perm	Auto	<none>	<none>	Perm	Auto

Critical Movements Diagram

SouthBound A: 219 B: 0

EastBound A: 164 B: 85

WestBound A: 0 B: 0

NorthBound A: 192 B: 105

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{105 + 219 + 0 + 164}{*1500} = 0.255$$

LOS = A

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997, Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD | W/E: I-405 RAMPS S/O CENTURY BL | I/S No: 68

AM/PM: PM | Comments:

COUNT DATE: 5/7/94 | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	610	70	745	594	0	0	0	309	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	610	70	745	594	0	0	0	309	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 0 0	2 0 2 0 0 0 0	0 0 0 0 0 2 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Perm	<none>
SIGNAL RTOR	Auto	<none>	OLA	<none>

Critical Movements Diagram

	A	B
SouthBound	297	410
EastBound	0	0
WestBound	0	0
NorthBound	340	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{340 + 410 + 0 + 0}{{}^{*}1500} = 0.430 \qquad LOS = A$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997, Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD | W/E: I-405 FWY SB N/O IMPERIAL | I/S No: 69

AM/PM: PM | Comments:

COUNT DATE: 5/7/95 | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	14	460	47	154	707	0	73	0	49	0	1	5
AMBIENT												
RELATED												
PROJECT												
TOTAL	14	460	47	154	707	0	73	0	49	0	1	5

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	1 0 2 0 1 0 0	2 0 0 0 0 1 0	0 0 0 1 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	236	154
EastBound	6	0
WestBound	0	40
NorthBound	230	14

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{230 + 154 + 40 + 6}{{}^{*}1425} = 0.232 \qquad LOS = A$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: LENNOX BLVD I/S No: 71

AM/PM: PM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	434	87	0	602	100	89	0	51	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	434	87	0	602	100	89	0	51	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 0 0	1 0 3 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>	Split	Auto	<none>	<none>

Critical Movements Diagram

	A	B
SouthBound	201	0
EastBound	0	0
WestBound	51	49
NorthBound	261	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{261 + 0 + 51 + 0}{1425} = 0.219 \qquad LOS = A$$

Developed by Chun Wong 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: MANCHESTER AV I/S No: 72

AM/PM: PM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	31	366	136	307	871	67	408	872	114	18	736	75
AMBIENT												
RELATED												
PROJECT												
TOTAL	31	366	136	307	871	67	408	872	114	18	736	75

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 1 1 0 1 0 0	2 0 2 0 1 0 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	OLA	Split	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	313	307
EastBound	270	18
WestBound	329	224
NorthBound	251	31

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{251 + 313 + 224 + 270}{1375} = 0.769 \qquad LOS = C$$

Developed by Chun Wong 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 N/B RAMPS   W/E: LA TIJERA BLVD   I/S No: 78

AM/PM: PM   Comments:

COUNT DATE: 4/23/94   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	247	3	465	0	0	0	0	1577	163	382	1605	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	247	3	465	0	0	0	0	1577	163	382	1605	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	1	0	3	0	0	0	0

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	<none>	<none>	<none>	Perm	Auto	Prot-Fix	<none>

Critical Movements Diagram

SouthBound — A: 0 B: 0

EastBound — A: 535 B: 382

WestBound — A: 435 B: 0

NorthBound — A: 465 B: 247

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{465 + 0 + 435. + 382}{*1425} = 0.830$$

LOS = D

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 S/B RAMPS   W/E: LA TIJERA BLVD   I/S No: 79

AM/PM: PM   Comments:

COUNT DATE: 4/23/94   STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	245	0	360	310	1439	0	0	1726	206
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	245	0	360	310	1439	0	0	1726	206

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	3	0	1	0	0

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	<none>	<none>	Split	<none>	Prot-Fix	<none>	Perm	Auto

Critical Movements Diagram

SouthBound — A: 303 B: 245

EastBound — A: 483 B: 0

WestBound — A: 480 B: 310

NorthBound — A: 0 B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 303 + 310 + 483}{*1425} = 0.699$$

LOS = B

Developed by Chun Wong, 12/94

96PM

August 23, 1997 ,Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: LA TIJERA BLVD I/S No: 81

AM/PM: PM Comments:

COUNT DATE: 4/16/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	33	1553	0	24	1595	34	4	2	2	43	0	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	33	1553	0	24	1595	34	4	2	2	43	0	38

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0
SIGNAL Phasing	Prot-Var	Prot-Var	Split	Split
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	543	24
EastBound	29	22
WestBound	8	4
NorthBound	518	18

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{18 + 543 + 8 + 29}{1375} = 0.435$$ LOS = A

Developed by Chun Wong, 12/94

96PM

August 28, 1997 ,Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LA TIJERA BLVD W/E: MANCHESTER AV I/S No: 82

AM/PM: PM Comments:

COUNT DATE: 4/16/97 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	24	546	161	25	398	209	113	689	17	185	735	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	24	546	161	25	398	209	113	689	17	185	735	38

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	1 0 2 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	199	25
EastBound	387	185
WestBound	353	113
NorthBound	273	24

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{273 + 25 + 353 + 185}{*1375} = 0.538$$ LOS = A

Developed by Chun Wong, 12/94

96PM

August 28, 1997 ,Thursday 02:40:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD | W/E: LA TIJERA BLVD | I/S No: 83

AM/PM: PM | Comments:

COUNT DATE: 4/15/94 | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	118	1534	137	100	1410	76	238	239	86	80	244	50
AMBIENT												
RELATED												
PROJECT												
TOTAL	118	1534	137	100	1410	76	238	239	86	80	244	50

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0
SIGNAL Phasing	Perm	Perm	Prot-Fix	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	495	100
EastBound	122	80
WestBound	163	238
NorthBound	557	118

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)
West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{557 + 100 + 238 + 122}{*1425} = 0.644$$

LOS = B

Developed by Chun Wong, 12/94

96PM

August 28, 1997 ,Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: 83RD ST | I/S No: 87

AM/PM: PM | Comments:

COUNT DATE: 4/22/94 | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	32	1733	31	225	1908	209	47	56	167	108	51	29
AMBIENT												
RELATED												
PROJECT												
TOTAL	32	1733	31	225	1908	209	47	56	167	108	51	29

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 0 1 0	1 0 0 0 1 0 0
SIGNAL Phasing	Perm	Prot-Fix	Perm	Prot-Fix
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	706	225
EastBound	80	108
WestBound	56	47
NorthBound	588	32

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)
West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{588 + 225 + 56 + 108}{*1375} = 0.641$$

LOS = B

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD	W/E: MANCHESTER AV	I/S No: 88	
AM/PM: PM	Comments:		
COUNT DATE: 4/22/01	STUDY DATE:	GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	82	1494	127	287	1631	186	165	404	265	132	343	79
AMBIENT												
RELATED												
PROJECT												
TOTAL	82	1494	127	287	1631	186	165	404	265	132	343	79

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 2 0 0 1 0	1 0 2 0 0 1 0
SIGNAL Phasing	Perm	Prot-Fix	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	606	287
EastBound	172	132
WestBound	202	165
NorthBound	540	82

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{540 + 287 + 165 + 172}{*1425} = 0.747 \qquad LOS = C$$

Developed by Chun Wong, 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD	W/E: LINCOLN BLVD	I/S No: 93	
AM/PM: PM	Comments:		
COUNT DATE: 4/15/94	STUDY DATE:	GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	1821	0	18	0	1607	1803	0	1562	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	1821	0	18	0	1607	1803	0	1562	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	3 0 0 0 0 0 1	0 0 3 0 0 3 0	0 0 3 0 0 0 0
SIGNAL Phasing	<none>	Perm	Perm	Perm
SIGNAL RTOR	<none>	<none>	Free	<none>

Critical Movements Diagram

	A	B
SouthBound	460	460
EastBound	521	0
WestBound	536	0
NorthBound	0	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 460 + 536 + 0}{*1500} = 0.594 \qquad LOS = A$$

Developed by Chun Wong, 12/94

96PM

August 28, 1997 ,Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: TEALE ST I/S No: 94

AM/PM: PM Comments:

COUNT DATE: 5/1/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	0	2237	7	17	2345	0	3	0	22	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2237	7	17	2345	0	3	0	22	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 0 1 0	1 0 2 0 0 0 0	1 0 0 0 0 1 1	0 0 0 0 0 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Prot-Fix	<none>	Split	OLA	<none>	<none>

Critical Movements Diagram

	A	B
SouthBound	1173	17
EastBound	0	0
WestBound	0	3
NorthBound	1119	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 1173 + 3 + 0}{1425} = 0.825 \qquad LOS = D$$

Developed by Chun Wong, 12/94

96PM

August 28, 1997 ,Thursday 02:40:16 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: MANCHESTER AV I/S No: 98

AM/PM: PM Comments:

COUNT DATE: 5/1/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	20	366	185	350	535	40	132	73	212	20	52	36
AMBIENT												
RELATED												
PROJECT												
TOTAL	20	366	185	350	535	40	132	73	212	20	52	36

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 0 1 0	0 1 0 0 1 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	288	350
EastBound	64	20
WestBound	73	132
NorthBound	276	20

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{276 + 350 + 132 + 64}{1375} = 0.528 \qquad LOS = A$$

Developed by Chun Wong, 12/94

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: MANCHESTER AV I/S No: 99

AM/PM: PM Comments:

COUNT DATE: 4/16/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	86	1601	78	99	1522	219	103	773	205	137	780	128
AMBIENT												
RELATED												
PROJECT												
TOTAL	86	1601	78	99	1522	219	103	773	205	137	780	128

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	580	99
EastBound	454	137
WestBound	489	103
NorthBound	560	86

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{86 + 580 + 469 + 137}{*1375} = 0.870 \qquad LOS = D$$

Developed by Chun Wong 12/94

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: MARIPOSA AV I/S No: 100

AM/PM: PM Comments:

COUNT DATE: 4/16/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	118	2357	57	165	2720	130	111	183	74	84	60	31
AMBIENT												
RELATED												
PROJECT												
TOTAL	118	2357	57	165	2720	130	111	183	74	84	60	31

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	1 0 1 0 0 1 0	1 0 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	713	91
EastBound	91	84
WestBound	183	111
NorthBound	589	118

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{118 + 713 + 183 + 84}{1375} = 0.799 \qquad LOS = C$$

Developed by Chun Wong 12/94

56PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: WESTCHESTER PKWY I/S No: 101

AM/PM: PM Comments:

COUNT DATE: 5/1/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	366	135	49	471	0	196	0	99	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	366	135	49	471	0	196	0	99	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 2 0	1 0 2 0 0 0 0	2 0 0 0 0 1 1	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	OLA	Prot-Fix	<none>	Split	OLA	<none>	<none>

Critical Movements Diagram

SouthBound A: 236 B: 49

EastBound A: 0 B: 0

WestBound A: 25 B: 74

NorthBound A: 183 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C = (0 + 236 + 74 + 0) / *1425 = 0.148 LOS = A

Developed by Chun Wong 12/94

96PM

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: ROSECRANS AV I/S No: 103

AM/PM: PM Comments:

COUNT DATE: 5/6/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	325	1297	296	417	3054	172	256	681	480	167	521	193
AMBIENT												
RELATED												
PROJECT												
TOTAL	325	1297	296	417	3054	172	256	681	480	167	521	193

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	1 0 2 0 0 1 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	<none>

Critical Movements Diagram

SouthBound A: 1075 B: 417

EastBound A: 238 B: 167

WestBound A: 341 B: 256

NorthBound A: 432 B: 325

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C = (325 + 1075 + 341 + 167) / 1375 = 1.388 LOS = F

Developed by Chun Wong 12/94

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: I-105 OFF RAMP N/O IMPERIAL HW I/S No: 105

AM/PM: PM Comments:

COUNT DATE: 5/6/94 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2462	0	0	1981	2092	0	0	1556	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2462	0	0	1981	2092	0	0	1556	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 3 0 0 0 0	0 0 1 0 1 1 0	0 0 0 0 0 3 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	<none>	Perm	<none>
SIGNAL RTOR	<none>	<none>	<none>	<none>

Critical Movements Diagram

	A	B
SouthBound	1358	0
EastBound	0	0
WestBound	545	0
NorthBound	821	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)
West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{821 + 1358 + 545 + 0}{1500} = \cancel{1.268} \quad .91$$

LOS = ~~F~~ E

Developed by Chun Wong, 12/94

CalcaDB

August 28, 1997 ,Thursday 02:40:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: 76TH/77TH ST I/S No: 106

AM/PM: PM Comments:

COUNT DATE: 4/16/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	74	1569	16	103	1714	276	42	53	54	185	72	49
AMBIENT												
RELATED												
PROJECT												
TOTAL	74	1569	16	103	1714	276	42	53	54	185	72	49

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 0 0 1 0 0	2 0 1 0 0 1 0
SIGNAL Phasing	Perm	Perm	Perm	Prot-Fix
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	663	103
EastBound	72	102
WestBound	107	42
NorthBound	528	74

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)
West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{74 + 663 + 107 + 102}{*1425} = 0.594$$

LOS = A

Developed by Chun Wong, 12/94

CalcaDB

November 17, 1997 ,Monday 08:50:32 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: WESTCHESTER PKWY I/S No: 109

AM/PM: PM Comments:

COUNT DATE: 4/15/97 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	101	1723	62	116	1493	44	195	275	150	25	233	45
AMBIENT												
RELATED												
PROJECT												
TOTAL	101	1723	62	116	1493	44	195	275	150	25	233	45

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound — A: 512 B: 116

EastBound — A: 139 B: 25

WestBound — A: 213 B: 195

NorthBound — A: 595 B: 101

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{595 + 116 + 195 + 139}{*1500} = 0.627$$

LOS = B

96PM

CalcaDB

November 17, 1997 ,Monday 08:50:32 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: I-405 SB RAMPS N/O CENTURY I/S No: 111

AM/PM: PM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	747	216	239	880	0	237	0	487	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	747	216	239	880	0	237	0	487	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	1 0 2 0 0 0 0	1 0 0 0 0 0 1	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	<none>
SIGNAL RTOR	OLA	Auto	Auto	<none>

Critical Movements Diagram

SouthBound — A: 440 B: 239

EastBound — A: 0 B: 0

WestBound — A: 487 B: 237

NorthBound — A: 374 B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{374 + 239 + 487 + 0}{*1500} = 0.663$$

LOS = B

96PM

CalcaDB

November 17, 1997 ,Monday 08:50:32 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 NB OFF-RAMP W/E: CENTURY BLVD I/S No: 307

AM/PM: PM Comments:

COUNT DATE: 4/17/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	506	0	284	1	0	24	0	761	18	0	1410	693
AMBIENT												
RELATED												
PROJECT												
TOTAL	506	0	284	1	0	24	0	761	18	0	1410	693

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 0 0 0 1 0	0 0 0 0 0 0 1	0 0 2 0 1 0 0	1 0 2 0 1 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Split	<none>	<none>	Auto	<none>	Auto	Perm	Free

Critical Movements Diagram

	A	B
SouthBound	25	1
EastBound	526	0
WestBound	260	0
NorthBound	284	278

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{284 + 25 + 260 + 526}{1500} = 0.557$$

LOS = A

Developed by Chun Wong, 12/94

96PM

CalcaDB

November 17, 1997 ,Monday 08:50:32 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: EL SEGUNDO BLVD I/S No: 312

AM/PM: PM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	795	0	275	0	533	180	107	1146	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	795	0	275	0	533	180	107	1146	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 0 0 0 0 0	2 0 0 0 0 2 0	0 0 2 0 1 0 0	1 0 3 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	<none>	<none>	Split	Auto	Perm	Auto	Prot-Fix	<none>

Critical Movements Diagram

	A	B
SouthBound	97	437
EastBound	382	107
WestBound	238	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 437 + 0 + 382}{1425} = 0.575$$

LOS = A

Developed by Chun Wong, 12/94

96PM

CalcaDB

November 17, 1997 ,Monday 08:50:32 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: 120TH ST I/S No: 313

AM/PM: PM Comments:

COUNT DATE: 4/22/95 STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	35	61	35	167	278	56	42	123	33	21	239	80
AMBIENT												
RELATED												
PROJECT												
TOTAL	35	61	35	167	278	56	42	123	33	21	239	80

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

SouthBound
A: 167
B: 167

EastBound
A: 160
B: 21

WestBound
A: 78
B: 42

NorthBound
A: 48
B: 35

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{48 + 167 + 42 + 160}{1375} = 0.303$$

LOS = A

Developed by Clam Wong, 12/94

REV-OP-96

November 19, 1997 ,Wednesday 09:16:54 AM

CalcaDB

SUMMARY SHEET

REC NO.	INTERSECTIONS	IS NO.	AM/PM	V/C	LOS
1	AIRPORT BLVD & ARBOR VITAE ST	3	AM	0.593	A
2	AIRPORT BLVD & CENTURY BLVD	4	AM	0.786	C
3	AIRPORT BLVD & LA TIJERA BLVD	5	AM	0.608	B
4	AIRPORT BLVD & MANCHESTER AV	6	AM	0.791	C
5	AVIATION BLVD & ARBOR VITAE ST	7	AM	0.732	C
6	LA CIENEGA BLVD & ARBOR VITAE ST	8	AM	0.731	C
7	AVIATION BLVD & 111TH ST	10	AM	0.856	D
8	AVIATION BLVD & CENTURY BLVD	11	AM	1.477	F
9	AVIATION BLVD & EL SEGUNDO BLVD	12	AM	0.701	C
10	AVIATION BLVD & IMPERIAL HWY	13	AM	0.870	D
11	AVIATION BLVD & MANCHESTER AV	14	AM	1.087	F
12	AVIATION BLVD & ROSECRANS AV	15	AM	1.169	F
13	CENTINELA AV & JEFFERSON BLVD	18	AM	0.658	B
14	SEPULVEDA BLVD & CENTINELA AV	22	AM	0.676	B
15	LA CIENEGA BLVD & CENTURY BLVD	26	AM	0.562	A
16	SEPULVEDA BLVD & CENTURY BLVD	27	AM	0.597	A
17	CULVER BLVD & JEFFERSON BLVD	28	AM	0.618	B
18	CULVER BLVD & VISTA DEL MAR	33	AM	0.300	A
19	DOUGLAS ST & IMPERIAL HWY	34	AM	0.435	A
20	SEPULVEDA BLVD & EL SEGUNDO BLVD	35	AM	0.774	C
21	VISTA DEL MAR & GRAND AV	36	AM	0.356	A
22	LA CIENEGA BLVD & FLORENCE AV	40	AM	1.409	F
23	HIGHLAND AV/VISTA DEL MAR & ROSECRANS AV	43	AM	0.806	D
24	SEPULVEDA BLVD & HOWARD HUGHES PKWY	44	AM	0.543	A
25	I-105 FWY/CONTINENTAL CITY DR & IMPERIAL HWY	45	AM	0.676	B
26	I-405 FWY NB RAMPS & IMPERIAL HWY	46	AM	0.573	A
27	MAIN ST & IMPERIAL HWY	47	AM	0.547	A
28	I-105 FWY W/B OFF/NASH ST & IMPERIAL HWY	48	AM	0.338	A
29	PERSHING DR & IMPERIAL HWY	49	AM	0.623	B
30	SEPULVEDA BLVD & IMPERIAL HWY	50	AM	1.008	F
31	VISTA DEL MAR & IMPERIAL HWY	51	AM	0.542	A
32	LA CIENEGA BLVD & IMPERIAL HWY	52	AM	0.536	A
33	I-405 N/B RAMPS & JEFFERSON BLVD	54	AM	0.561	A
34	I-405 S/B RAMPS & JEFFERSON BLVD	55	AM	0.411	A
35	LINCOLN BLVD & JEFFERSON BLVD	57	AM	0.623	B
36	LA CIENEGA BLVD & 111TH ST	67	AM	0.675	B
37	LA CIENEGA BLVD & I-405 RAMPS S/O CENTURY BL	68	AM	0.573	A
38	LA CIENEGA BLVD & I-405 FWY SB N/O IMPERIAL	69	AM	0.475	A

REV-OP

November 19, 1997 ,Wednesday 09:16:54 AM

CalcaDB

SUMMARY SHEET

REC NO.	INTERSECTIONS	IS NO.	AM/PM	V/C	LOS
39	LA CIENEGA BLVD & LENNOX BLVD	71	AM	0.752	C
40	LA CIENEGA BLVD & MANCHESTER AV	72	AM	1.061	F
41	I-405 N/B RAMPS & LA TIJERA BLVD	78	AM	0.559	A
42	I-405 S/B RAMPS & LA TIJERA BLVD	79	AM	0.418	A
43	LINCOLN BLVD & LA TIJERA BLVD	81	AM	0.215	A
44	LA TIJERA BLVD & MANCHESTER AV	82	AM	0.537	A
45	SEPULVEDA BLVD & LA TIJERA BLVD	83	AM	0.318	A
46	LINCOLN BLVD & 83RD ST	87	AM	0.722	C
47	LINCOLN BLVD & MANCHESTER AV	88	AM	0.571	A
48	SEPULVEDA BLVD & LINCOLN BLVD	93	AM	0.425	A
49	LINCOLN BLVD & TEALE ST	94	AM	0.554	A
50	PERSHING DR & MANCHESTER AV	98	AM	0.211	A
51	SEPULVEDA BLVD & MANCHESTER AV	99	AM	0.659	B
52	SEPULVEDA BLVD & MARIPOSA AV	100	AM	1.074	F
53	PERSHING DR & WESTCHESTER PKWY	101	AM	0.090	A
54	SEPULVEDA BLVD & ROSECRANS AV	103	AM	1.412	F
55	SEPULVEDA BLVD & I-105 OFF RAMP N/O IMPERIAL HW	105	AM	[illegible] ~~1.234~~	~~F~~ D
56	SEPULVEDA BLVD & 76TH/77TH ST	106	AM	0.658	B
57	SEPULVEDA BLVD & WESTCHESTER PKWY	109	AM	0.439	A
58	LA CIENEGA BLVD & I-405 SB RAMPS N/O CENTURY	111	AM	0.712	C
59	I-405 NB OFF-RAMP & CENTURY BLVD	307	AM	0.444	A
60	LA CIENEGA BLVD & EL SEGUNDO BLVD	312	AM	0.404	A
61	LA CIENEGA BLVD & 120TH ST	313	AM	0.317	A

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD W/E: ARBOR VITAE ST I/S No: 3

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	76	458	317	61	897	97	217	356	55	82	657	270
AMBIENT												
RELATED												
PROJECT												
TOTAL	76	458	317	61	897	97	217	356	55	82	657	270

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 3 0 0 1 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	299	61
EastBound	329	82
WestBound	206	217
NorthBound	386	76

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{386 + 61 + 217 + 329}{*1500} = 0.593 \qquad LOS = A$$

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD W/E: CENTURY BLVD I/S No: 4

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	77	39	17	199	91	649	27	1449	148	321	1070	45
AMBIENT												
RELATED												
PROJECT												
TOTAL	77	39	17	199	91	649	27	1449	148	321	1070	45

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	2 1 1 0 0 1 0	1 0 4 0 0 1 0	2 0 4 0 1 0 0
SIGNAL Phasing	Split	Split	Prot-Var	Prot-Var
SIGNAL RTOR	Auto	Auto	OLA	Auto

Critical Movements Diagram

	A	B
SouthBound	561	73
EastBound	223	177
WestBound	362	27
NorthBound	20	77

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{77 + 561 + 362 + 177}{*1375} = 0.786 \qquad LOS = C$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD W/E: LA TIJERA BLVD I/S No: 5

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	299	78	378	7	94	25	636	865	9	26	535	113
AMBIENT												
RELATED												
PROJECT												
TOTAL	299	78	378	7	94	25	636	865	9	26	535	113

LANE							
NORTHBOUND	0	1	0	0	1	1	0
SOUTHBOUND	0	1	0	0	1	0	0
WESTBOUND	2	0	1	0	1	0	0
EASTBOUND	1	0	2	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	<none>
SOUTHBOUND	Perm	Auto
WESTBOUND	Prot-Var	Auto
EASTBOUND	Prot-Var	Auto

Critical Movements Diagram

SouthBound A: 67 B: 7

EastBound A: 216 B: 26

WestBound A: 437 B: 350

NorthBound A: 228 B: 299

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{299 + 67 + 350 + 216}{*1375} = 0.608$$ LOS = B

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AIRPORT BLVD W/E: MANCHESTER AV I/S No: 6

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	40	454	159	91	730	33	283	1028	237	50	1099	72
AMBIENT												
RELATED												
PROJECT												
TOTAL	40	454	159	91	730	33	283	1028	237	50	1099	72

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	1	0	1	0	1	0	0
EASTBOUND	1	0	1	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

SouthBound A: 382 B: 91

EastBound A: 586 B: 50

WestBound A: 633 B: 283

NorthBound A: 307 B: 40

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{40 + 382 + 283 + 586}{*1500} = 0.791$$ LOS = C

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: ARBOR VITAE ST I/S No: 7

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	150	384	28	57	527	351	33	193	34	387	474	284
AMBIENT												
RELATED												
PROJECT												
TOTAL	150	384	28	57	527	351	33	193	34	387	474	284

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	1 0 1 0 1 0 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	439	57
EastBound	379	387
WestBound	227	33
NorthBound	192	150

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{150 + 439 + 227 + 387}{{}^{*}1500} = 0.732$$

LOS = C

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: ARBOR VITAE ST I/S No: 8

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	58	692	213	239	600	21	163	177	316	75	405	76
AMBIENT												
RELATED												
PROJECT												
TOTAL	58	692	213	239	600	21	163	177	316	75	405	76

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	311	239
EastBound	241	75
WestBound	316	163
NorthBound	453	58

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{453 + 239 + 163 + 241}{1500} = 0.731$$

LOS = C

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD | W/E: 111TH ST | I/S No: 10

AM/PM: AM | Comments:

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	68	1331	180	265	1068	72	239	185	202	46	148	21
AMBIENT												
RELATED												
PROJECT												
TOTAL	68	1331	180	265	1068	72	239	185	202	46	148	21

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound — A: 570, B: 265

EastBound — A: 131, B: 46

WestBound — A: 325, B: 239

NorthBound — A: 756, B: 68

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{756 + 265 + 325 + 46}{*1500} = 0.858 \qquad LOS = D$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD | W/E: CENTURY BLVD | I/S No: 11

AM/PM: AM | Comments:

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1344	389	44	29	522	327	37	1017	11	115	910	1082
AMBIENT												
RELATED												
PROJECT												
TOTAL	1344	389	44	29	522	327	37	1017	11	115	910	1082

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	1	0	1	0	0	2	0	2	0	0	1	0	1	0	3	0	1	0	0	1	0	3	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

SouthBound — A: 269, B: 16

EastBound — A: 1082, B: 115

WestBound — A: 257, B: 37

NorthBound — A: 217, B: 739

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{739 + 269 + 37 + 1082}{*1375} = 1.477 \qquad LOS = F$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: EL SEGUNDO BLVD I/S No: 12

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	241	340	165	124	188	100	188	1074	229	153	1022	139
AMBIENT												
RELATED												
PROJECT												
TOTAL	241	340	165	124	188	100	188	1074	229	153	1022	139

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 2 0 0 1 0	2 0 2 0 1 0 0	1 0 3 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

SouthBound A: 94 B: 124

EastBound A: 341 B: 153

WestBound A: 434 B: 103

NorthBound A: 253 B: 241

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{253 + 124 + 434 + 153}{1375} = 0.701 \qquad LOS = C$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: IMPERIAL HWY I/S No: 13

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	87	362	77	817	65	469	15	398	871	438	714	17
AMBIENT												
RELATED												
PROJECT												
TOTAL	87	362	77	817	65	469	15	398	871	438	714	17

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 0 1 0	2 0 1 0 1 1 0	2 0 3 0 0 1 0	2 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	OLA	Prot-Var	OLA	Prot-Var	OLA	Prot-Var	Auto

Critical Movements Diagram

SouthBound A: 65 B: 449

EastBound A: 244 B: 241

WestBound A: 422 B: 8

NorthBound A: 181 B: 48

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{181 + 449 + 422 + 241}{*1375} = 0.870 \qquad LOS = D$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: MANCHESTER AV I/S No: 14

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	466	341	0	0	518	352	204	1006	20	321	1026	218
AMBIENT												
RELATED												
PROJECT *												
TOTAL	466	341	0	0	518	352	204	1006	20	321	1026	218

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 1 0 1 0 0	0 0 2 0 0 1 0	1 0 2 0 0 1 0	1 0 2 0 0 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	<none>	Auto	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	259	0
EastBound	513	321
WestBound	503	204
NorthBound	171	466

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{466 + 259 + 503 + 321}{1425} = 1.087$$

LOS = F

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: AVIATION BLVD W/E: ROSECRANS AV I/S No: 15

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	200	366	557	189	317	126	356	1525	242	273	1303	133
AMBIENT												
RELATED												
PROJECT												
TOTAL	200	366	557	189	317	126	356	1525	242	273	1303	133

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 2 0 1 0 0	1 0 2 0 1 0 0	2 0 2 0 1 0 0	1 0 2 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	148	189
EastBound	479	273
WestBound	589	196
NorthBound	557	200

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{557 + 189 + 589 + 273}{1375} = 1.169$$

LOS = F

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CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: CENTINELA AV W/E: JEFFERSON BLVD I/S No: 18

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	440	0	498	0	647	627	564	415	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	440	0	498	0	647	627	564	416	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 3 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	<none>	<none>	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 168 B: 242

EastBound A: 138 B: 310

WestBound A: 385 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 242 + 385 + 310}{1425} = 0.658$$

LOS = B

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: CENTINELA AV I/S No: 22

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	742	584	249	94	1009	166	133	249	50	35	169	445
AMBIENT												
RELATED												
PROJECT												
TOTAL	742	584	249	94	1009	166	133	249	50	35	169	445

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 3 0 0 1 0	2 0 3 0 0 1 0	2 0 1 0 1 0 0	1 0 3 0 0 2 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	OLA

Critical Movements Diagram

SouthBound A: 336 B: 52

EastBound A: 56 B: 35

WestBound A: 150 B: 73

NorthBound A: 212 B: 408

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{408 + 336 + 150 + 35}{1375} = 0.676$$

LOS = B

Developed by Chun Wong, 12/94

REV-OP

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November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: CENTURY BLVD I/S No: 26

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	177	622	313	175	763	473	177	424	172	123	400	466
AMBIENT												
RELATED												
PROJECT												
TOTAL	177	622	313	175	763	473	177	424	172	123	400	466

LANE							
NORTHBOUND	1	0	3	0	0	1	0
SOUTHBOUND	1	0	2	0	0	2	0
WESTBOUND	1	0	3	0	1	0	0
EASTBOUND	1	0	3	0	0	2	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	OLA
SOUTHBOUND	Prot-Var	OLA
WESTBOUND	Prot-Var	Auto
EASTBOUND	Prot-Var	OLA

Critical Movements Diagram

	A	B
SouthBound	382	175
EastBound	133	123
WestBound	172	177
NorthBound	207	177

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{177 + 382 + 177 + 133}{*1375} = 0.562$$

LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: CENTURY BLVD I/S No: 27

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	3955	0	0	2397	26	21	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	3955	0	0	2397	26	21	0	3	0	0	0

LANE							
NORTHBOUND	0	0	3	0	1	0	0
SOUTHBOUND	0	0	4	0	0	1	0
WESTBOUND	1	1	0	0	0	2	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Split	Auto
EASTBOUND	<none>	<none>

Critical Movements Diagram

	A	B
SouthBound	599	0
EastBound	0	0
WestBound	11	11
NorthBound	989	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{989 + 0 + 11 + 0}{*1500} = 0.597$$

LOS = A

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REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 28

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	346	588	2	334	0	673	0	0	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	346	588	2	334	0	673	0	0	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 0 0	0 1 1 0 0 0 0	1 0 0 0 0 0 1	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Split	<none>
SIGNAL RTOR	Auto	Auto	Auto	<none>

Critical Movements Diagram

	A	B
SouthBound	171	2
EastBound	0	0
WestBound	337	337
NorthBound	588	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{588 + 2 + 337 + 0}{1500} = 0.618$$

LOS = B

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: VISTA DEL MAR I/S No: 33

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	18	588	24	30	0	460	0	54	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	18	588	24	30	0	460	0	54	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 1 0 2 0	0 0 0 1 0 0 0	1 1 0 0 1 0 0	0 1 0 0 1 0 0
SIGNAL Phasing	Split	Split	Split	Split
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	54	24
EastBound	0	0
WestBound	54	253
NorthBound	202	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{202 + 54 + 253 + 0}{*1376} = 0.300$$

LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: DOUGLAS ST W/E: IMPERIAL HWY I/S No: 34

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	9	10	321	187	0	12	0	748	172	11	626	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	9	10	321	187	0	12	0	748	172	11	626	0

LANE							
NORTHBOUND	2	0	2	0	0	2	0
SOUTHBOUND	1	0	0	0	0	1	1
WESTBOUND	0	0	2	0	1	0	0
EASTBOUND	1	0	3	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Split	Auto
SOUTHBOUND	Split	Auto
WESTBOUND	Prot-Var	Auto
EASTBOUND	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	6	103
EastBound	209	11
WestBound	307	0
NorthBound	177	5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{177 + 103 + 307 + 11}{1375} = 0.435$$

LOS = A

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REV-OP

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November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: EL SEGUNDO BLVD I/S No: 35

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	49	1530	159	243	1786	38	520	124	438	51	129	108
AMBIENT												
RELATED												
PROJECT												
TOTAL	49	1530	159	243	1786	38	520	124	438	51	129	108

LANE							
NORTHBOUND	1	0	3	0	1	0	0
SOUTHBOUND	1	0	4	0	0	1	0
WESTBOUND	1	1	1	0	0	1	0
EASTBOUND	1	1	1	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	Auto
SOUTHBOUND	Prot-Var	Auto
WESTBOUND	Split	Auto
EASTBOUND	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	447	243
EastBound	83	61
WestBound	316	286
NorthBound	422	49

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{422 + 243 + 316 + 83}{1375} = 0.774$$

LOS = C

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VISTA DEL MAR W/E: GRAND AV I/S No: 36

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	465	239	96	331	0	171	0	82	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	465	239	96	331	0	171	0	82	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	166	96
EastBound	0	0
WestBound	86	86
NorthBound	352	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{352 + 96 + 86 + 0}{1500} = 0.356 \qquad LOS = A$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: FLORENCE AV I/S No: 40

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	68	1014	89	172	1534	492	361	450	70	359	370	131
AMBIENT												
RELATED												
PROJECT												
TOTAL	68	1014	89	172	1534	492	361	450	70	359	370	131

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	1	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	767	172
EastBound	251	359
WestBound	260	361
NorthBound	552	68

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{552 + 767 + 260 + 359}{1375} = 1.409 \qquad LOS = F$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: HIGHLAND AV/VISTA DEL MAR W/E: ROSECRANS AV I/S No: 43

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	464	68	602	330	0	43	0	581	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	464	68	602	330	0	43	0	581	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 1 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 0 1 0	1 0 0 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	330	602
EastBound	0	0
WestBound	280	43
NorthBound	266	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{266 + 602 + 280 + 0}{1425} = 0.806$$

LOS = D

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:06:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: HOWARD HUGHES PKWY I/S No: 44

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1412	576	264	1325	0	733	0	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1412	576	264	1325	0	733	0	165	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 3 0 0 1 0	2 0 3 0 0 0 0	3 0 0 0 0 1 0	0 0 0 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Prot-Fix	<none>	Split	Auto	<none>	<none>

Critical Movements Diagram

	A	B
SouthBound	442	145
EastBound	0	0
WestBound	92	257
NorthBound	471	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{471 + 145 + 257 + 0}{*1425} = 0.543$$

LOS = A

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REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-105 FWY/CONTINENTAL CITY DR W/E: IMPERIAL HWY I/S No: 45

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	902	0	111	0	0	0	65	380	0	0	839	767
AMBIENT												
RELATED												
PROJECT												
TOTAL	902	0	111	0	0	0	65	380	0	0	839	767

LANE	NB							SB							WB							EB						
	2	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	2	0	1	1	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Split	OLA	<none>	<none>	Prot-Fix	<none>	Perm	OLA

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 402 B: 0

WestBound A: 127 B: 65

NorthBound A: 0 B: 496

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{496 + 0 + 65 + 402}{1425} = 0.676$$

LOS = B

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REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 FWY NB RAMPS W/E: IMPERIAL HWY I/S No: 46

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	883	0	97	0	0	0	0	1001	0	0	949	532
AMBIENT												
RELATED												
PROJECT												
TOTAL	883	0	97	0	0	0	0	1001	0	0	949	532

LANE	NB							SB							WB							EB						
	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	1	1	0	0	0	2	0	1	1	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Split	Auto	<none>	<none>	Perm	Free	Perm	Free

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 370 B: 0

WestBound A: 334 B: 0

NorthBound A: 490 B: 490

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{490 + 0 + 0 + 370}{1500} = 0.573$$

LOS = A

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REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MAIN ST W/E: IMPERIAL HWY I/S No: 47

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	138	0	205	0	0	0	239	993	0	0	910	88
AMBIENT												
RELATED												
PROJECT												
TOTAL	138	0	205	0	0	0	239	993	0	0	910	88

LANE: NORTHBOUND 2 0 0 0 0 1 0; SOUTHBOUND 0 0 0 0 0 0 0; WESTBOUND 1 0 2 0 0 0 0; EASTBOUND 0 0 2 0 0 1 0

SIGNAL	Phasing	RTOR
NORTHBOUND	Split	Auto
SOUTHBOUND	<none>	<none>
WESTBOUND	Prot-Fix	<none>
EASTBOUND	Perm	Auto

Critical Movements Diagram

SouthBound — A: 0 B: 0

EastBound — A: 455 B: 0

WestBound — A: 497 B: 239

NorthBound — A: 85 B: 76

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{85 + 0 + 239 + 455}{1425} = 0.547$$

LOS = A

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CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-105 FWY W/B OFF/NASH ST W/E: IMPERIAL HWY I/S No: 48

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	0	0	0	120	470	255	196	568	0	0	510	184
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	120	470	255	196	568	0	0	510	184

LANE: NORTHBOUND 0 0 0 0 0 0 0; SOUTHBOUND 1 1 0 0 1 1 0; WESTBOUND 2 0 3 0 0 0 0; EASTBOUND 0 0 2 0 1 0 0

SIGNAL	Phasing	RTOR
NORTHBOUND	<none>	<none>
SOUTHBOUND	Split	Auto
WESTBOUND	Prot-Fix	<none>
EASTBOUND	Perm	Auto

Critical Movements Diagram

SouthBound — A: 242 B: 120

EastBound — A: 231 B: 0

WestBound — A: 189 B: 108

NorthBound — A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 242 + 108 + 231}{*1425} = 0.338$$

LOS = A

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CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: IMPERIAL HWY I/S No: 49

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	498	0	53	0	419	583	56	349	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	498	0	53	0	419	583	56	349	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 1 0 0 0	1 0 0 1 0 1 0	1 0 2 0 0 1 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	OLA	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	249	249
EastBound	175	56
WestBound	583	0
NorthBound	0	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 249 + 583 + 56}{1425} = 0.623$$

LOS = B

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CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: IMPERIAL HWY I/S No: 50

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	25	1249	165	1254	1938	210	16	80	528	176	61	5
AMBIENT												
RELATED												
PROJECT												
TOTAL	25	1249	165	1254	1938	210	16	80	528	176	61	5

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	2 0 3 0 1 0 0	2 0 3 0 0 1 0	2 0 3 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	537	690
EastBound	20	97
WestBound	183	9
NorthBound	416	25

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{416 + 690 + 183 + 97}{1375} = 1.008$$

LOS = F

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REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VISTA DEL MAR W/E: IMPERIAL HWY I/S No: 51

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	491	58	348	378	0	50	0	421	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	491	58	348	378	0	50	0	421	0	0	0

LANE NORTHBOUND	1	0	2	0	0	1	0
LANE SOUTHBOUND	1	0	1	0	1	0	0
LANE WESTBOUND	1	1	0	0	0	1	0
LANE EASTBOUND	0	0	0	1	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Split	Auto
EASTBOUND	Split	Auto

Critical Movements Diagram

SouthBound A: 189 B: 348

EastBound A: 0 B: 0

WestBound A: 247 B: 25

NorthBound A: 246 B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{246 + 348 + 247 + 0}{*1375} = 0.542 \qquad LOS = A$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: IMPERIAL HWY I/S No: 52

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	13	74	227	519	303	120	419	434	1033	128	733	149
AMBIENT												
RELATED												
PROJECT												
TOTAL	13	74	227	519	303	120	419	434	1033	128	733	149

LANE NORTHBOUND	2	0	1	0	1	1	0
LANE SOUTHBOUND	2	0	1	0	1	1	0
LANE WESTBOUND	2	0	3	0	0	2	0
LANE EASTBOUND	2	0	3	0	0	2	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	Auto
SOUTHBOUND	Prot-Var	Auto
WESTBOUND	Prot-Var	OLA
EASTBOUND	Prot-Var	OLA

Critical Movements Diagram

SouthBound A: 152 B: 285

EastBound A: 244 B: 70

WestBound A: 283 B: 230

NorthBound A: 74 B: 7

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{74 + 285 + 230 + 244}{*1375} = 0.536 \qquad LOS = A$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 N/B RAMPS W/E: JEFFERSON BLVD I/S No: 54

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	210	0	124	0	0	0	0	897	193	207	709	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	210	0	124	0	0	0	0	897	193	207	709	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 1 0 0 0	0 0 0 0 0 0 0	0 0 3 0 0 1 0	1 0 3 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	<none>	<none>	Perm	Auto	Prot-Fix	<none>

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	236	207
WestBound	299	0
NorthBound	167	167

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{167 + 0 + 299 + 207}{1200} = 0.561 \qquad LOS = A$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 S/B RAMPS W/E: JEFFERSON BLVD I/S No: 55

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	137	0	170	270	839	0	0	776	74
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	137	0	170	270	839	0	0	776	74

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	1 0 0 1 0 1 0	1 0 2 0 0 0 0	0 0 3 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	<none>	<none>	Split	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	102	102
EastBound	213	0
WestBound	420	270
NorthBound	0	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 102 + 270 + 213}{1425} = 0.411 \qquad LOS = A$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 57

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	75	1114	388	131	894	349	436	248	263	67	361	160
AMBIENT												
RELATED												
PROJECT												
TOTAL	75	1114	388	131	894	349	436	248	263	67	361	160

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	2 0 3 0 0 1 0	2 0 2 0 0 1 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	OLA	Prot-Var	OLA	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 298 B: 72

EastBound A: 174 B: 67

WestBound A: 191 B: 240

NorthBound A: 371 B: 75

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{371 + 72 + 240 + 174}{1375} = 0.623$$

LOS = B

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: 111TH ST I/S No: 67

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	438	794	0	0	706	312	0	0	0	336	0	341
AMBIENT												
RELATED												
PROJECT												
TOTAL	438	794	0	0	706	312	0	0	0	336	0	341

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	0 0 0 0 0 0 0	2 0 0 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	<none>	Perm	Auto	<none>	<none>	Perm	Auto

Critical Movements Diagram

SouthBound A: 339 B: 0

EastBound A: 341 B: 185

WestBound A: 0 B: 0

NorthBound A: 397 B: 438

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{438 + 339 + 0 + 341}{*1500} = 0.675$$

LOS = B

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD   W/E: I-405 RAMPS S/O CENTURY BL   I/S No: 68

AM/PM: AM   Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1383	2	494	1150	0	0	0	82	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1383	2	494	1150	0	0	0	82	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 0 0	2 0 2 0 0 0 0	0 0 0 0 0 2 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Perm	<none>
SIGNAL RTOR	Auto	<none>	Auto	<none>

Critical Movements Diagram

	A	B
SouthBound	575	272
EastBound	0	0
WestBound	0	0
NorthBound	693	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{693 + 272 + 0 + 0}{{}^{*}1500} = 0.573 \qquad LOS = A$$

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD   W/E: I-405 FWY SB N/O IMPERIAL   I/S No: 69

AM/PM: AM   Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1056	178	151	899	0	45	0	174	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1056	178	151	899	0	45	0	174	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 1 0	1 0 2 0 1 0 0	2 0 0 0 0 1 0	0 0 0 1 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Perm	Perm
SIGNAL RTOR	OLA	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	300	151
EastBound	0	0
WestBound	98	25
NorthBound	528	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{528 + 151 + 98 + 0}{{}^{*}1425} = 0.476 \qquad LOS = A$$

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: LENNOX BLVD I/S No: 71

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	981	124	235	913	0	136	0	402	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	981	124	235	913	0	136	0	402	0	0	0

LANE							
NORTHBOUND	0	0	1	0	1	0	0
SOUTHBOUND	1	0	3	0	0	0	0
WESTBOUND	2	0	0	0	0	1	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Prot-Fix	<none>	Split	Auto	<none>	<none>

Critical Movements Diagram

SouthBound A: 304 B: 235

EastBound A: 0 B: 0

WestBound A: 284 B: 75

NorthBound A: 553 B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{553 + 235 + 284 + 0}{1425} = 0.752 \qquad LOS = C$$

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: MANCHESTER AV I/S No: 72

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	28	680	44	470	1086	473	248	730	232	256	653	113
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	680	44	470	1086	473	248	730	232	256	653	113

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	1	1	1	0	1	0	0
WESTBOUND	2	0	2	0	1	0	0
EASTBOUND	1	0	2	0	1	0	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Split	OLA	Split	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

SouthBound A: 520 B: 470

EastBound A: 255 B: 256

WestBound A: 321 B: 136

NorthBound A: 362 B: 28

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{362 + 520 + 321 + 256}{1375} = 1.061 \qquad LOS = F$$

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 N/B RAMPS W/E: LA TIJERA BLVD I/S No: 76

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	341	0	128	0	0	0	0	738	76	351	686	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	341	0	128	0	0	0	0	738	76	351	686	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 0 1 0	0 0 0 0 0 0 0	0 0 3 0 1 0 0	1 0 3 0 0 0 0
SIGNAL Phasing	Perm	<none>	Perm	Prot-Fix
SIGNAL RTOR	<none>	<none>	Auto	<none>

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	229	351
WestBound	204	0
NorthBound	128	341

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{341 + 0 + 204 + 351}{*1425} = 0.559$$

LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 S/B RAMPS W/E: LA TIJERA BLVD I/S No: 79

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	8	0	664	5	1077	0	0	1032	145
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	8	0	664	5	1077	0	0	1032	145

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	0 0 0 0 0 1 1	1 0 3 0 0 0 0	0 0 3 0 1 0 0
SIGNAL Phasing	<none>	Split	Prot-Fix	Perm
SIGNAL RTOR	<none>	<none>	<none>	Auto

Critical Movements Diagram

	A	B
SouthBound	336	8
EastBound	294	0
WestBound	359	5
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 336 + 359 + 0}{*1425} = 0.418$$

LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: LA TIJERA BLVD I/S No: 81

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	691	18	21	810	4	4	0	1	21	0	18
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	691	18	21	810	4	4	0	1	21	0	18

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Var	Auto	Prot-Var	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	271	21
EastBound	17	11
WestBound	5	4
NorthBound	236	2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{2 + 271 + 5 + 17}{1375} = 0.215$$

LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA TIJERA BLVD W/E: MANCHESTER AV I/S No: 82

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	315	170	105	350	68	162	726	11	96	817	3
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	315	170	105	350	68	162	726	11	96	817	3

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	0	1	0	1	0	2	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Var	Auto	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	175	105
EastBound	410	96
WestBound	369	162
NorthBound	158	3

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{158 + 105 + 162 + 410}{*1375} = 0.537$$

LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: LA TIJERA BLVD I/S No: 83

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	23	890	81	141	601	42	9	32	37	51	81	7
AMBIENT												
RELATED												
PROJECT												
TOTAL	23	890	81	141	601	42	9	32	37	51	81	7

	NB	SB	WB	EB
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0
SIGNAL Phasing	Perm	Perm	Prot-Fix	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	214	141
EastBound	41	51
WestBound	37	9
NorthBound	324	23

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{324 + 141 + 37 + 51}{*1425} = 0.318$$

LOS = A

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: 83RD ST I/S No: 87

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	5	811	3	351	730	225	12	66	334	309	48	10
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	811	3	351	730	225	12	66	334	309	48	10

	NB	SB	WB	EB
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 0 1 0	1 0 0 0 1 0 0
SIGNAL Phasing	Perm	Prot-Fix	Perm	Prot-Fix
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	318	351
EastBound	58	309
WestBound	158	12
NorthBound	271	5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{271 + 351 + 158 + 309}{*1375} = 0.722$$

LOS = C

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MANCHESTER AV I/S No: 88

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	282	654	78	67	566	117	173	576	56	111	459	93
AMBIENT												
RELATED												
PROJECT												
TOTAL	282	654	78	67	566	117	173	576	56	111	459	93

LANE							
NORTHBOUND	1	0	2	0	1	0	0
SOUTHBOUND	1	0	2	0	1	0	0
WESTBOUND	1	0	2	0	0	1	0
EASTBOUND	1	0	2	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	228	67
EastBound	230	111
WestBound	288	173
NorthBound	244	282

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{282 + 228 + 173 + 230}{*1425} = 0.571$$

LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: LINCOLN BLVD I/S No: 93

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	1166	0	3	0	741	1750	0	1351	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	1166	0	3	0	741	1750	0	1351	0

LANE							
NORTHBOUND	0	0	0	0	0	0	0
SOUTHBOUND	3	0	0	0	0	0	1
WESTBOUND	0	0	3	0	0	3	0
EASTBOUND	0	0	3	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	<none>	<none>
SOUTHBOUND	Perm	<none>
WESTBOUND	Perm	Free
EASTBOUND	Perm	<none>

Critical Movements Diagram

	A:	B:
SouthBound	292	292
EastBound	450	0
WestBound	247	0
NorthBound	0	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 292 + 0 + 450}{*1500} = 0.425$$

LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: TEALE ST I/S No: 94

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1577	0	0	1492	0	0	0	0	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1577	0	0	1492	0	0	0	0	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 0 1 0	1 0 2 0 0 0 0	1 0 0 0 0 1 1	0 0 0 0 0 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Prot-Fix	<none>	Split	OLA	<none>	<none>

Critical Movements Diagram

SouthBound A: 746 B: 0

EastBound A: 0 B: 0

WestBound A: 0 B: 0

NorthBound A: 789 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{789 + 0 + 0 + 0}{1425} = 0.554$$ LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: MANCHESTER AV I/S No: 98

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	42	171	157	95	255	10	111	23	33	2	12	16
AMBIENT												
RELATED												
PROJECT												
TOTAL	42	171	157	95	255	10	111	23	33	2	12	16

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 0 1 0	0 1 0 0 1 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 133 B: 95

EastBound A: 16 B: 2

WestBound A: 23 B: 111

NorthBound A: 164 B: 42

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{164 + 95 + 111 + 16}{*1375} = 0.211$$ LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: MANCHESTER AV I/S No: 99

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	204	758	83	126	674	89	112	601	83	151	707	155
AMBIENT												
RELATED												
PROJECT												
TOTAL	204	758	83	126	674	89	112	601	83	151	707	155

LANE	NB	SB	WB	EB
	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Prot-Var	Auto	Prot-Var	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 254 B: 126

EastBound A: 431 B: 151

WestBound A: 342 B: 112

NorthBound A: 280 B: 204

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{204 + 254 + 112 + 431}{*1375} = 0.658$$

LOS = B

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: MARIPOSA AV I/S No: 100

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	338	1382	90	21	1960	39	174	53	22	146	113	352
AMBIENT												
RELATED												
PROJECT												
TOTAL	338	1382	90	21	1960	39	174	53	22	146	113	352

LANE	NB	SB	WB	EB
	1 0 4 0 0 1 0	2 0 3 0 1 0 0	1 0 1 0 0 1 0	1 0 0 0 1 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Prot-Var	Auto	Prot-Var	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 500 B: 12

EastBound A: 465 B: 146

WestBound A: 53 B: 174

NorthBound A: 346 B: 338

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{338 + 500 + 174 + 465}{1375} = 1.074$$

LOS = F

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PERSHING DR W/E: WESTCHESTER PKWY I/S No: 101

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	374	106	20	357	0	43	0	41	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	374	106	20	357	0	43	0	41	0	0	0

LANE							
NORTHBOUND	0	0	2	0	0	2	0
SOUTHBOUND	1	0	2	0	0	0	0
WESTBOUND	2	0	0	0	0	1	1
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	OLA
SOUTHBOUND	Prot-Fix	<none>
WESTBOUND	Split	OLA
EASTBOUND	<none>	<none>

Critical Movements Diagram

SouthBound — A: 179 B: 20

EastBound — A: 0 B: 0

WestBound — A: 1 B: 21

NorthBound — A: 187 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{187 + 20 + 21 + 0}{{}^{*}1425} = 0.090 \qquad LOS = A$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: ROSECRANS AV I/S No: 103

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	30	1430	899	526	1618	10	737	149	311	47	225	148
AMBIENT												
RELATED												
PROJECT												
TOTAL	30	1430	899	526	1618	10	737	149	311	47	225	148

LANE							
NORTHBOUND	1	0	3	0	0	1	0
SOUTHBOUND	1	0	2	0	1	0	0
WESTBOUND	1	0	2	0	1	0	0
EASTBOUND	1	0	2	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Var	Auto
SOUTHBOUND	Prot-Var	Auto
WESTBOUND	Prot-Var	Auto
EASTBOUND	Prot-Var	Auto

Critical Movements Diagram

SouthBound — A: 543 B: 526

EastBound — A: 148 B: 47

WestBound — A: 311 B: 737

NorthBound — A: 530 B: 30

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{530 + 526 + 737 + 148}{1375} = 1.412 \qquad LOS = F$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: I-105 OFF RAMP N/O IMPERIAL HW I/S No: 105

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1956	0	0	2683	968	0	0	1454	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1956	0	0	2683	968	0	0	1454	0	0	0

LANE: NB 0 0 3 0 0 0 0 | SB 0 0 1 0 1 1 0 | WB 0 0 0 0 0 3 0 | EB 0 0 0 0 0 0 0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	<none>
SOUTHBOUND	<none>	<none>
WESTBOUND	Perm	<none>
EASTBOUND	<none>	<none>

Critical Movements Diagram

	A	B
SouthBound	1342	0
EastBound	0	0
WestBound	509	0
NorthBound	652	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{652 + 1342 + 509 + 0}{1500} = \cancel{1.234}$$

.815

LOS = ~~F~~ D

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: 76TH/77TH ST I/S No: 106

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	31	1259	2	27	1311	620	5	20	23	580	11	36
AMBIENT												
RELATED												
PROJECT												
TOTAL	31	1259	2	27	1311	620	5	20	23	580	11	36

LANE: NB 1 0 2 0 1 0 0 | SB 1 0 2 0 1 0 0 | WB 1 0 0 0 1 0 0 | EB 2 0 1 0 0 1 0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	644	27
EastBound	36	319
WestBound	43	5
NorthBound	420	31

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{31 + 644 + 43 + 319}{*1425} = 0.658$$

LOS = B

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: SEPULVEDA BLVD W/E: WESTCHESTER PKWY I/S No: 109

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	19	807	118	91	521	2	253	50	169	20	170	53
AMBIENT												
RELATED												
PROJECT												
TOTAL	19	807	118	91	521	2	253	50	169	20	170	53

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	174	91
EastBound	112	20
WestBound	169	253
NorthBound	308	19

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{308 + 91 + 253 + 112}{*1500} = 0.439 \qquad LOS = A$$

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:06:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: I-405 SB RAMPS N/O CENTURY I/S No: 111

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	793	121	262	607	0	806	0	222	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	793	121	262	607	0	806	0	222	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	1 0 2 0 0 0 0	1 0 0 0 0 0 1	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	<none>
SIGNAL RTOR	OLA	Auto	Auto	<none>

Critical Movements Diagram

	A	B
SouthBound	304	262
EastBound	0	0
WestBound	514	514
NorthBound	397	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{397 + 262 + 514 + 0}{*1500} = 0.712 \qquad LOS = C$$

Developed by Chun Wong 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: I-405 NB OFF-RAMP W/E: CENTURY BLVD I/S No: 307

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	337	0	382	0	0	0	0	852	0	0	787	101
AMBIENT												
RELATED												
PROJECT												
TOTAL	337	0	382	0	0	0	0	852	0	0	787	101

LANE	Northbound	Southbound	Westbound	Eastbound
	2 0 0 0 0 1 0	0 0 0 0 0 0 1	0 0 2 0 1 0 0	1 0 2 0 1 1 0

SIGNAL	Phasing	RTOR
Northbound	Split	<none>
Southbound	<none>	Auto
Westbound	<none>	Auto
Eastbound	Perm	Free

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	262	0
WestBound	284	0
NorthBound	382	185

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{382 + 0 + 284 + 262}{1500} = 0.444$$ LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: EL SEGUNDO BLVD I/S No: 312

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	0	0	0	205	0	97	0	1247	92	16	914	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	205	0	97	0	1247	92	16	914	0

LANE	Northbound	Southbound	Westbound	Eastbound
	0 0 0 0 0 0 0	2 0 0 0 0 2 0	0 0 2 0 1 0 0	1 0 3 0 0 0 0

SIGNAL	Phasing	RTOR
Northbound	<none>	<none>
Southbound	Split	Auto
Westbound	Perm	Auto
Eastbound	Prot-Fix	<none>

Critical Movements Diagram

	A	B
SouthBound	45	113
EastBound	305	16
WestBound	446	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 113 + 446 + 16}{1425} = 0.404$$ LOS = A

Developed by Chun Wong, 12/94

REV-OP

CalcaDB

November 19, 1997 ,Wednesday 09:05:54 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LA CIENEGA BLVD W/E: 120TH ST I/S No: 313

AM/PM: AM Comments:

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	35	73	0	3	28	125	1	78	10	232	29	55
AMBIENT												
RELATED												
PROJECT												
TOTAL	35	73	0	3	28	125	1	78	10	232	29	55

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	1	0	1	0	1	0	0
EASTBOUND	1	0	1	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Prot-Var	Auto
EASTBOUND	Prot-Var	Auto

Critical Movements Diagram

	A	B
SouthBound	125	3
EastBound	55	232
WestBound	44	1
NorthBound	37	35

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E
> 1.00	F

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{35 + 125 + 44 + 232}{1375} = 0.317$$

LOS = A

Developed by Chun Wong, 12/94

APPENDIX II-N

FREEWAY MAINLINES AND RAMPS

APPENDIX N
FREEWAY MAINLINES AND RAMPS

No.	Freeway Ramps	
1	405 NB off-ramp	at Sepulveda Blvd.
2	405 SB off-ramp	at Howard Hughes Pkwy.
3	405 SB on-ramp	at Howard Hughes Pkwy.
4	405 NB off-ramp	at Howard Hughes Pkwy.
5	405 NB on-ramp	at Howard Hughes Pkwy.
6	405 SB off-ramp	at La Tijera Blvd.
7	405 SB on-ramp	at La Tijera Blvd.
8	405 NB off-ramp	at La Tijera Blvd.
9	405 NB on-ramp	at La Tijera Blvd.
10	405 NB on-ramp	at Manchester Blvd. East
11	405 NB on-ramp	at Manchester Blvd. West
12	405 NB off-ramp	at Manchester Blvd.
13	405 SB on-ramp	at Manchester Blvd.
14	405 SB off-ramp	at La Cienega Blvd. (n/o Century Blvd.)
15	405 SB on-ramp	at La Cienega Blvd. (n/o Century Blvd.)
16	405 SB off-ramp	at La Cienega Blvd. (s/o Century Blvd.)
17	405 SB on-ramp	at La Cienega Blvd. (s/o Century Blvd.)
18	405 NB off-ramp	at Century Blvd.
19	405 NB on-ramp	at Century Blvd. EB
20	405 NB on-ramp	at Century Blvd. WB
21	405 SB off-ramp	at La Cienega Blvd. (n/o Imperial Hwy.)
22	405 SB on-ramp	at La Cienega Blvd. (n/o Imperial Hwy.)
23	405 SB off-ramp	at La Cienega Blvd. (n/o El Segundo Blvd.)
24	405 SB on-ramp	at La Cienega Blvd. (n/o El Segundo Blvd.)
25	405 SB off-ramp	El Segundo Blvd.
26	405 SB on-ramp	El Segundo Blvd.
27	405 NB off-ramp	El Segundo Blvd.
28	405 NB on-ramp	El Segundo Blvd. EB
29	405 NB on-ramp	El Segundo Blvd. WB
30	105 EB on-ramp	Sepulveda Blvd. SB
31	105 EB on-ramp	Imperial Highway (w/o Sepulveda Blvd.)
32	105 WB off-ramp	Sepulveda Blvd. NB
33	105 WB off-ramp	Sepulveda Blvd. SB
34	105 EB on-ramp	Imperial Highway (e/o Sepulveda Blvd.)
35	105 WB off-ramp	Nash St.
36	105 EB on-ramp	Imperial Highway (e/o Hawthorne Blvd.)
37	105 EB on-ramp	Hawthorne Blvd. SB
38	105 WB off-ramp	Hawthorne Blvd.

Freeway Mainlines

1	Interstate 405	n/o Venice Blvd.
2	Interstate 405	n/o La Tijera Blvd.
3	Interstate 405	s/o Rosecrans Ave.
4	Interstate 105	e/o Crenshaw Blvd.

APPENDIX II-O

DRIVER SURVEY

No.	Location	Direction	Lane	AM Time	AM LAX No.	AM LAX % of response	AM Non-LAX No.	AM Non-LAX % of response	AM No Response No.	AM No Response % of all response	AM Response Rate	PM Time	PM LAX No.	PM LAX % of response	PM Non-LAX No.	PM Non-LAX % of response	PM No Response No.	PM No Response % of all response	PM Response Rate
1	Airport/Century	Southbound	Right	735-800	20	59	14	41	2	6	94	505-530	29	60	19	40	1	2	98
			Thru		2	40	3	60	1	17	83		2	33	4	67	2	25	75
			Thru Left		6	29	15	71	0	0	100		6	35	15	65	0	0	100
			Left		14	54	12	46	1	4	96		5	24	16	76	7	25	75
			Left		6	55	5	45	2	15	85		2	12	15	88	5	23	
		Westbound	Right	805-830	6	43	8	57	3	18	82	540-605	7	33	14	67	0	0	100
			Thru		4	19	17	81	2	9	91		6	29	15	71	4	16	84
			Thru		15	75	5	25	0	0	100		16	84	9	36	0	0	100
			Thru		11	65	6	35	0	0	100		17	71	7	29	0	0	100
			Thru		9	50	9	50	2	10	90		7	64	4	36	2	15	
			Left		2	10	19	90	1	5	95		1	4	23	96	2	8	92
		Northbound	Right	835-900	1	20	4	80	1	17	83	400-425	4	57	3	43	2	22	78
			Thru		4	36	7	64	0	0	100		6	32	13	68	1	5	95
			Thru		2	17	10	83	1	8	92		4	19	17	81	1	5	
			Left		4	44	5	56	1	10	90		5	24	16	76	0	0	100
		Eastbound	Right	700-725	6	75	2	25	0	0	100	435-500	3	60	2	40	3	38	63
			Thru		7	26	20	74	2	7	93		3	23	10	77	0	0	100
			Thru		13	62	8	38	3	13	88		12	48	13	52	0	0	100
			Thru		17	68	8	32	1	4	96		15	63	9	38	1	4	96
			Thru		18	67	9	33	8	23	77		10	83	2	17	5	29	
			Left		26	76	8	24	3	8	92		20	74	7	26	5	16	
			Left		20	83	4	17	3	11	89		24	73	9	27	6	15	
				TOTAL	213		198		37				206		242		47		
4	Imperial Highway/Nash-WB I-105 off-ramp Wednesday 4/19/95	Southbound	Right	810-835	21	46	25	54	27	37	63	505-530	19	68	9	32	6	18	82
			Thru Right		3	9	31	91	20	37	63		8	25	24	75	4	11	89
			Thru Left		0	0	13	100	106	89	11		0	0	19	100	0	0	100
			Left		2	12	15	88	13	43	57		2	17	10	83	71	86	14
		Westbound	Thru 1	845-910	3	25	9	75	5	29	71	540-605	9	38	15	63	4	14	86
			Thru 2		14	67	7	33	6	22	78		13	59	9	41	7	24	76
			Thru 3		5	36	9	64	2	13	88		6	33	12	67	2	10	90
			Left 1		1	10	9	90	17	63	37		2	67	1	33	17	85	15
			Left 2		0	0	12	100	0	0	100		3	75	1	25	0	0	100
		Northbound	Right	700-730	8	35	15	65	3	12	88	400-425	1	4	24	96	142	85	15
			Right Left		23	70	10	30	8	20	80		9	60	6	40	25	63	38
			Left		10	45	12	55	3	12	88		6	18	27	82	23	41	59
		Eastbound	Right	740-805	7	16	38	84	98	69	31	435-500	0	0	9	100	6	40	60
			Thru 1		5	15	29	85	16	32	68		0	0	10	100	80	89	11
			Thru 2		9	20	35	80	10	19	81		5	15	29	85	12	26	74
			Thru 3		4	12	29	88	9	21	79		11	32	23	68	9	21	79
				TOTAL	328		456		380				300		470		455		
8B	Howard Hughes/I-405 Ramps Tuesday - 4/4/95	Southbound	Right 1	805-840A	7	18	33	83	10	20	80	445-515P	10	21	38	79	19	28	72
			Right 2		2	20	8	80	0	0	100		4	20	16	80	6	23	77
			Left		0	0	4	100	0	0	100		0	0	2	100	0	0	100
		Westbound	Thru Right	700-740A	0	0	3	100	0	0	100	400-430P	0	0	4	100	6	60	40
			Thru 1		2	13	14	88	0	0	100		1	11	8	89	4	31	69
			Thru 2		0	0	21	100	3	13	88		1	7	13	93	1	7	93
		Eastbound	Thru 1	900-930A	2	11	16	89	5	22	78	530-600P	2	13	13	87	2	12	88
			Thru 2		5	38	8	62	3	19	81		2	50	2	50	0	0	100
			Left 1		1	3	29	97	4	12	88		2	8	22	92	38	61	39
			Left 2		17	45	21	55	23	38	62		1	4	27	96	18	39	61
				TOTAL	36		157		48				23		145		94		
9	La Tijera/I-405 SB ramps	Southbound	Right	700-735A	49	60	32	40	17	17	83	400-435	30	37	52	63	3	4	96
			Right Left		18	29	44	71	14	18	82		4	6	58	94	4	6	94
		Eastbound	Thru Right	740-815A	3	5	60	95	8	11	89	440-515	10	13	67	87	14	15	85
			Thru		3	5	58	95	0	0	100		10	18	46	82	0	0	100
			Thru		1	2	53	98	6	10	90		6	18	28	82	7	17	83
			Thru		0	0	50	100	2	4	96		2	6	34	94	5	12	88
		Westbound	Thru	820-900A	2	22	7	78	0	0	100	525-600	4	24	13	76	0	0	100
			Thru		1	10	9	90	0	0	100		7	37	12	63	0	0	100
			Thru		0	0	4	100	0	0	100		5	36	9	64	0	0	100
			Left		2	4	46	96	0	0	100		6	4	133	96	13	9	91
				TOTAL	79		363		47				84		452		46		
10	La Tijera/I-405 NB ramps Tuesday - 4/4/95	Westbound	Thru Right	700-735A	6	16	32	84	35	48	52	445-515P	4	13	28	88	45	58	42
			Thru		4	27	11	73	9	38	63		10	26	28	74	2	5	95
			Thru		13	39	20	61	6	15	85		7	22	25	78	8	20	80
			Thru		3	9	29	91	2	6	94		2	6	32	94	2	6	
		Northbound	Right	740-815A	4	9	43	91	23	33	67	400-430P	1	3	35	97	11	23	77
			Left		4	12	29	88	19	37	63		0	0	33	100	3	8	92
		Eastbound	Thru		0	0	4	100	1	20	80		0	0	12	100	1	8	92
			Thru	825-900	0	0	4	100	0	0	100	530-600P	1	7	13	93	10	42	68
			Thru		6	43	8	57	0	0	100		3	23	10	77	4	24	76
			Left		4	13	27	87	10	24	76		13	36	23	64	40	53	47
				TOTAL	44		207		105				41		239		126		

No.	Location	Direction	Lane	AM Responses Time	AM LAX No.	AM LAX % of response	AM Non-LAX No.	AM Non-LAX % of response	AM No Response No.	AM No Response % of all response	AM Response Rate	PM Responses Time	PM LAX No.	PM LAX % of response	PM Non-LAX No.	PM Non-LAX % of response	PM No Response No.	PM No Response % of all response	PM Response Rate
11	Pershing Drive at Manchester Av.	Southbound	Thru Right	700-730A	2	20	8	80	4	29	71	400-430P	0	0	15	100	11	42	58
	Thursday - 3/30/95		Thru		6	36	14	64	1	4	96		0	0	26	100	1	4	96
			Left		7	33	14	67	4	16	84		2	6	31	94	3	8	92
		Westbound	Right	830-900A	4	12	29	88	5	13	87	530-600P	2	7	28	93	13	30	70
			Thru		1	1	70	99	9	11	89		0	0	7	100	3	30	70
			Left		1	9	10	91	3	21	79		2	4	46	96	1	2	98
		Northbound	Right	800-830A	4	44	5	56	4	31	69	500-530P	1	10	9	90	4	29	71
			Thru 1		2	6	31	94	1	3	97		3	8	37	93	24	38	63
			Thru 2		0	0	25	100	32	56	44		2	9	21	91	2	8	92
			Left		1	20	4	80	0	0	100		0	0	3	100	0	0	100
		Eastbound	Thru Right	730-750A	0	0	15	100	2	12	88		1	7	13	93	2	13	88
			Thru Left		1	5	18	95	3	14	86		0	0	10	100	0	0	100
				TOTAL	31		243		68				13		246		64		
12	Lincoln Blvd at Manchester Av	Southbound	Thru Right	700-730A	3	12	23	88	5	16	84	500-530P	5	14	32	86	7	16	84
	Tuesday - 3/28/95		Thru 1		16	55	13	45	33	53	47		7	19	29	81	40	53	47
			Thru 2		13	30	30	70	19	31	69		3	8	36	92	14	26	74
			Left																
		Westbound	Right	730-800A								400-430P							
			Thru 1																
			Thru 2																
			Left		3	17	15	83	4	18	82		4	13	27	87	5	14	86
		Northbound	Right	815-845A	0	0	5	100	14	74	26	530-600P	2	18	9	82	19	63	37
			Thru 1		2	11	17	89	22	54	46		6	35	11	65	13	43	57
			Thru 2		9	29	22	71	23	43	57		22	31	49	69	14	16	84
			Thru 3		3	7	38	93	17	29	71		9	17	43	83	20	28	72
			Left		1	100	0	0	0	0	100		1	8	12	92	7	35	65
		Eastbound	Thru Right	850-915	3	15	17	85	15	43	57	430-450P	4	11	32	89	7	16	84
			Thru																
			Left																
				TOTAL	53		180		152				63		280		146		
14	Manchester Blvd at N/B I-405 ramps	Westbound	Thru Right	750-825A	1	2	43	98	5	10	90	440-515P	0	0	13	100	1	7	93
	Thursday - 4/6/95		Thru		2	5	36	95	10	21	79		3	15	17	85	1	5	95
			Thru		2	5	42	95	8	15	85		2	9	20	91	1	4	96
		Northbound	Right	705-745A	3	7	42	93	1	2	98	400-435P	5	6	80	94	1	1	99
			Thru Right Left		2	2	90	98	18	16	84		5	7	62	93	0	0	100
			Left		8	7	105	93	12	10	90		14	19	60	81	15	17	83
		Eastbound	Right	830-900A	5	22	18	78	23	50	50	530-600P	8	24	25	76	51	61	39
			Thru Right		3	12	22	88	1	4	96		9	14	56	86	0	0	100
			Thru		2	10	18	90	4	17	83		2	3	68	97	3	4	96
				TOTAL	28		416		82				48		401		73		
16	La Cienega Blvd at S/B I-405 ramps	Southbound	Thru 1	820-900A	2	14	12	86	7	33	67	445-515P	11	21	42	79	15	22	78
	Tuesday - 4/4/95		Thru 2		0	0	19	100	15	44	56		9	12	64	88	5	6	94
			Left		4	13	27	87	20	39	61		9	9	91	91	0	0	100
		Westbound	Right Left	700-740A	25	53	22	47	22	32	68	400-440P	19	51	18	49	18	33	67
			Left		8	42	11	58	24	56	44		9	31	20	69	23	44	56
		Northbound	Right	750-815A	0	0	3	100	10	77	23	530-600P	3	12	23	88	15	37	63
			Thru Right		17	47	19	53	32	47	53		3	8	33	92	18	33	67
			Thru		8	19	34	81	46	52	48		14	23	46	77	12	16	84
				TOTAL	64		147		176				77		339		106		
17	Century Blvd at N/B I-405 ramps	Westbound	Thru Right	750-825A	3		36	92	32	45	55	445-515P	3	13	21	88	22	48	52
	Wednesday - 4/12/95		Thru 1		5		12	71	17	50	50		4	27	11	73	18	55	45
			Thru 2		17		29	63	6	12	88		8	38	13	62	0	0	100
		Northbound	Right	810-915A	0		13	100	24	65	35	400-430P	0	0	24	100	46	66	34
			Thru Left		9		16	64	32	56	44		12	43	16	57	15	35	65
			Left		29		60	67	16	15	85		30	49	31	51	11	15	85
		Eastbound	Right	845-915A	0		1	100	3	75	25	525-600P	4	29	10	71	16	53	47
			Thru Right		7		10	59	0	0	100		1	2	54	98	22	29	71
			Thru 1		0		26	100	17	40	60		14	18	65	82	31	28	72
			Thru 2		1		7	88	6	43	57		0	0	9	100	15	63	38
			Left		1		1	50	3	60	40		0	0	1	100	6	86	14
				TOTAL	72		211		156				76		255		202		

No.	Location	Direction	Lane	AM Responses Time	AM LAX No.	AM LAX % of response	AM Non-LAX No.	AM Non-LAX % of response	AM No Response No.	AM No Response % of all response	AM Response Rate	PM Responses Time	PM LAX No.	PM LAX % of response	PM Non-LAX No.	PM Non-LAX % of response	PM No Response No.	PM No Response % of all response	PM Response Rate
18	Aviation Bl/Century Bl	Southbound	Thru Right	745-810	25	68	12	32	12	24	76	530-555	29	69	13	31	7	14	86
			Thru		1	5	21	95	13	37	63		3	19	13	81	11	41	59
			Left		2	3	67	97	25	27	73		36	43	47	57	25	23	77
			Left		2	10	18	90	9	31	69		28	70	12	30	8	17	83
		Westbound	Thru Right	700-730	7	33	14	67	6	22	78	500-525	23	58	17	43	6	13	87
			Thru		13	59	9	41	5	19	81		14	61	9	39	13	36	64
			Thru		67	50	68	50	24	15	85		9	38	15	63	1	4	96
			Thru		36	92	3	8	14	26	74		29	85	5	15	14	29	71
			Left		26	84	5	16	11	26	74		28	57	21	43	15	23	77
		Northbound	Thru Right	850-920	19	46	22	54	13	24	76	430-455	3	14	18	86	25	54	46
			Thru		19	53	17	47	11	23	77		65	65	35	35	9	8	92
			Left		71	63	41	37	13	10	90		29	71	12	29	14	25	75
			Left		45	71	18	29	20	24	76		20	56	16	44	12	25	75
		Eastbound	Thru Right	705-735	31	72	12	28	18	30	70	400-425	24	52	22	48	21	31	69
			Thru		14	47	16	53	11	27	73		22	65	12	35	16	32	68
			Thru		66	76	21	24	12	12	88		23	63	20	47	9	17	83
			Thru		24	73	9	27	4	11	89		60	66	31	34	19	17	83
			Left		28	90	3	10	5	14	86		20	51	19	49	5	11	89
				TOTAL	496		376		276				465		337		230		
20	Sepulveda Bl/I-105 ramps	Northbound	Thru	715-830	63	38	101	62	34	17	83	445-515P	42	48	46	52	7	7	93
			Thru		44	19	191	81	3	1	99		37	23	121	77	4	2	98
			Thru		33	19	144	81	35	17	83		24	22	83	78	29	21	79
		Eastbound	Right	835-910	5	11	39	89	127	74	26	400-440P	10	16	51	84	80	67	43
				TOTAL	145		475		199				113		301		120		
21	Sepulveda Bl/Imperial Highway	Southbound	Thru Right	905-935	5	19	22	81	3	10	90	530-555	2	3	57	97	7	11	89
			Thru		4	8	47	92	1	2	98		14	17	69	83	4	5	95
			Thru		13	21	50	79	13	17	83		26	29	64	71	0	0	100
			Thru		16	24	50	76	3	4	96		12	19	50	81	20	24	76
			Left		7	18	33	83	16	29	71		10	19	44	81	0	0	100
			Left		15	31	34	69	2	4	96		13	23	44	77	1	2	98
		Westbound	Thru Right	815-850	18	27	49	73	0	0	100	500-525	26	20	106	80	1	1	99
			Thru		3	16	16	84	1	5	95		2	18	9	82	8	42	58
			Thru		8	38	13	62	5	19	81		3	8	35	92	0	0	100
			Thru		9	45	11	55	0	0	100		1	3	33	97	4	11	89
			Left		2	20	8	80	17	63	37		11	32	23	68	2	6	94
			Left		0	0	7	100	0	0	100		9	33	18	67	2	7	93
		Northbound	Right	740-810	5	7	63	93	0	0	100	430-455	1	1	78	99	2	2	98
			Thru		11	17	54	83	0	0	100		4	21	15	79	0	0	100
			Thru		14	19	60	81	4	5	95		5	17	24	83	0	0	100
			Thru		6	8	73	92	34	30	70		0	0	10	100	4	29	71
			Left		11	41	16	59	0	0	100		5	13	33	87	0	0	100
		Eastbound	Right	705-735	3	15	17	85	2	9	91	400-425	6	25	18	75	4	14	86
			Thru		2	4	44	96	0	0	100		2	17	10	83	7	37	63
			Thru		5	17	25	83	0	0	100		4	17	19	83	0	0	100
			Thru		1	9	10	91	2	15	85		5	23	17	77	1	4	96
			Left		27	45	33	55	19	24	76		17	47	19	53	0	0	100
			Left		11	26	32	74	1	2	98		9	39	14	61	0	0	100
				TOTAL	196		767		123				187		805		67		
22	La Cienega / SB I-405 ramps n/o Imperial	Southbound	Thru	710-735	0	ERR	0	ERR	0	ERR	ERR	4-430	0	0	19	100	17	47	53
			Thru		1	17	5	83	0	0	100		1	20	4	80	2	29	71
			Thru		1	100	0	0	2	67	33		3	27	8	73	9	45	55
			Left		6	75	2	25	1	11	89		10	56	8	44	4	18	82
		Westbound	Right	745-815	5	38	8	62	12	48	52	440-510	4	33	8	67	0	0	100
			Left		8	19	34	81	6	13	88		0	0	10	100	2	17	83
			Left		14	52	13	48	11	29	71		2	22	7	78	2	18	82
		Northbound	Right	825-900	0	0	3	100	6	67	33	515-600	0	0	2	100	4	67	33
			Thru		4	16	21	84	35	58	42		5	25	15	75	13	39	61
			Thru		6	20	24	80	4	12	88		8	47	9	53	5	23	77
			Left		1	14	6	86	0	0	100		2	67	1	33	0	0	100
				TOTAL	46		116		77				35		91		58		
23	La Cienega Blvd at S/B I-405 ramps (S/O I- Tuesday - 4/11/95	Southbound	Thru 1	820-850A	0	0	7	100	2	22	78	520-555P	0	0	12	100	4	25	75
			Thru 2		0	0	1	100	0	0	100		0	0	10	100	1	9	91
			Left 1		0	0	6	100	1	14	86		0	0	17	100	3	15	85
			Left 2		3	50	3	50	5	45	55		1	8	11	92	10	45	65
		Westbound	Right	705-735A	3	7	40	93	2	4	96	440-515P	0	0	21	100	14	40	60
			Thru Right		2	8	23	92	0	0	100		0	0	8	100	2	20	80
			Left		0	0	27	100	2	7	93		0	0	7	100	0	0	100
		Northbound	Thru Right	740-815	0	0	6	100	0	0	100	400-435P	1	7	13	93	2	13	88
			Thru 1		1	9	10	91	1	8	92		1	9	10	91	2	15	85
			Thru 2		4	36	7	64	3	21	79		1	8	12	92	0	0	100
				TOTAL	13		130		16				4		121		38		

LOS ANGELES INTERNATIONAL AIRPORT
MASTER PLAN

LAX GROUND ACCESS MODEL
CALIBRATION AND VALIDATION REPORT

Prepared for

Los Angeles World Airports

Prepared by

Barton-Aschman Associates, Inc.
a unit of Parsons Transportation Group

October 15, 1998

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Appendices

LAX GROUND ACCESS MODEL CALIBRATION AND VALIDATION REPORT

This report documents the development of the LAX Ground Access Model. The model is designed to analyze the off-airport transportation impacts of land use and transportation changes within the Airport as well as changes outside the Airport.

The model was calibrated to 1994 conditions, and incorporates ground count data at over 1,450 locations. It meets very stringent statistical standards for precision. The model was initially calibrated to 1995 data in June, 1995. A draft Calibration and Validation Report

was prepared in August 1995. This 1995 model was re-calibrated in 1996 to incorporate more accurate LAX trip generation estimates that were made available at the time the On-Airport Roadway Model was completed by Leigh Fisher Associates. This final Model Calibration and Validation Report documents the final calibration of the model conducted in 1996.

Subsequent to final model calibration, the model was updated to reflect 1996 conditions. The update was not a recalibration of the model. New ground counts were integrated into the model through the post -processor, as described in Chapter V.

The LAX Ground Access Model is a regional model which "focuses" in on a 50 square mile area surrounding LAX. It includes a detailed LAX-Area trip generation and distribution model which comprises 55 Airport zones, each with unique trip making characteristics. The model is capable of analyzing detailed intersection turning movements anywhere within its 50 square mile focus area. A post-processor within the model structure calculates the individual turning movement volumes and calculates the intersection level of service.

This report is organized as follows :

- Chapter I, Model Dimensions;
- Chapter II, Model Development Process;
- Chapter III, Airport Trip Tables for AM,PM,and Airport Peak Hours,
- Chapter IV, Results of Model Validation Analysis;
- Chapter V, Model Output and Post Processor; and
- Chapter VI, Model Application;
- Chapter VII, Airport Peak Hour Model Development;
- Chapter VIII, Update to 1996 Conditions

I. MODEL DIMENSIONS

The LAX Ground Access Model structure is based upon the procedures of the Los Angeles Citywide General Plan Framework Model and SCAG's urbanized five-county regional model. This includes overall zonal structure, network and technical modeling methodologies for such functions as trip generation, trip distribution, mode split and vehicle occupancy rates.

A. MODEL DATABANK

The dimensions of the LAX Ground Access Model are designed to accommodate the detail required for the LAX Master Plan. To account for the nature of airport trips, the model databank was developed with the following dimensions:

- 1,605 Zones/Centroids
- 13,125 Nodes including Centroids
- 33,509 Links
- 4,018 Turning movement data
- 99 Scalar Matrices
- 99 Origin Matrices
- 99 Destination Matrices
- 40 Full Matrices
- 2,040,060 words for extra attributes

The size of the LAX Ground Access Model is directly proportional to the dimensions of the databank. As such, the databank currently occupies approximately 518 megabytes of disk space. This size may increase in the future if an increase in a dimension is required.

B. ZONE SYSTEM DEFINITION

The modeling area is composed of a series of traffic analysis zones (TAZs). The TAZs are structured to provide the greatest level of detail within the focus area, with the zone system and network becoming progressively less detailed as distance from the Los Angeles International Airport increases.

The zone system was developed by adding more detail to the Framework Model Zones in the focus area. The smallest unit of definition for the TAZ system is a subdivision of a census tract (partial census tract), and the largest is a SCAG Regional Statistical Area (RSA). As shown in **Figures I-1 and I-2,** the region has been structured into five distinct levels of detail: LAX area, focus area, Framework model area, buffer area, and outlying area. The following is a detailed description of the structure of each of the four TAZ levels:

1. The LAX Area. The LAX Area consists of all City owned airport property and the properties immediately surrounding the airport that provide direct services to the airport. These properties include parking lots and rental car agencies. For the purposes of the model, the airport is a special generator. That is, its trips are created externally from the standard model set. See chapter III for details of this trip generation procedure.

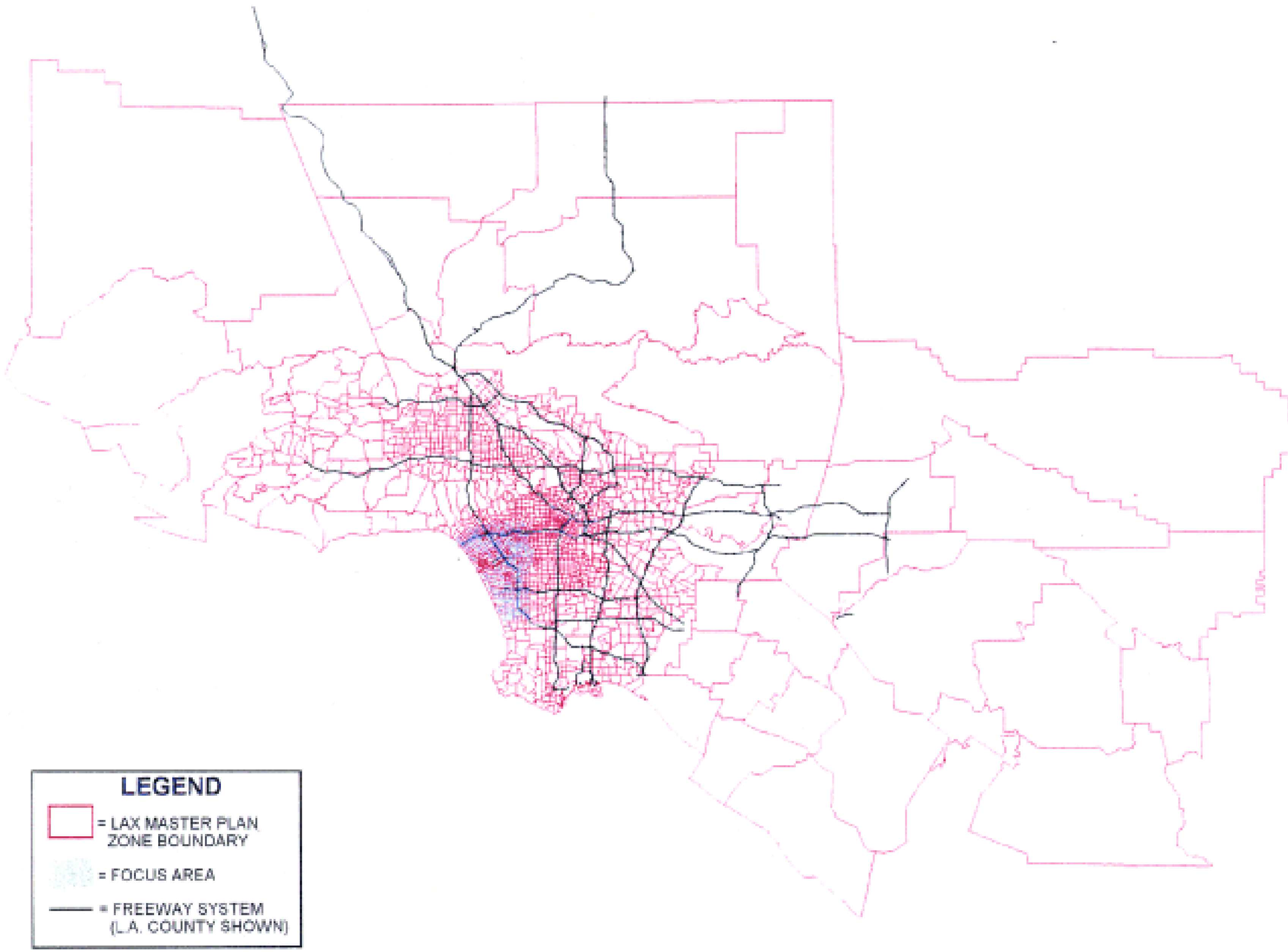
   The airport is a substantial employment center, so it would be inappropriate to simply remove it from the standard model procedures set. In order to maintain regional balance and consistency, the LAX area is modeled in two steps. First, SCAG data for the LAX Area is use for an initial run of the full model. This takes into account the airport's impact on regional competition for matching workers to jobs as trips are distributed geographically throughout the region. After the initial model run is completed, all trips to/from airport zones are zeroed out, and the special generator trips (as described in Chapter III) are added to/from the special generator zones.

   In all there are 55 (special generator) TAZs in the LAX Area. They include 8 zones in the Central Terminal Area, 23 zones representing other airport property driveways, and 24 zones representing parking lots and auto rental agencies.

2. Focus Area. All the TAZ's in the focus area are defined by subdivisions of census tracts. The focus area is bounded on the south by Artesia Boulevard, on the east by Hawthorne Boulevard/La Brea and on the north by I-10/Wilshire Boulevard. These TAZ's are based on the Framework model zone structure, with more detail added from zone structures of the West Adams Community Plan

Area Model, a prior LAX Ground Access Model, the Playa Vista Phase I Model, and the Westwood/West Side Model. Additional zonal detail was provided to ensure sufficient detail throughout the focus area.

3. The Framework Model Area. All of the TAZs in this area are defined by individual census tracts or subdivisions of census tracts. This area contains the following sub-areas:
   - All remaining areas within the corporate boundaries of the City of Los Angeles, not including the focus area and LAX area;
   - The areas encompassing the "island" cities and unincorporated Los Angeles County pockets, which are surrounded by the City of Los Angeles (such as San Fernando, Universal City, and West Hollywood); and
   - Peripheral neighboring cities and communities including the entire cities of Burbank, Glendale, Vernon, Maywood, Huntington Park, Southgate, and parts of Pasadena, South Pasadena, and several other neighboring communities.
4. The Buffer Area. All of the TAZ's in this area are defined by SCAG model zones. The Buffer Area provides a smooth and gradual transition from the small Framework Model Area TAZ's (at or below census tract level) to the very large zones defined by the RSA's and sub-RSA's (Regional Statistical Areas) in the External Area. Internal boundaries of the Buffer Area are defined by the external edges of the Framework Model Area and the external boundaries are defined by RSA's and sub-RSA's. The three distinct sub-areas in the Buffer Area are:
   - Areas generally bounded by the Long Beach Freeway (I-710), the San Gabriel River Freeway (I-605), and south of Imperial Highway in Los Angeles County RSA's 20, 22 and 25;
   - Areas in the South Bay, generally south of Artesia Boulevard and west of the City of Los Angeles, es, in RSA's 18 and 19.
   - Los Angeles County RSA's 7 and 15 (Western Santa Monica Mountains, Westlake, Calabasas, and Malibu areas) and Ventura County RSA's 4 and 5 (Simi Valley and Thousand Oaks areas).
5. The Outlaying Area. Within the Outlaying Area the TAZ system consists of large zones defined by RSA's or divisions of RSA's. These areas include:
   - Los Angeles County RSA 10 (Palmdale area) and RSA 27 (Pomona area) each correspond to one TAZ, and the remaining RSAs are split as follows: RSA 8 (Santa Clarita area) is 4 TAZs, RSA 9, (Lancaster area)is 4 TAZs, RSA 11(Angeles National Forest area) is 2 TAZs, and RSA 26 (Eastern San Gabriel Valley)is 3 TAZs;
   - Ventura County RSA 3 is split in 2 TAZs, and the remaining RSAs 1, 2 and 6 each represent one TAZ each; and
   - In Orange County, and urbanized areas of San Bernardino and Riverside Counties each TAZ corresponds to one RSA.



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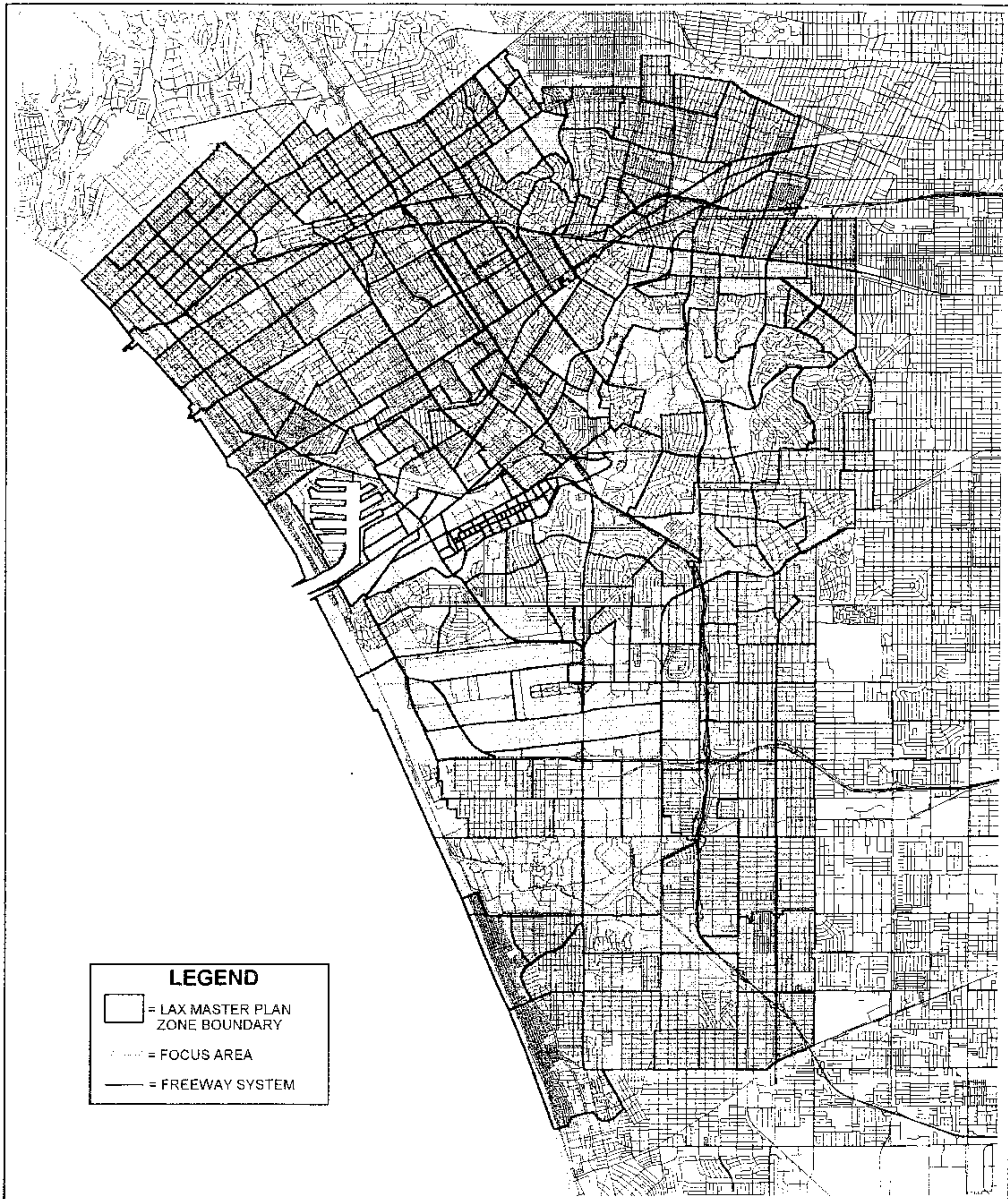
Los Angeles International Airport Master Plan	ZONE SYSTEM - Region	FIGURE I-1



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Los Angeles International Airport Master Plan	ZONE SYSTEM - Focus Area	FIGURE I-2

II. MODEL DEVELOPMENT PROCESS

A. HIGHWAY NETWORKS

SOURCE OF NETWORK

The base year highway network is a combination of three major regional Emme/2 models: City of Los Angeles Citywide General Plan Framework (Framework), Southern California Association of Governments LAX Ground Access Study (LAX) and The Playa Vista Phase I model (PV). Other models such as the Westwood/Westwide and West Adams models were examined and used as reference where appropriate.

The three source models (Framework, LAX and PV) provided the core network for the new model. Of the three, the Framework model is the largest and most extensive of the models in the L.A. area. The Framework network is a copy of the Southern California Association of Governments (SCAG) base year highway network with extensive detailing within the City of Los Angeles. The LAX network is also a SCAG based highway network with extensive detailing in the airport area. The PV network was developed as a windowed model, with specific details only in Playa Vista development areas.

DEVELOPMENT PROCESS

The process of network development consisted of two primary tasks: (a) detailing the street system and (b) refining the zone system. The two tasks were used to incorporate key details from the LAX, PV and other models and to update the base network to a level sufficient for the detailed analysis and post processing in subsequent tasks. The steps taken in the process include the following:

- Field check the Framework base network;
- Identify key streets and zone splits from other networks;
- Field check network details to be added to the base;
- Add links and zones necessary for smooth transition between focus area/buffer;
- Incorporate additional details to the base; and
- Add facilities such as the I-105 freeway, which have been built between 1990 and 1994, since the source models represented 1990 conditions.

A comprehensive field check was first conducted to verify that the coding of the street system in the base network was correct. This included checking for number of travel lanes, parking restrictions of any type, street medians and posted speed limits within the study area.

Key streets, study intersections, zone boundaries, and centroid connector locations were then identified to be added to the base network. This would update the network to a level sufficient for detailed analysis. Information such as the refined zone systems from the LAX and other models, and the identification of important intersections and roadways not already in the existing network, were all compiled.

Where possible, field checks were conducted for the additions to the network. As conducted in the original field checks, the data used for verification included number of travel lanes, parking restrictions of any type, street medians and posted speed limits. In locations where future improvements could be identified, the network detail was developed in such as way as to facilitate coding of the future networks. This included providing nodes along a roadway for future intersections, and providing expansion centroids and centroid connectors for future zone growth.

In addition to the refinements incorporated from the other models and identified by the jurisdictions, details necessary for transition between the highly focused areas and the adjacent areas were also incorporated. This included disaggregating zones and adding network detail to allow smooth transition and loading in the adjacent network areas. Field checks were conducted for these facilities as well.

Once compiled, the network revisions and zone disaggregations were added to the base network. Details for a total of 212 Focus Area intersections were included, all new TAZs were coded, modified TAZs had their centroid connectors recoded as required, and key roadway facilities were added.

The final step in the process involved allowing the reviewing jurisdictions of LADOT and adjacent jurisdictions such as the City of Santa Monica, El Segundo, Culver City and Caltrans to review and approve the final base network. The resulting base network is a reviewed and approved street network and zone system.

NETWORK STRUCTURE

The network represents the five county SCAG region which includes: Los Angeles, Orange, Riverside, San Bernadino and Ventura Counties. The structure of the region is composed of five distinct areas: the LAX Area; Focus Area; Framework Model Area; Buffer Area; and Outlying Area. The level of detail between the areas range from the Outlying Area, which is the least detailed area in terms of street network and most aggregated in terms of zones, to the Focus and LAX areas, which are the most detailed in terms of street network and refined zone system. This approach was used to maximize the performance and increase the efficiency of the model.

The highest level of detail in the network occurs in the Focus Area and the LAX Area. These areas are characterized by double-linked freeways, all interchanges and rampings schematically represented, secondary arterials coded in their entirety, presence of significant collector streets, and the actual number of lanes on all facilities. The Transportation Analysis Zones (TAZ) are at a finer than census tract level. Centroid connector locations have been located to simulate local streets and other access points, such as driveways.

The Framework Model Area is characterized by double linked freeways, all interchanges and rampings schematically represented, secondary arterials coded in their entirety, and the actual number of lanes on all facilities. The TAZ are at a finer than census tract level.

The Buffer Area is the area surrounding the Framework Model Area and is roughly contained in Los Angeles County. The network in this area is characterized by SCAG regional model level of detail. This generally includes all freeways, most primary arterials and a limited number of secondary arterials. Freeway mainlines are represented as single two-way links, and ramps and interchanges are represented by single nodes or links, similar to their representation in the SCAG network. TAZ's are consistent with SCAG Zone level of detail.

The model's Outlying Area surrounds the Buffer Area and encompasses the other remain county areas. This area is characterized by a skeletal network and aggregated Regional Study Area (RSA) zone levels. The purpose for this structure is to maximize the efficiency of model runs by eliminating extraneous and unnecessary network and zone clutter in these "remote" areas. This was done by only maintaining freeways and important roadways identified as Congestion Management Program(CMP) roadways, and aggregating zones to be consistent with the network level of detail.

NETWORK DESCRIPTION

The following is a description of the coding schemes used to describe the various attributes in the model network. These attributes have been developed to aid in sorting the various levels of data available from the model.

A. LINK TYPES

This link attribute is used to describe the area type and functional classification of the network link. The two digit link type represents both the area in which the facility resides in and the facility type. The first digit represents the area type and the second digit represents the facility type.

The area type coding corresponds to common descriptions used by agencies such as SCAG. They are as follows:

1 Core Area

2 Central Business District (CBD)

3 Outside CBD

4 Residential Area

5 Rural Area

The facility type corresponds to the operational characteristics of the facility. It should be noted that the coding of the facility type may differ from the designation assigned by the City. This is due to the fact that the facility type is used to describe the functional classification, based on results of the calibration process, rather than a designation assigned by policy. The codes are as follows:

1 Freeway
2 Major Arterial
3 Secondary Arterial
4 Collector Streets
5 Not Used
6 Not Used
7 Freeway Ramps
8 Freeway Interchanges
9 Centroid Connectors

B. VOLUME DELAY FUNCTIONS

The volume delay function (VDF) determines the operational characteristics of each link within the model. These functions effectively revises the speed of the link in inverse proportion to the volume on the link. VDFs generally have the form:

(length)x(60)/(speed))x(1-0.15x((volume)/((lanes)x(capacity))) ^4)

Where:

Length	=	link length in miles
Speed	=	Free Flow speed in MPH
Volume	=	demand volume on link
Lanes	=	directional number of lanes on link
Capacity	=	lane capacity of link
Result	=	Number of minutes to traverse link

This formula is used to revise the travel time on every link after each iteration of the capacity constraint, or equilibrium assignment. Initially, the VDF given to each link is determined by the facility type. However, during model calibration, VDFs are revised to improve model precision. As a result, the final VDFs cannot be directly related to facility type.

A table summarizing the characteristics of the volume delay functions, such as speed and capacity, is included in Appendix C of this report.

C. SPECIAL VOLUME DELAY FUNCTIONS

In the course of calibration, special volume delay functions which do not follow the typical naming conventions were developed. They were used to calibrate important roadways, within the focus areas, which could not modelled with the typical volume delay functions. The volume delay functions and their descriptions are as follows:

90 Fast Arterial
91 Faster Arterial
92 Slow Freeway
93 Slower Freeway
94 Fast Freeway
95 Slow Freeway Ramp
96 Very Fast Arterial
97 Very Slow Arterial
98 Very Slow Freeway

Note that descriptions are relative to the typical classification of volume delay functions. A table summarizing the characteristics of the volume delay functions, such as speed and capacity, is included in the appendix to this report.

D. EXTRA ATTRIBUTES

Extra attributes are additional fields of information stored in the model. Due to the large amounts of data and analysis periods, extra attributes play a very important role in the manipulation of data, development of the model and application of the model results. The following is a summary of the extra attributes, their description and purpose:

@amvol	Raw model AM peak hour volume used for post processing
@pmvol	Raw model PM peak hour volume used for post processing
@opvol	Raw model Off peak hour volume used for post processing
@lanop	Base number of lanes on link - used to regenerate the base number of lanes
@lanam	Additional lanes in AM - used to generate #lanes for AM peak hour
@lanpm	Additional lanes in PM - used to generate #lanes for PM peak hour
@lnkam	Existing link counts for AM peak hour - used for calibration
@lnkpm	Existing link counts for PM peak hour - used for calibration
@intam	Existing intersection counts for AM - used for calibration
@intpm	Existing intersection counts for PM - used for calibration
@scrn	Screenline number - used to generate screenline results
@laxam	LAX select trip for AM - select link information
@laxpm	LAX select trip for PM - select link information
@laxop	LAX select trip for Off Peak - select link information
@advam	Adjusted AM peak hour volume - used for post processing
@advpm	Adjusted PM peak hour volume - used for post processing
@advop	Adjusted OP peak hour volume - used for post processing
@adfam	Adjustment factor for AM - used to generate adjusted volumes
@adfpm	Adjustment factor for PM - used to generate adjusted volumes
@adfop	Adjustment factor for OP - used to generate adjusted volumes
@vdfam	Volume delay function coding for AM - used to restore VDF information
@vdfpm	Volume delay function coding for PM - used to restore VDF information
@vdfop	Volume delay function coding for OP - used to restore VDF information
@pvam	Playa Vista select trip for AM - select link information
@pvpm	Playa Vista select trip for PM - select link information
@pvop	Playa Vista select trip for OP - select link information
@focusarea	Focus area - used for result summary information
@tuam	Raw model turning movement volumes for AM - not used
@tupm	Raw model turning movement volumes for PM - not used

Macros have been developed which facilitate the storing, recovery and handling of the extra attributes.

B. SOCIOECONOMIC DATA

This model requires the following socioeconomic data for each zone:

- Single Dwelling Units;
- Multi Dwelling Units;
- Total Dwelling Units;
- Population;
- Average Household Income;

- Retail Employment;
- Non Retail Employment; and
- Total Employment.

In order to create the 1994 socio economic dataset, the 1990 data from the framework model was updated taking into consideration projects that were completed between 1990 and 1994 in the study area. **Figure II-1** shows the locations of these projects.

C. Regional Trip Generation

The next step is the modeling process, after the network and zone system are defined, is regional trip generation. The trip generation model predicts the level of tripmaking to or from each zone. Based on the socio-economic data for each zone, the number of daily trips produced by and attracted to the zone are calculated for each of five trip purposes:

- Home-Based Work; (HBW);
- Non-Home-Based Work; (NHBW);
- Home-Based Other; (HBO);
- Home-Based Shop; (HBS);
- Non-Home-Based Other; (NHBO);

After the productions and attraction factors are calculated, the attraction factors are normalized (scaled) so that the regional productions match the regional attractions. It is importation to remember that productions and attractions are different than origins and destinations. For instance, Home-Based Work trips are always produced at the home zone and attracted to the work zone regardless of the direction (to or from work) of the trip. This means that during the course of a day a worker's home zone would (barring vacations and sick days) generate two trip productions and his work zone would generate two trip attractions. While this definition may seem arbitrary, it is very useful in later steps of the modeling process.

The trip generation model for the LAX Master Plan Study is a direct application of the Framework Model, which in turn is a direct application of the current SCAG regional trip generation model. This model uses a cross-classification submodel for calculating trip productions, and a linear regression model for calculating attraction factors. The model uses as input variables: population, income, number of housing units (single and multiple) and employment (retail and total) by zone, as well as the number of SCAG zones per TAZ. This last variable is used to allocate zonal constants used by the regional model set. In following sections, the results of the LAX trip generation model are compared to the results of the SCAG regional model to verify the operation of the LAX trip generation model.

Trip Production

The SCAG trip production process, which is used directly in the LAX model, utilizes a disaggregate cross-classification submodel. The data for the cross-classification model are generated for each zone from the average household income, and number of Single-Family Dwelling Units (SDU) and Multi-Family Dwelling Units (MDU), and a household auto ownership submodel. Separate trip rates are applied by county for each zone

A. Cross-Classification Submodel

The auto ownership-household size submodel uses zonal average income plus single and multiple-family dwelling units as input. Using relationships established by SCAG from survey data, the number of vehicles (zero, one, and two or more vehicles) for the single and multiple dwelling units are estimated for each zone. This process can be described in three steps. First, the dwelling units (single and multiple) are split into zero, one, and two or more auto ownership classes. Next, another relationship estimates the number of vehicles per single-and multiple-family dwelling unit in the two or more vehicles class. Finally, a countywide control total for vehicles is used to adjust these values to match regional totals. This produces the dissaggregate cross-classification table; the number of vehicles (zero, one, and two or more) by dwelling units (single, multiple) for each zone.

The submodel results in the following for each zone:

- Numer of zero car single dwelling units;

- Number of zerp car multiple dwelling units;
- Number of one car single dwelling units;
- Number of one car multiple dwelling units;
- Number of vehicles in single dwelling units with two or more vehicles; and
- Number of vehicles in multiple dwelling units with two or more vehicles

B. PERSON-TRIP PRODUCTION RATES

Trip rates vary by county and trip purpose. They are applied to the disaggregate cross-classification table, described above. Note that rates for the third and sixth variable in the table (the 2+ auto ownership dwelling units) are trips per *vehicle* as opposed to dwelling units. **Table II-1** shows the rates used for Los Angeles County which, of course, apply to the City. There are five trip purposes in the model set, listed under the "Purpose" column of the following table:

Table II-1

Person-Trip Production Rates for Los Angeles County

Purpose	SDU 0 Veh	SDU 1 Veh	SDU 2+ Veh	MDU 0 Veh	MDU 1 Veh	MDU 2+ Veh
HBW	0.1870	1.0450	0.8690	0.2301	1.1682	0.8569
NHBW	0.0737	0.4279	0.4070	0.1243	0.6028	0.4490
HBS	0.4598	0.9119	0.5698	0.2893	0.6666	0.4928
HBO	0.9130	2.8218	2.1098	0.9042	2.0823	1.6280
NHBO	0.3267	1.4520	1.0703	0.5786	1.2100	0.9636

After the trip productions are computed, the NHBW and NHBO purposes are redistributed based on employment and population. This is necessary since, by definition, these trips are not produced by the homes in the zone. The calculation of trips from the cross-classification table is therefore used only to estimate the total number of non-home based trips. These non-home based trips are then "reallocated" using the following relationships:

$$(\text{Zonal Productions}) = (\text{Total Productions})^* \frac{R_i}{\sum R_i}$$

Where R_i is the reallocation of factor for each zone. The reallocation factors are as follows:

NHBW R_i = A_0*(SCAG Zones/TAZ) + A_1*(Retail Empl) + A_2*(Nonretail Empl)

NHBO R_i = B_0*(SCAG Zones/TAZ) + B_1*(Population) + B_2*(Retail Empl)

For Los Angeles County these values are:

A0	=	446.03003	B0	=	489.63989
A1	=	0.17750	B1	=	1.44298
A2	=	4.03312	B2	=	0.22779

NHBW trips are normalized for the region. NHBO trips are normalized separately by county.

TRIP PRODUCTION VALIDATION RESULTS

The trip production model was tested by applying the model against the socio-economic data used by SCAG and comparing the results to the SCAG model. **Figures II-2 through II-6** show histograms of the person trips weighted relative error in the LAX model for each purpose. These plots were made by creating for each zone the relative error:

$$\frac{\text{(LAX Model Productions)} - \text{(SCAG Model Productions)}}{\text{(SCAG Model Productions)}}$$

The number of times each percentage error occurs for a zone is multiplied by the number of productions SCAG produced for that zone and summed for the histograms. Each histogram shows the person weighted frequency of occurrence of each error in 1% increments. A perfect fit would have all of the productions in the 0% error range. These histograms show excellent validation. Virtually all of the relative errors are within 10% of SCAG's value, with the vast majority well within 5%. The mean errors and standard deviations for the Home Based models are approximately 1/2 of 1% (0.005).

TRIP ATTRACTION

The trip attraction factors by each zone are computed using an adaptation of the SCAG linear attraction ("regression") models. Since in the SCAG model, the total regional attraction factors for each purpose are normalized (scaled) to match total regional productions for the purpose, the initial trip attraction factor for each zone is relative. The trip attraction factors for the LAX model are based on SCAG's linear attraction equations, which use population, retail employment, and total employment as independent variables. In addition, a relatively large constant term is used in the SCAG trip attraction equations. The "number of SCAG zones per TAZ" variable was applied to this constant in order to assure compatibility with the regional model results.

The resulting equations have the form:

HBW	=	X_1(SCAG zones in TAZ) $+X_2$(Total Employment) $+X_3$(Retail Employment)	
NHBW	=	X_4(SCAG zones in TAZ) + X_5(Total Employment)	
HBS	=	X_6(SCAG zones in TAZ) + X_7(Retail Employment)	
HBO	=	X_8(SCAG zones in TAZ) + X_9(Population)	$+X_{10}$(Retail Employment)
NHBO	=	X_{11}(SCAG zones in TAZ) + X_{12}(Population)	+ X_{13}(Retail Employment)

For all counties these values are:

X_1	=	202.0	X_2	=	1.62277*
X_3	=	1.58	X_4	=	308.0
X_5	=	0.46	X_6	=	1033.0
X_7	=	4.18	X_8	=	1539.0
X_9	=	0.46	X_{10}	=	5.93
X_{11}	=	666.0	X_{12}	=	0.46
X_{13}	=	5.93			

TRIP ATTRACTION VALIDATION RESULTS

The trip production model was tested by applying the model against the socio-economic data used by SCAG and comparing the results of the SCAG model. The normalized attractions from the LAX model were compared against the balanced attractions in the final SCAG person-trip tables. The results for trip attraction validation are very good. The mean of the person weighted relative errors is less than 1/2 of 1%(0.005), and the standard deviations are significantly less than 10%. Histograms of the relative errors for each purpose are shown in the **Figures II-7 through II-11**.

D. Trip Distribution

The results of the trip generation models; the balanced productions and attractions, along with zone to zone travel impedance, are the primary inputs to the trip distribution model. The purpose of the trip distribution model is to link productions to attractions. The productions from each zone are matched to attractions based on the relative attractiveness of the zones (measured by zonal trip attractions versus total attractions) and their impedance (travel time), from the zone of origin.

Gravity Model

The Citywide Framework model uses the same formulation for trip distribution as is used in the SCAG regional model, i.e., the gravity model. The functional form of the gravity model is as follows:

$$T_{ij} = P_i \frac{A_j F_{ij} K_{ij}}{\sum_j (A_j F_{ij} K_{ij})}$$

Where:

T_{ij} = Trips from zone i to zone j

P_i = Productions from zone i

A_j = Attractions to zone j

F_{ij} = Friction factor from zone i to zone j

(This is a measure of the impedance, usually a function of auto travel time, from zone i to zone j)

K_{ij} = K-factor; bias factor to adjust zonal interchange attractiveness

As the formula shows, the trip interchange volumes are based on the total productions P_i and the normalized attractions A_j. The friction factors (a function of travel impedance) are computed for the trip interchange by using a look-up table which gives a high value to short trips and relatively lower values as the trip length increases.

This discourages very long trips between zones that are far apart yet produce and attract large numbers of trips. The "shape" of the F-factor curve defines the trip length frequency distribution (the relative number of long and short trips) for a network. F-Factors are a relative measure of travel propensity. That is, the shape of the F-Factor curve is what is important, the absolute value of the F-Factor for any travel time is only useful in its relationship to the other values within that F-Factor set, in this case for that specific trip purpose.

Since the friction factors are a function of travel time, and travel time is a function of zone size and network design, the regional friction factors from SCAG are related to the regional network,. With the LAX focussed network the travel time distribution is different since the zone sizes are different. With differing zone sizes the opportunity to make longer or shorter trips on the network is affected. Therefore the friction factors were re-calibrated.

In order to calibrate the F-Factors, zone-to-zone travel impedances are required. In order to create the initial travel time "skims", the 1990 SCAG vehicle trip table was converted to the LAX zone system and assigned to the network. This provided a set of travel impedances.

F-Factor and K-Factor Development

F-Factors were initially developed with K-Factors set to 1.0. The regional trip length frequency distribution (as expressed on the Citywide Framework network) was used to develop initial F-Factors. Intra-county K-Factors (e.g. Orange County to Orange County) were created for some of the highly aggregated counties. This was necessary because of the large zones insome of the other counties. Only some intra-county trips (all outside of LA County) have K-Factors different than 1.0.

TRIP DISTRIBUTION VALIDATION RESULTS

Trip distribution was performed separately for each trip purpose, producing five daily person trip tables, which were compared to the regional trip tables created by SCAG in terms of average trip length and trip-length frequency distribution. **Figures II-12 to II-16** show the trip-length frequency distributions for each trip purpose. As can be seen, an excellent agreement was achieved, not only with the shapes of the curves, but also with the average trip times and the standard deviations of those times. The average trip time for each purpose is typically within a fraction of a minute of that obtained by the SCAG trip tables converted to the LAX zone system.

E. VEHICLE TRIP ESTIMATION AND ASSIGNMENT

In the traditional modelling process, trip generation and trip distribution are followed by modal split, daily to peak period trip conversion, a shift from production-attraction to origin-destination format, and trip assignment. The LAX model does not use an explicit modal split model. Instead, the modal split information is taken from model runs made by SCAG and applied directly as (zone to zone) transit percentages and auto occupancies.

After trip distribution, the resulting daily person trips (in Production and Attraction format) must be converted into peak period vehicle trips (in Origin and Destination format) for assignment. This conversion is done in two steps. First the person trips are converted into daily vehicle trips using the transit percentages and the auto occupancies. Peak period factors, by purpose and direction, are then applied to convert the daily vehicle trips (in P&A format) into peak hour vehicle trips (in O&D format) for assignment.

DAILY VEHICLE TRIPS

In a typical modeling process, the modal split process follows trip generation and trip distribution. The LAX model does not have an explicit modal split capability, which would use modaltravel time and cost differential formulae. Instead, the modal split information is taken from existing comparable SCAG regional model runs, by direct application of SCAG zone-to-zone (1555 zone system) transit percentages and auto occupancy factors.

This process is performed on total daily trips for three trip purposes: Home-Based Work (HBW), Non Home-Based Work (NHBW) and Non-Work (sum of HBS,HBO and NHBO)

The transit percentage for each trip purpose is obtained by dividing the regional (SCAG) transit person trips by the regional total person trips for each zone pair. Auto occupancy is obtained by dividing the regional vehicle (nontransit) person trips by the total vehicle (non-transit) trips. These calculations are done using the SCAG (1555 zone) model data. Where the LAX zone structure is finer than the SCAG zone structure, the percentages and occupancies are calculated directly for the framework zones using the same percentages as the parent SCAG zone. Where LAX zones are an aggregation of SCAG zones, the data (person, transit, and vehicle trips) are aggregated before the percentages and occupancies are calculated. The non-work trip purposes are combined before vehicle trip estimation to yield the following three trip purposes:

HBW: Home-Based Work

NHBW: Non-Home Based Work

Non-Work: The sum of HBS, HBO, and NHBO

The resulting vehicle trip equation for each purpose is as follows:

$$\text{VEHICLES} = \frac{\text{(PERSONS)(1-TRANSIT)}}{\text{AUTO OCCUPANCY}}$$

Where:

VEHICLES = Daily vehicle trips, by purpose

PERSONS = Daily person trips, by purpose

TRANSIT = SCAG daily transit share, by purpose

AUTO OCCUPANCY = Average SCAG daily auto (decimal ratio) occupancy, by purpose

AM, PM, and Off-Peak Vehicle Trips

The daily vehicle trips are then converted into AM, PM and off-peak period trip tables using regionally derived day-to-period factors, which are also used in SCAG 1990 and Framework models. Each purpose (HBW, NHBW, and NW) and direction (P to A and A to P) is given a specific peak period factor. The factors used for the three periods are shown below:

	HBW		NHBW		NW	
Period	P-A	A-P	P-A	A-P	P-A	A-P
AM Peak	0.2898	0.0053	0.1181	--	0.0551	0.0051
PM Peak	0.0317	0.2980	0.3032	--	0.1261	0.1145
Off Peak	0.2110	0.1640	0.5787	--	0.4699	0.2293

The peak period trip tables were then converted to peak hour trip tables for assignment. The duration of time periods for AM, PM and off-peak are 2, 3, and 19 hours, respectively. The period-hour conversion factor used for the AM peak period was 0.55. For the PM peak period, a factor of 0.30 was used to determine PM peak hour trips. A factor of 0.06 was used for the off-peak period. The three period trip tables were multiplied by the above factors to obtain peak-hour trip tables.

The determination of peak hour trips was conducted for all zones in the region with the exception of LAX. A description of the procedure utilized for the development of LAX trip table is included in Chapter III. The LAX trips replaced those defined by the regional model. The resultant trip tables were used for assignment to the roadway network.

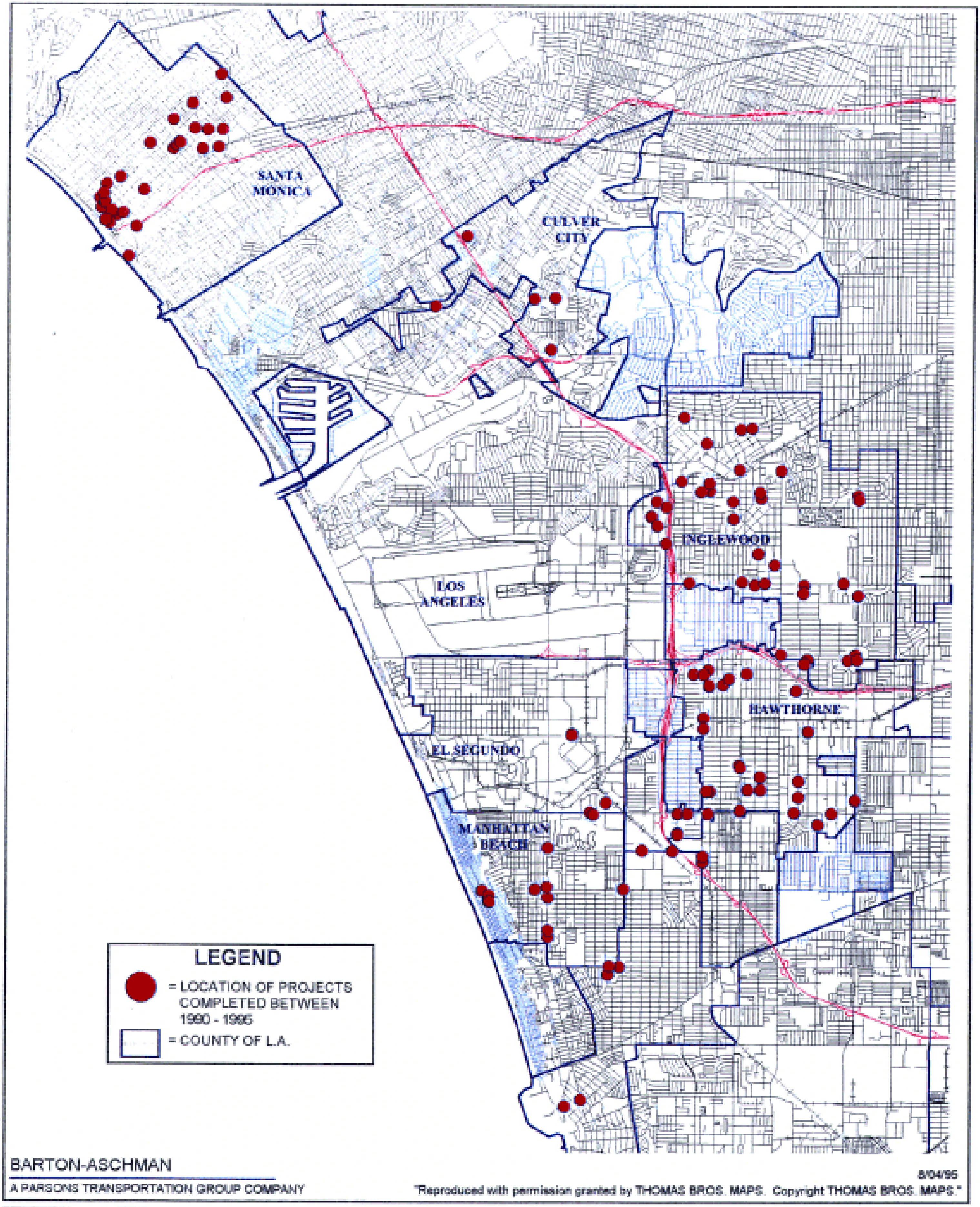
Trip Assignment

Trip Assignment is the process by which the model estimates the volume of traffic on each individual link of the transportation network. Paths are developed between each and every zone pair in the model, then the trip assignment routine loads trips onto the network by assigning them to specific paths. When all the trips from all the zone pairs are added together an estimate of total travel (traffic) on each link is derived.

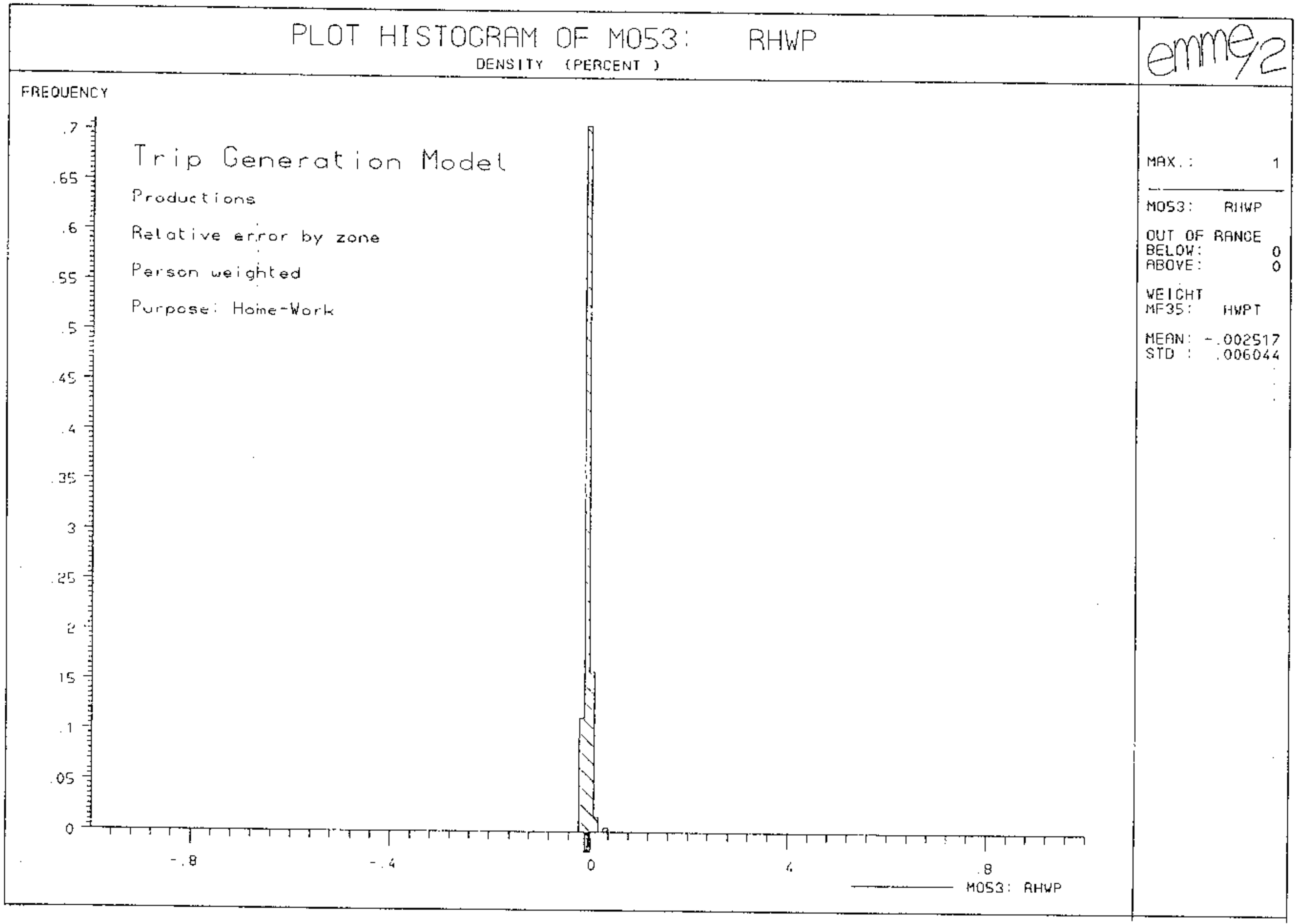
The LAX model uses an "equilibrium" assignment technique. This technique recognizes that several routes between a pair of zones might have nearly equal impedances, and therefore, equal use. Impedance is a function of the speed and capacity of the links that make up a path and may be thought of as the overall travel cost to the user. There is also some probability that even longer paths will be taken by some travelers.

Using this approach, trips are assigned to reasonable paths between zones as a function of the path's relative impedance. Paths of equal impedance would receive equal traffic, and longer paths would receive less traffic. This method uses an iterative assignment process which optimizes all assignment paths and volumes until a state of equilibrium is reached. Assignment equilibrium is defined as the point at which no traveler between a pair of zones can improve his or her travel time (or, more general, travel cost) by choosing an alternative route. A portion of the assignment from each of 25 iterations is included in the final volume. This technique results in a reasonably realistic representation of traffic on the network.

The traffic assignment was conducted for three periods on the respective networks. The different networks take into consideration any modifications that are specific to a time period, such as parking restrictions and turn prohibitions.



Los Angeles International Airport Master Plan | COMPLETED PROJECTS: 1990 - 1995 | FIGURE II-1



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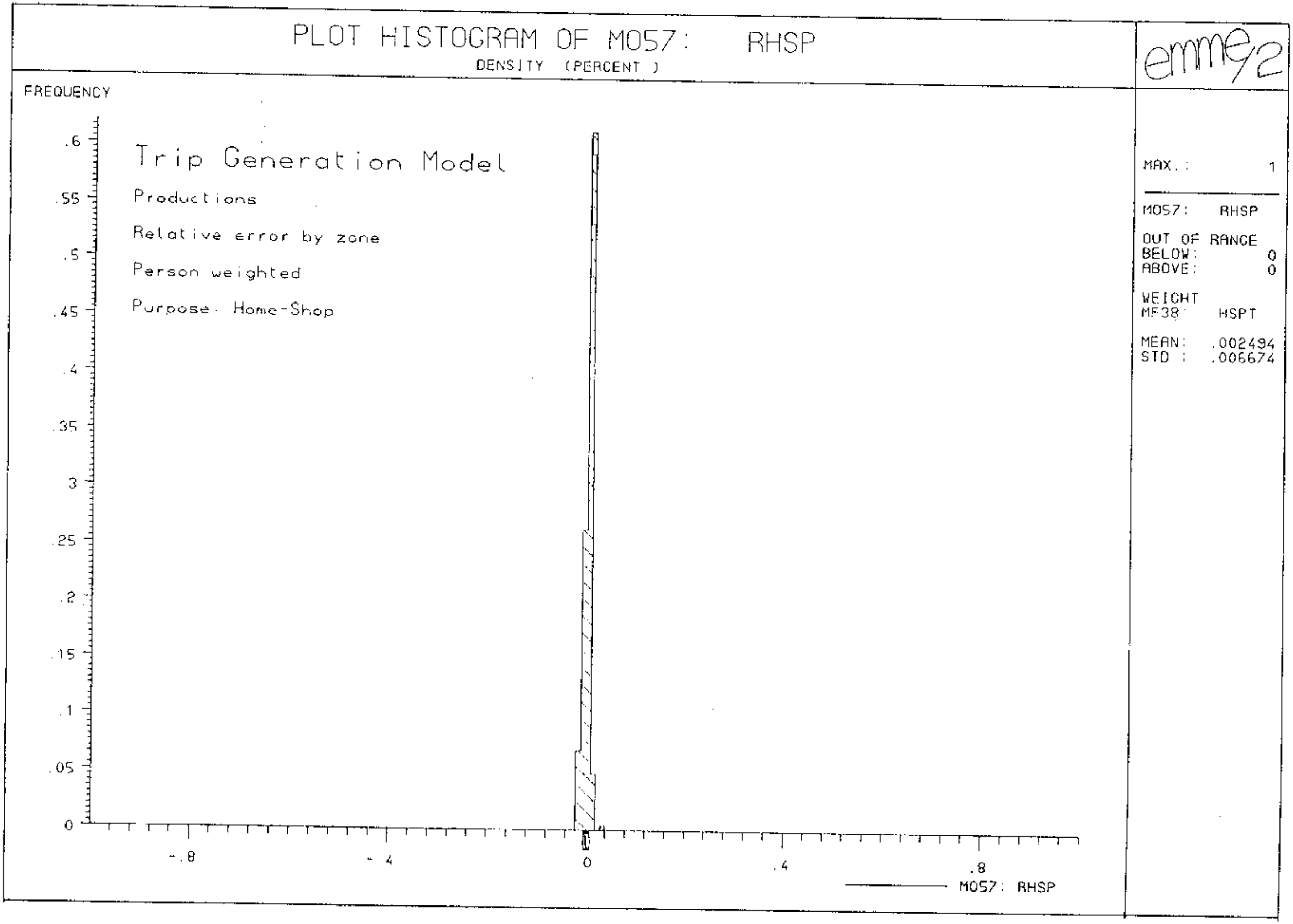
RELATIVE ERROR: Home-Work Productions

FIGURE II-2



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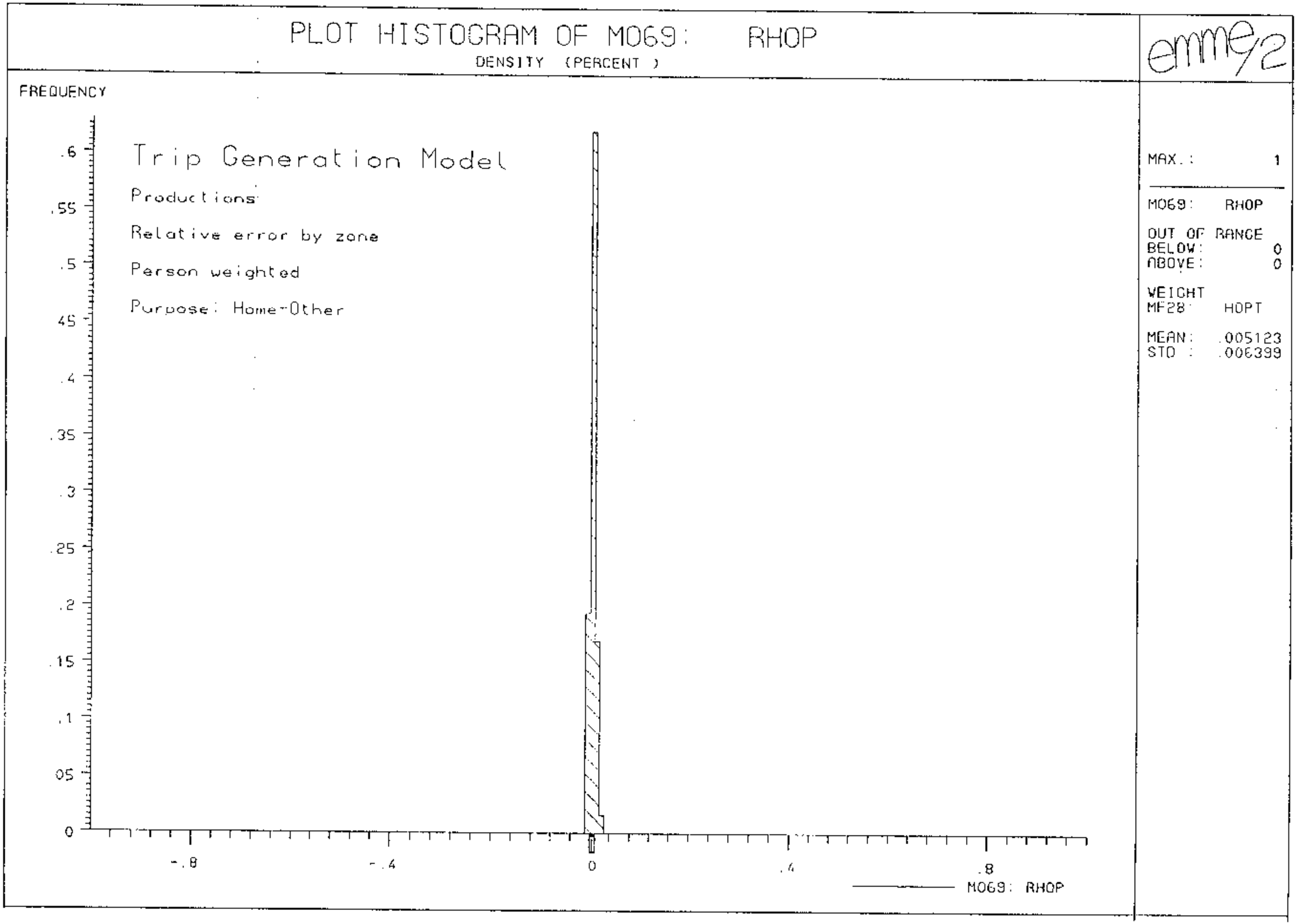
RELATIVE ERROR: Home-Shop Productions

FIGURE II-3



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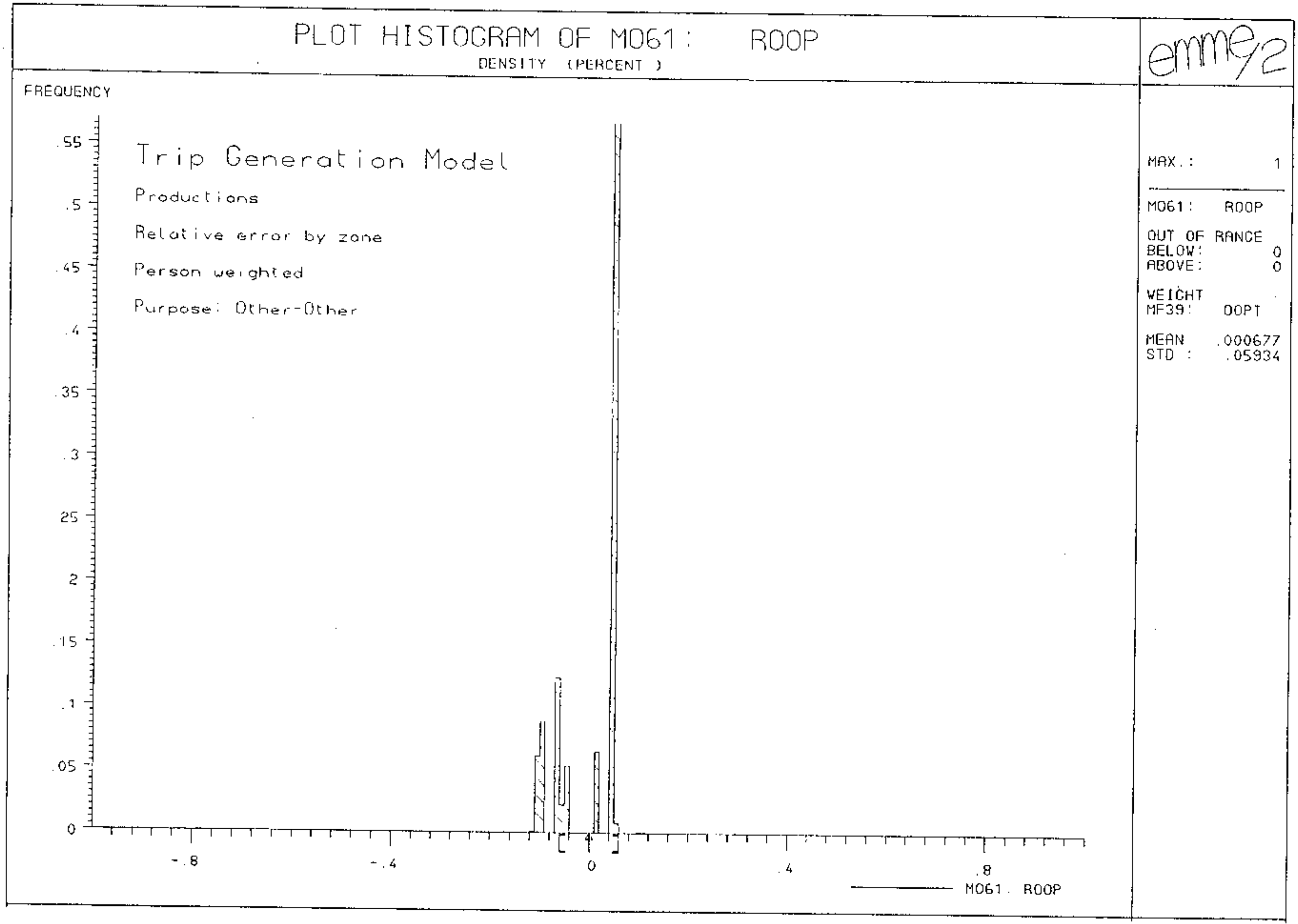
RELATIVE ERROR: Home-Other Productions

FIGURE II-4



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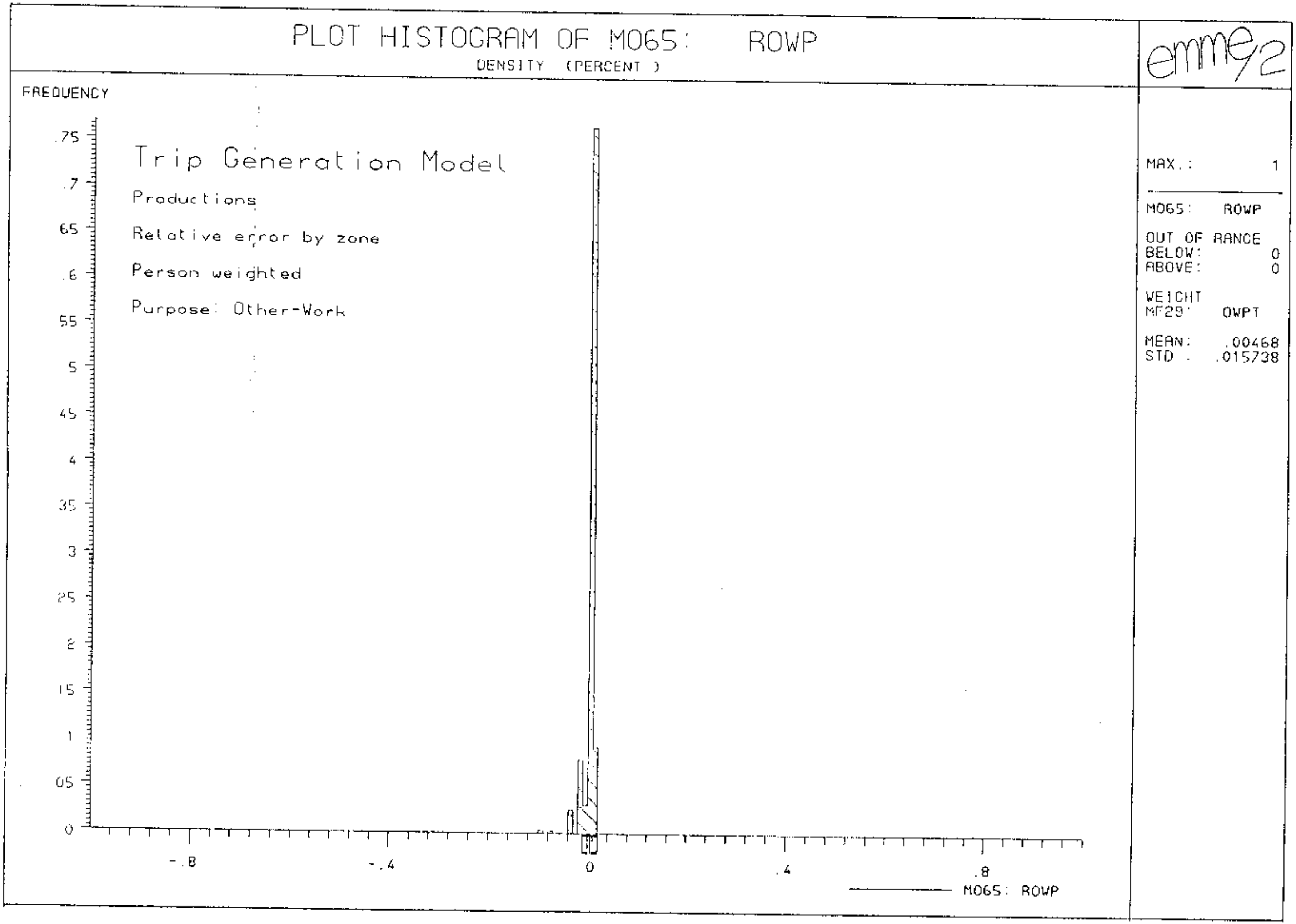
RELATIVE ERROR: Other-Other Productions

FIGURE II-5



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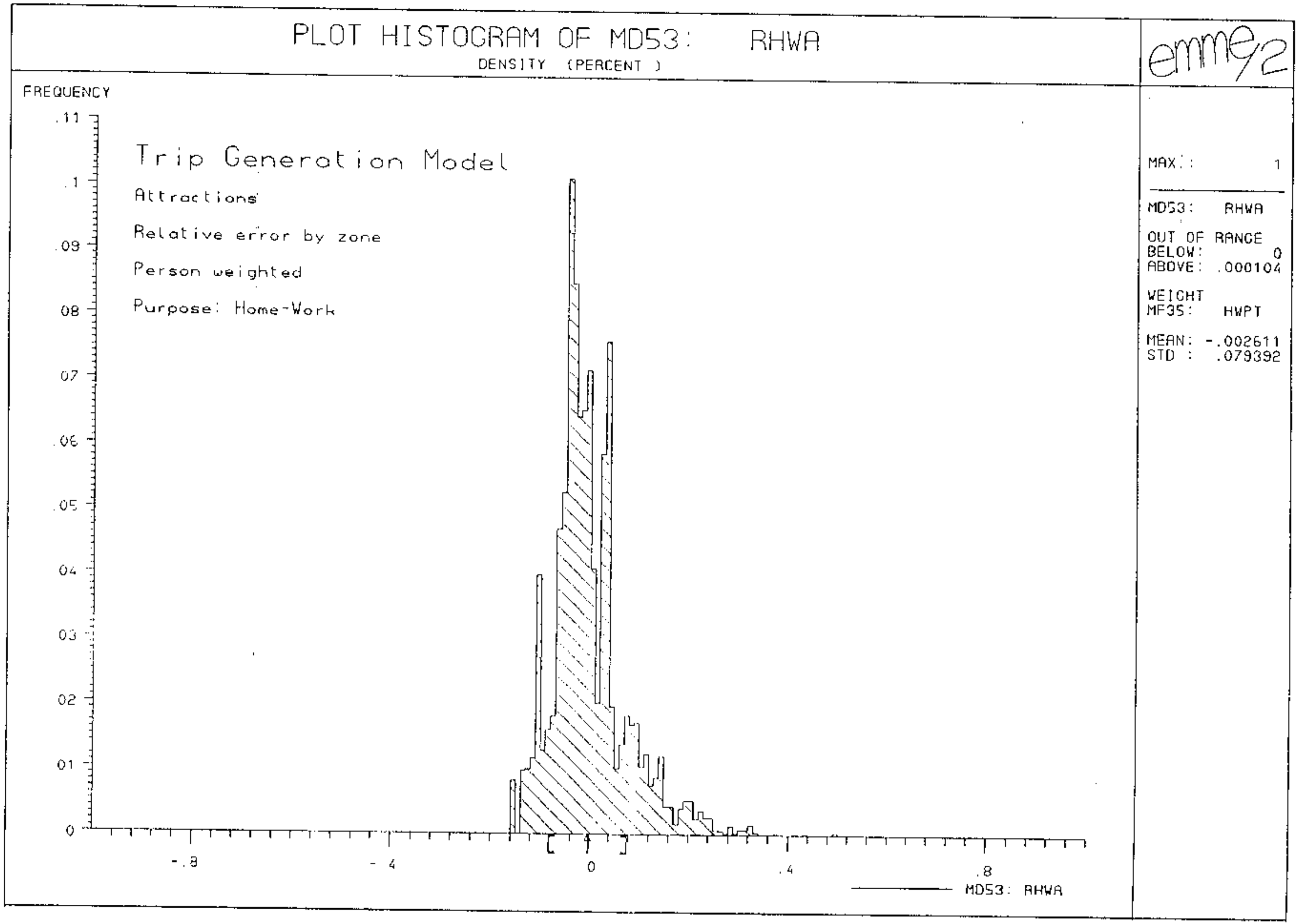
RELATIVE ERROR: Other-Work Productions

FIGURE II-6



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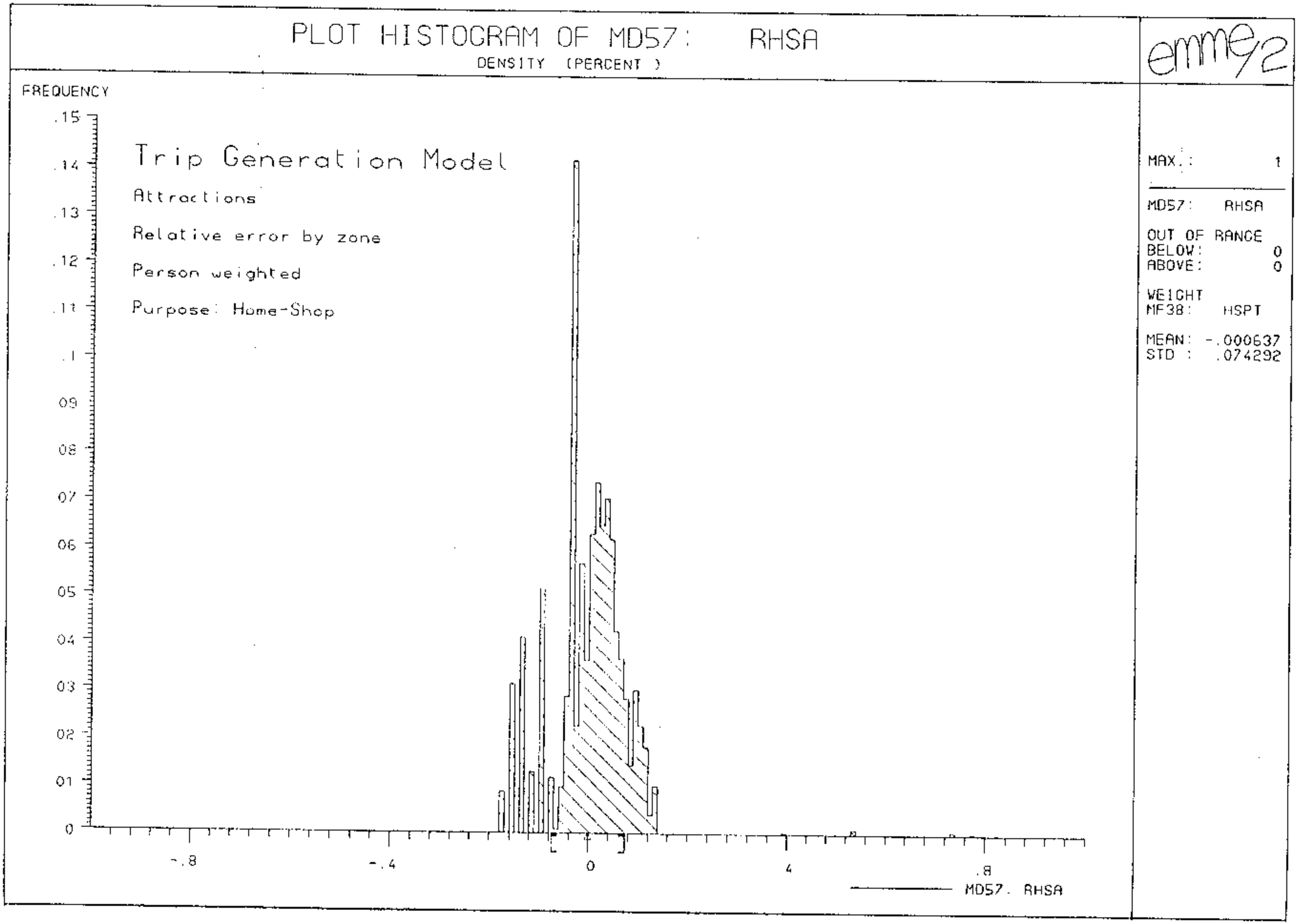
RELATIVE ERROR: Home-Work Attractions

FIGURE II-7



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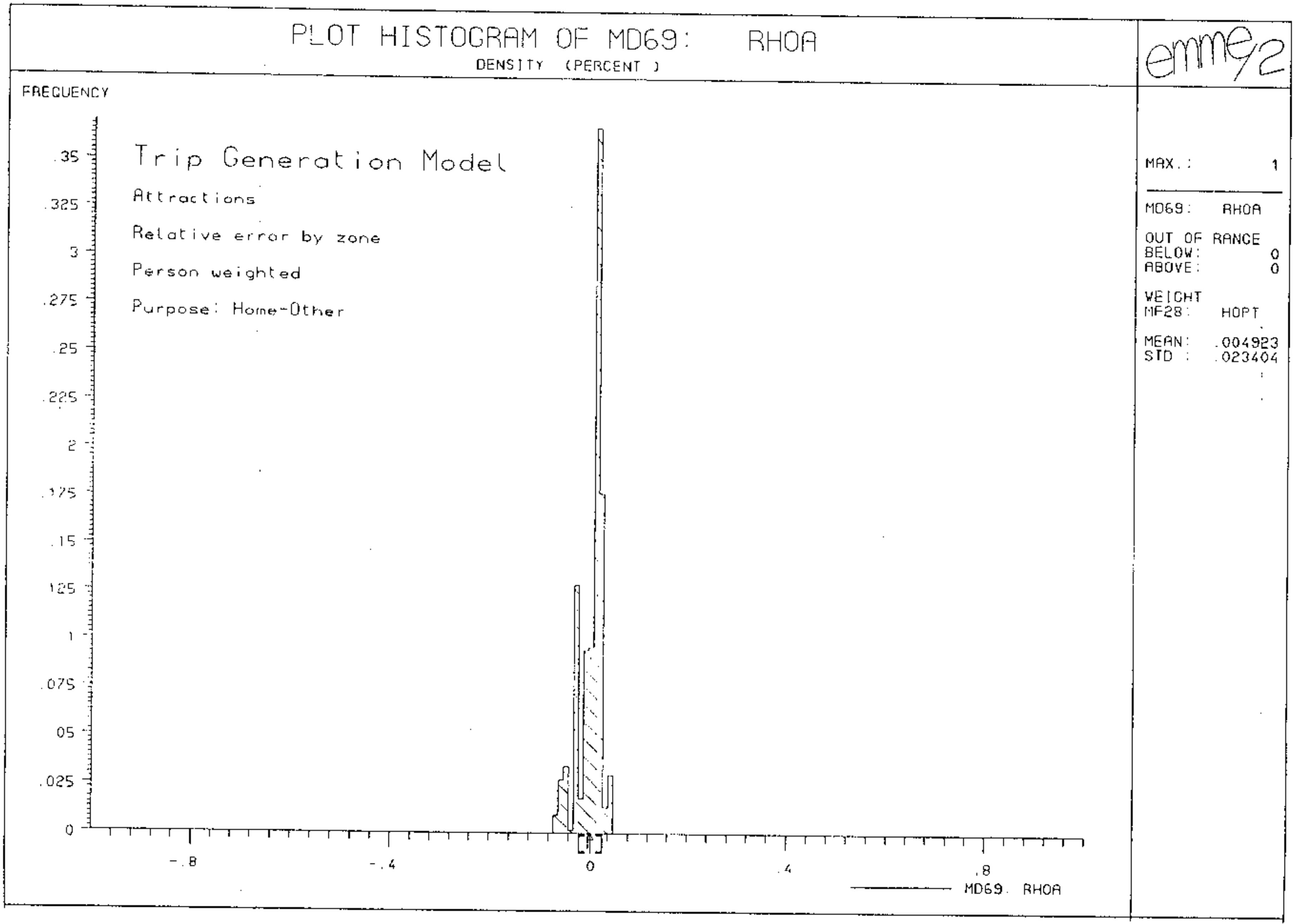
Los Angeles International Airport Master Plan

RELATIVE ERROR: Home-Shop Attractions

FIGURE
II-8



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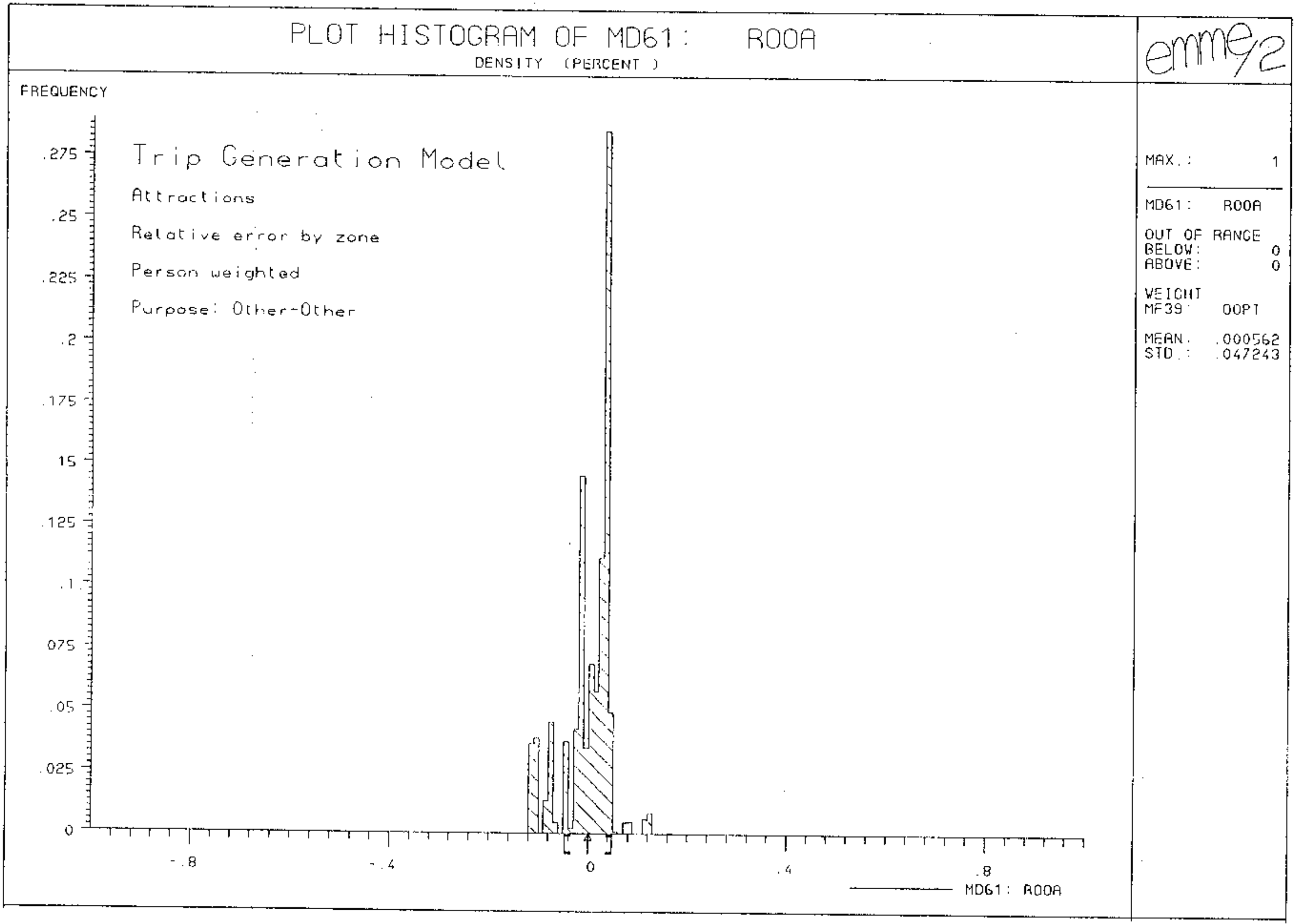
RELATIVE ERROR: Home-Other Attractions

FIGURE II-9



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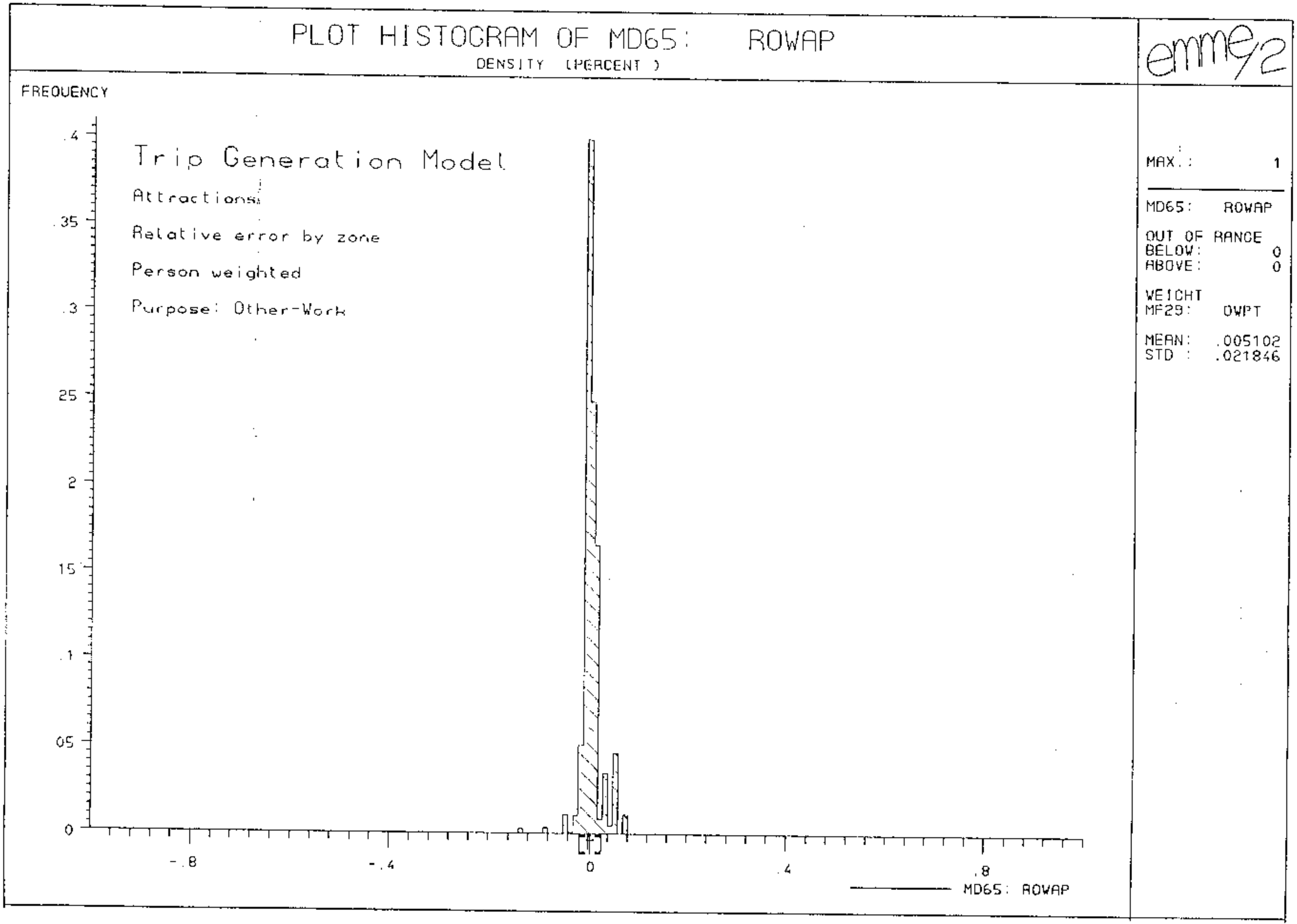
RELATIVE ERROR: Other-Other Attractions

FIGURE II-10



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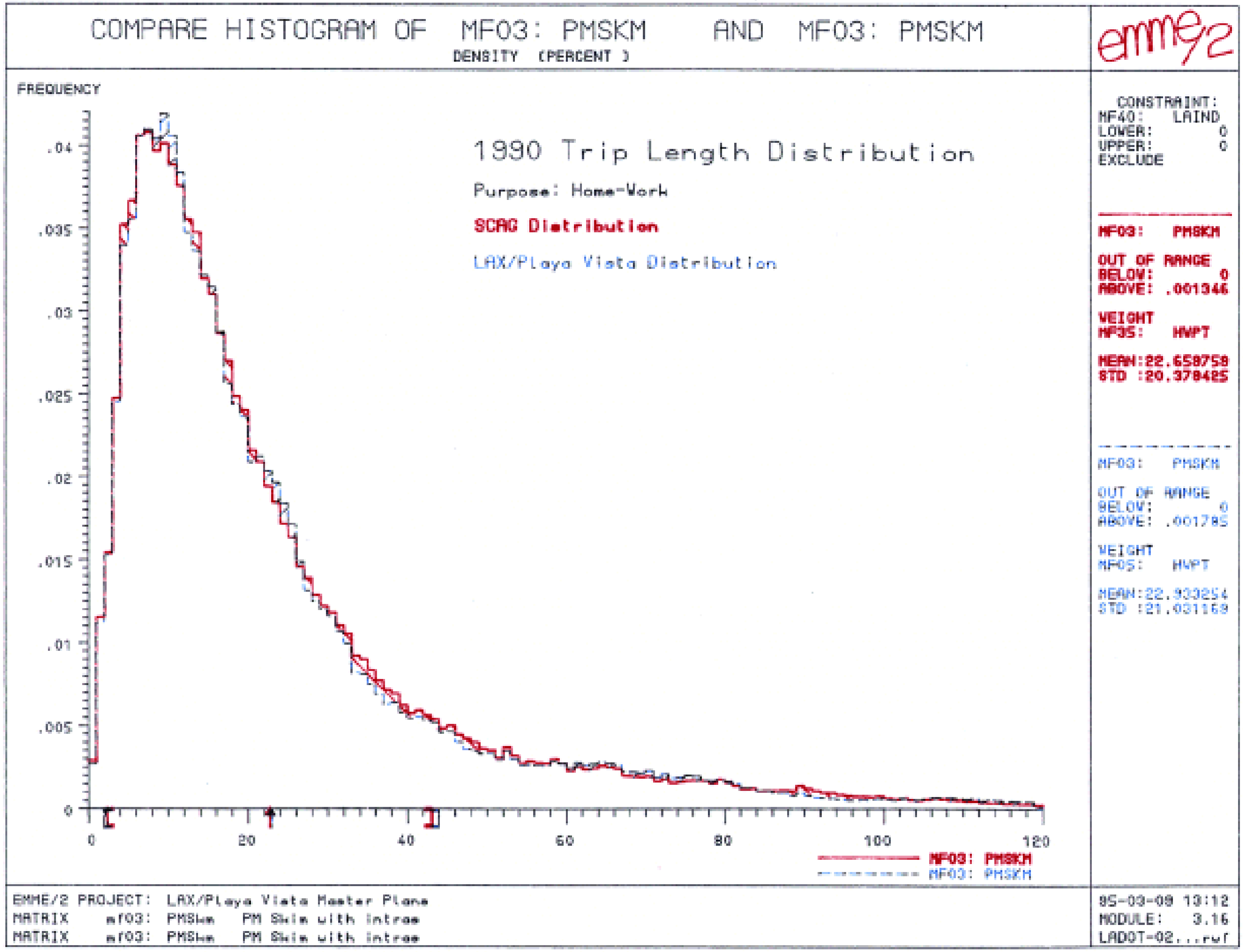
RELATIVE ERROR: Other-Work Attractions

FIGURE II-11



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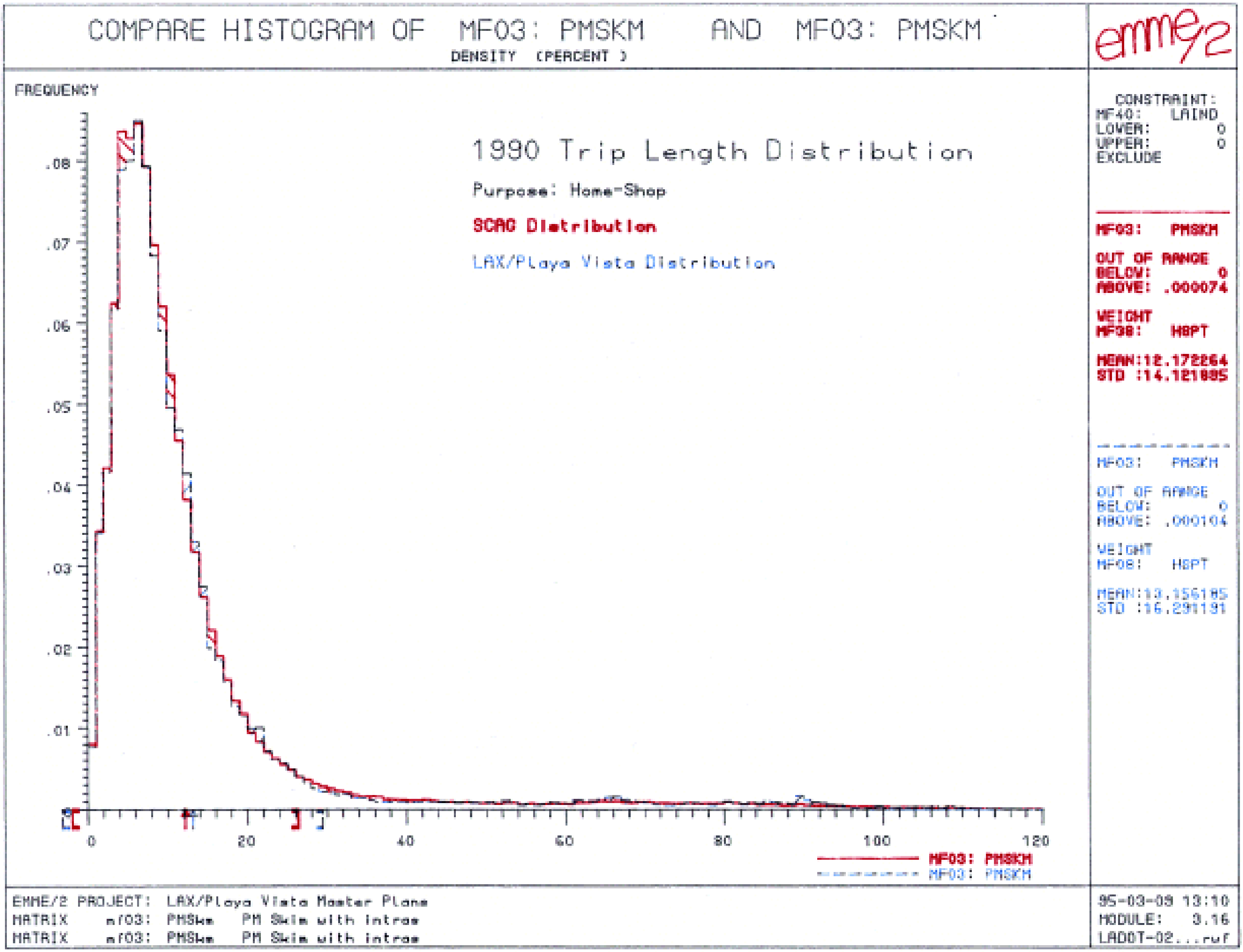
Los Angeles International Airport Master Plan	TRIP LENGTH FREQUENCY: Home-Work	FIGURE II-12



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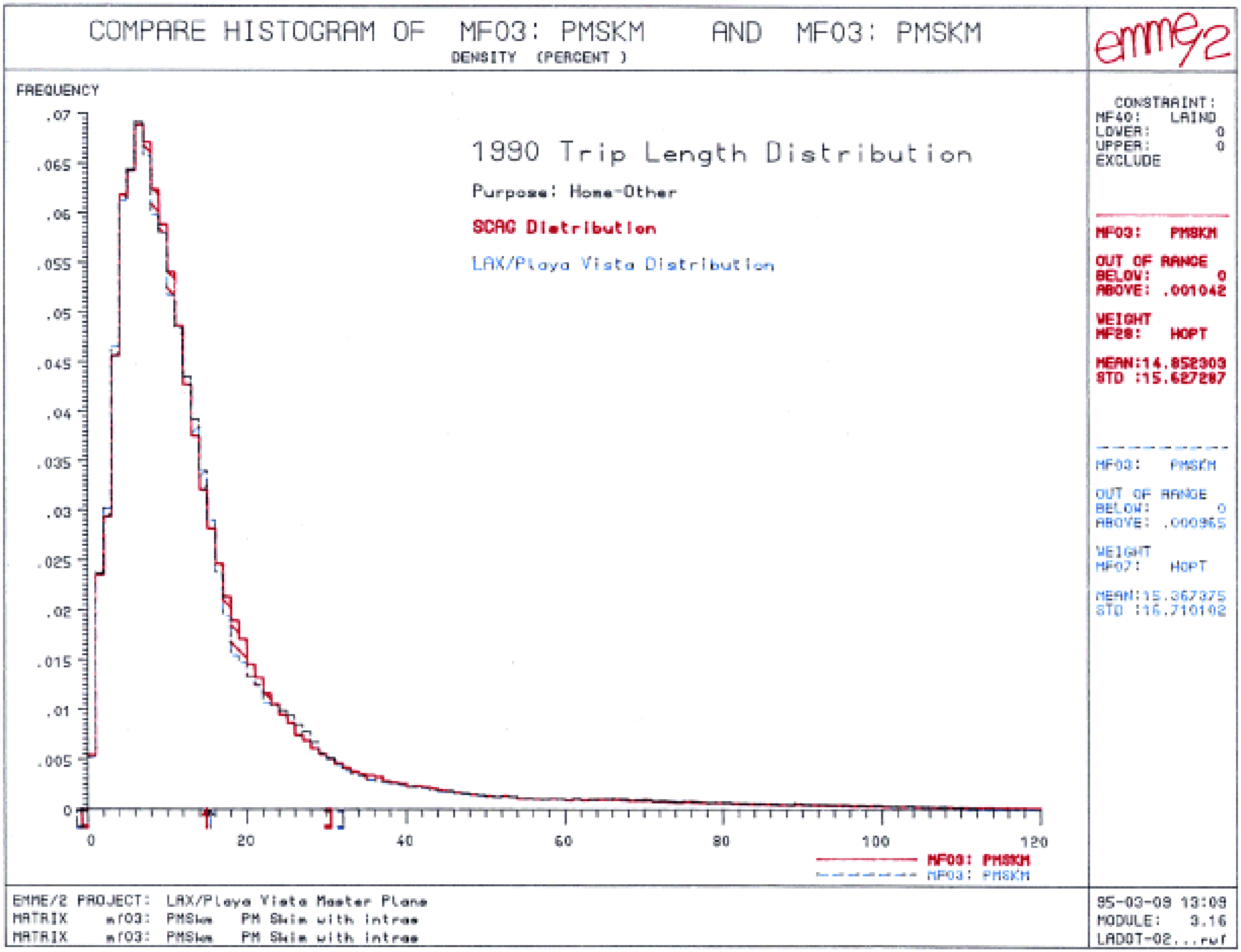
TRIP LENGTH FREQUENCY: Home-Shop

FIGURE
II-13



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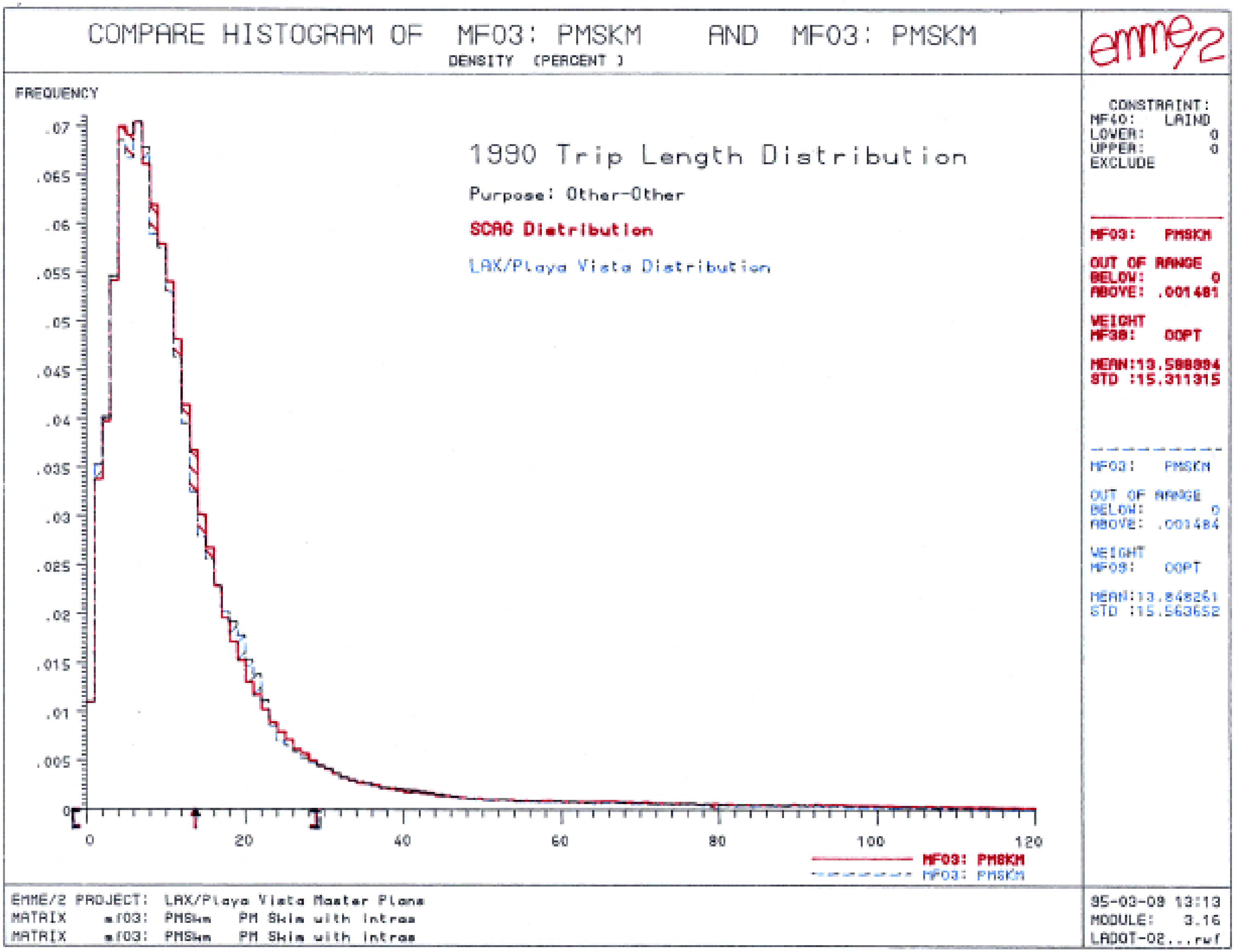
Los Angeles International Airport Master Plan	TRIP LENGTH FREQUENCY: Home-Other	FIGURE II-14



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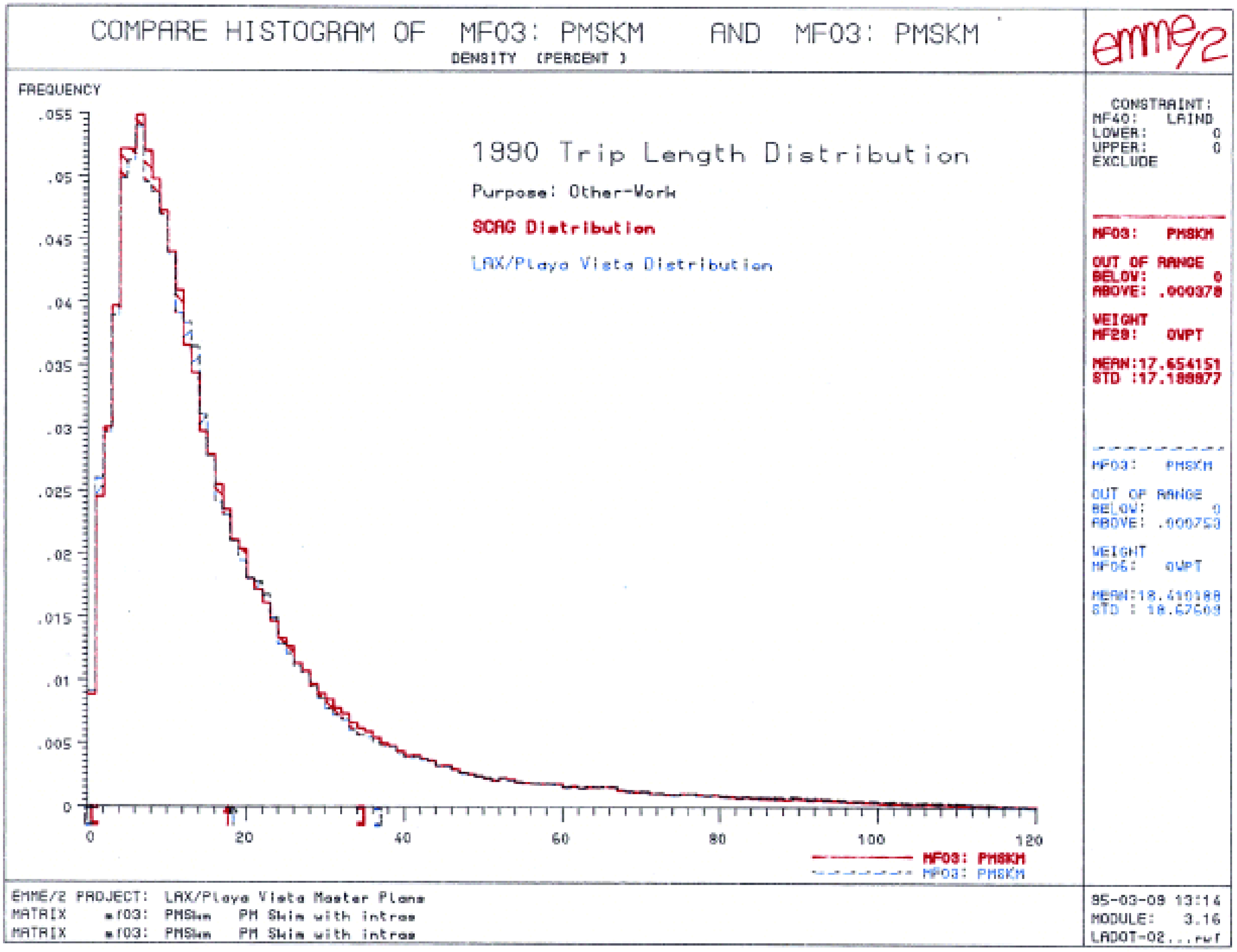
Los Angeles International Airport Master Plan	TRIP LENGTH FREQUENCY: Other-Other	FIGURE II-15



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TRIP LENGTH FREQUENCY: Other-Work

FIGURE II-16

III. DEVELOPMENT OF AIRPORT TRIP TABLES

The trip generation model used for the LAX Master Plan Study is a direct application of the Framework Model and is used for all zones *except* LAX Area Zones within and adjacent to airport property. Separate trip tables have been developed for the LAX Area. An extensive effort was undertaken to quantify existing trip-making characteristics at LAX. The following is a description of the methodology used in developing these trip tables for all peak hour trips (AM,PM, Airport Peak), in and out of LAX area zones.

A. DATA COLLECTION

Extensive data collection efforts were undertaken in March, 1995 to compile a comprehensive source of data for on- and off-airport facilities.

Seven-day, 24-hour machine counts were conducted at all entrances to the upper and lower levels of the Central Terminal Area (CTA). In addition, three-day, 24-hour machine counts were conducted at each airport property driveway located:

- south of Century Boulevard between Sepulveda Boulevard and Aviation Boulevard;
- west of Aviation Boulevard between Century Boulevard and Imperial Highway;
- north of Imperial Highway between Pershing Drive and Aviation Boulevard; and,
- east of Pershing Drive, between Manchester Parkway and Imperial Highway.

The locations of these count surveys are shown in **Figure III-1**.

Vehicle classification surveys were conducted simultaneously at all LAX property driveways to identify the mix of vehicles. The survey recorded the number of vehicles according to the following vehicle types:

- cars;
- delivery vans;
- panel trucks;
- 2-axle trucks; and
- 3- or more axle trucks.

These surveys were conducted for one hour during the morning peak period (7-9 AM) and one hour during the afternoon peak period (4-6 PM).

In addition, one-day, 24-hour machine counts were conducted at on- and off-airport parking facilities in the immediate airport area. The on-airport parking facilities included Lots B, C, D, and E. The off-airport lots included privately-owned and operated public parking facilities in the immediate area.

B. ZONE SYSTEM FOR THE AIRPORT AREA

The CTA, other LAX property, and adjacent LAX direct-use areas were divided into 55 zones, as shown in **Table III-1**. The CTA was divided into seven zones, according to access between the upper and lower levels and either Century Boulevard on the east, Sepulveda Boulevard on the south and Skyway on the north. Twenty-four zones were designated for other LAX property driveways accessing air cargo terminal facilities, administrative and other air-related uses located south of Century Boulevard, west of Aviation Boulevard, north of Imperial Highway, and east of Pershing Drive as well as LAX-operated public and employee parking lots.

The remaining twenty-four zones included LAX direct-use areas such as nearby hotels, car rental agencies, and privately-owned public parking facilities. These direct-use areas are located adjacent to the airport and generate trips to/from the CTA on a frequent basis. Each hotel, rental car agency and parking facility was designated as a separate zone.

C. CENTRAL TERMINAL AREA (CTA) TRIPS

Leigh Fisher Associates conducted machine counts on many roadways of the on-airport circulation system. The following is a summary of the counts conducted in February, 1995 during the morning and afternoon peak hours (8-9 AM and 5-6 PM, respectively).

ARRIVALS	AM Peak Hour	PM Peak Hour
Upper Level	1930	1540
Lower Level	1230	1220
Total	3160	2760
DEPARTURES	AM Peak Hour	PM Peak Hour
Upper Level	1020	720
Lower Level	1950	3150
Total	2970	3870
TOTAL TRIPS	6130	6630

The distribution of these trips to and from both levels of the CTA is shown in **Figures III-2 through III-5** for AM,PM, and airport peak hours.

In addition to machine counts, Leigh Fisher Associates simultaneously conducted a vehicle classification survey of on-airport traffic. **Table III-2** contains a summary of the mix of vehicles found on roadways within the CTA. The majority of traffic, approximately 72 percent, consists of private vehicles whereas the remaining traffic includes taxis, limos, passenger vans/buses, delivery trucks, and shuttles for rental car agencies, parking facilities and hotels.

Using the count data, Leigh Fisher provided a breakdown of trips to and from the CTA during three peak hours, as shown in **Table III-3**. This breakdown not only provides a summary of trip ends by vehicle type, but offers information on how these CTA trips can be distributed to other zones in the network, depending on the type of trip. The following is a description of the methodology used to distribute these trips.

Rental Car Agency Shuttles

A total of twelve zones were created which contain the ten major rental car agency facilities adjacent to LAX. Since two rental car agencies provided exclusive shuttle bus driveways at different roadways than autos, two zones were assigned to each of these agencies in order to separate shuttle and auto trips.

The numbers of rental car shuttles during peak hours were provided by Leigh Fisher Associates, based on the CTA vehicle classification survey described above and the 1993 Passenger Survey. The shuttle trips were allocated to the ten rental car agency zones based on the relative sizes of the individual agencies.

Table III-4 provides a summary of shuttle trips in and out of each rental car zone during the AM and PM and airport peak hours.

Off-Airport (Privately Operated) Parking Lot Shuttles

Seven major off-airport parking facilities were included in the trip table as separate zones. (Specific identification of each parking facility is not available due to agreements for confidential use of data.) These facilities are privately-owned and operated, providing short- and long-term parking for LAX passengers.

As shown in **Table III-3**, during the AM peak hour a total of 51 shuttles enter the CTA and 51 exit. During the PM peak hour, a total of 54 off-airport shuttle vans/buses enter the CTA and 53 exit.

These off-airport parking shuttle trips to/from the CTA were allocated among the zones based upon the relative sizes of the lots. In an attempt to obtain ground counts at all private lots, count surveys were conducted at driveways of four of the seven major off-airport parking facilities where permission was granted. Ground counts, consisting of one-day, 24-hour machine counts, were conducted at two parking facilities while a one-hour manual count during the peak hour was conducted at two other locations.

Since driveway counts of shuttles at these four off-airport parking facilities were available, the CTA ground counts were adjusted to include these findings. The remaining shuttle trips were then distributed to the other three off-airport zones, based upon relative size. **Table III-4** provides a summary of the resulting allocation of shuttle trips to off-airport parking facilities.

On-Airport Parking Lot Shuttles

Four on-airport parking lots are owned and operated by LAWA, including Lots B, C, D and E. Lots B and C are designated for passengers and Lots D and E are designated for employees. All four lots are serviced by shuttles to the CTA on a regular and frequent basis throughout the day. One-day, 24-hour machine counts were conducted at the driveways of all four lots, while shuttle bus activity was also monitored for Lots C and D since exclusive driveways are provided for shuttles.

According to the on-airport ground count and vehicle classification survey conducted by Leigh Fisher Associates (see **Table III-3**), during the AM and PM peak hour a total of 24 shuttles enter the CTA and 24 exit.

These trips were distributed to and from the parking lots based upon actual counts. However, since the on-airport parking driveway counts were available at Lots C and D, CTA ground counts were then adjusted to reflect these findings at the two count locations. **Table III-4** provides a summary of the resulting allocation of shuttle trips to on-airport parking facilities.

Hotel Shuttles

Many hotels are located within close proximity to LAX property and provide frequent, non-scheduled shuttle van service to and from LAX for their patrons. Shuttles for airline crews are also provided by hotels. Five zones were established in the LAX area to incorporate all major hotel shuttle activity to the CTA. Three of these zones are located on Century Boulevard, providing direct access to Century Boulevard and/or to adjacent side streets. Two additional zones within the area were identified for other groupings of major hotel activity, one located on Airport Boulevard/96th Street and one located on Imperial Highway.

Three additional hotel zones were selected throughout the Los Angeles region to account for service provided by hotels in other areas, such as downtown Los Angeles; west Los Angeles, the San Fernando Valley; South Bay, and Orange County. No ground count surveys were conducted as a part of this effort, however, data provided in the *1993 Air Passenger Survey Results* (conducted for LADOA) pertaining to the geographic distribution of visitors to LAX was used to assign CTA ground counts of these regional hotel shuttles.

During the AM peak hour, a total of 61 hotel shuttles enter the CTA and 62 exit, During the PM peak hour, 58 shuttles enter the CTA and 58 exit.

Table III-4 includes a summary of the resulting allocation of hotel shuttles.

Private Vehicle and Other Trips

The remaining trips in and out of the CTA comprise private autos, scheduled vans and buses, the VanNuys Flyaway, chauffeured Limousines, charter vans and buses, taxi cabs, public transit, service, delivery vehicles, and other vehicles.

Private autos at the CTA consist primarily of visitor and resident passengers. According to data provided in the 1993 *Air Passenger Survey Results*, approximately 70% of these autos are for residents of the Los Angeles area while 30% are for visitors. The resident auto trips were assigned according to the geographic distribution of resident passenger trips,included in the *1993 Air Passenger Survey Results*. Similarly, visitor trips were assigned to the geographic distribution of visitors, derived from the same survey.

Since the nature of the remaining(primarily commercial vehicle) trips reflect origins and destinations throughout the Los Angeles area that are more closely associated with the location of businesses and households, the geographic distribution of employment and residences provided in the 1993 *Air Passenger Survey Results* was used for the distribution of these trips to zones in the region.

D. LAX Direct-use Zones

The on-airport ground count surveys conducted by Leigh Fisher provided information concerning the number and type of trips in and out of the CTA, including shuttle buses from direct-use facilities such as rental car agencies and parking lots. The previous section reviewed the method for assigning *shuttle* trips. This section discusses the calculation and assignment of *auto* trips generated by these direct-use zones.

Direct-use zones include rental car agencies as well as on-and off-airport facilities. With the designation of these direct-use facilities as separate zones, more accurate data can be used in the model as a basis for the determining the number and distribution of LAX trips--not only for shuttles to and from the CTA, but for auto trips between the direct-use zones and the rest of the region.

The following is a summary of the method for distributing auto trips in and out of these facilities.

Rental Car Agencies

A total of twelve zones were created which contain the ten major rental car agency facilities adjacent to LAX. Since two rental car agencies provided exclusive shuttle bus driveways at different roadways than autos, two zones were assigned to each of these agencies in order to separate shuttle and auto trips.

Total rental car auto trips in the LAX Ground Access Model were estimated using Leigh Fisher's On-Airport Roadway Model. The estimates from this model were based on origin/destination (O/D) air passenger volumes (obtained from LAX Master Plan forecasts), mode choice percentages, and vehicle occupancy rates obtained from the 1993 passenger survey and extrapolated to 1994 conditions. These traffic estimates for rental car trips were provided to Barton-Aschman to be used in the LAX Ground Access Model.

Allocation of rental car auro trips among the ten agencies was based on the relative sizes of the agencies. Geographic distribution of the trips was based on 1993 passenger survey results for visitor (non-resident) **Table III-5** provides a summary of the calculation of auto trips in and out of each rental car zone during the AM and PM peak hours.

Off-Airport Parking Lots

Seven zones were designated for off-airport public parking facilities located near to LAX. The total number of airport parking auto trips was estimated using Leigh Fisher's On-Airport Roadway Model, based on 1993 passenger survey results and extrapolated to 1994 conditions . The trips were allocated among the seven off-airport parking lots based on the relative sizes of the lots

Table III-5 provides a summary of the number of auto trips allocated to the off-airport public parking zones. These trips were then distributed geographically, based upon the distribution of resident visitors, found in the 1993 *Air Passenger Survey Results*.

On-Airport Parking Lots

Four on-airport lots are owned and operated by LAWA, including Lots B, C, D, and E. Lots B and C are provided for passengers and Lots D and E are for employees. One-day, 24-hour machine counts were conducted at the driveways of all four lots.

The On-Airport Roadway Model was calibrated so that the estimate of trip generation for lots B,C,D and E closely matched the ground counts. These model numbers were used in the Off-Airport Ground Access Model. **Table III-5** shows the number of trips to/from each on-airport parking lot zone.

Passenger auto trips calculated for Lots B and C were distributed according to the geographic distribution of residents, found in the 1993 *Air Passenger Survey Results*. Employee auto trips calculated for Lots D and E were distributed based upon employee zip codes. The Zip code information was obtained from "Regulation XV" reports for employers of over 10,000 employees at LAX.

Hotel Auto Trips

While hotel shuttle trips in and out of the CTA are estimated (as described in the previous subsection), auto trips generated by the hotels are not explicitly estimated. Instead, the auto trips are included with the SCAG-based regional trip generation estimates for these zones where hotels are located

E. OTHER LAX PROPERTY ZONES

In addition to the CTA and direct-use zones, LAX includes additional property for other airport-related operations such as office, administration, airline reservation services, air cargo, and other ancillary users. This property consists of the area south of Century Boulevard, west of Aviation Boulevard, north of Imperial Highway and east of Pershing Drive (**see Figure III-1**), with access provided by eighteen driveways. Each of the driveways was defined as a unique zone.

Three-day, 24-hour machine counts were conducted at each of the eighteen driveways during March, 1995. Also, vehicle classification surveys were conducted for one hour during each of the morning and afternoon peak periods to determine the mix of trucks at these locations. In a joint effort, LADOT and Barton-Aschman carefully evaluated the raw count data and developed detailed estimates of arrivals and departures at these driveways.

Results of vehicle classification survey show that trucks consistently represent approximately 25% of the traffic at all LAX property driveways, reflecting high truck activity associated with air cargo operations. The survey revealed the presence of mostly 2-axle trucks, with a lesser number of 3- and 4-axle trucks.

In general, trucks operate at slower speeds than autos. To account for this affect on the traffic stream, a passenger car equivalency factor (pce) was applied to the driveway counts. A pce factor of 2.0 was selected for conditions at LAX property driveways. The pce value depends upon the a number of variables, including type and size of truck, percentage and length of grade, and the percentage of heavy vehicles in the traffic stream. Hence, 25% of the volume at each driveway (representing trucks) is increased by a factor of 2.0. **Table III-5** includes a summary of the adjusted volumes at each driveway during the AM, PM and peak Airport hours.

Since the nature of auto trips differs from that of the truck trips at LAX driveways, two separate geogaphic distributions were used for the assignment of these volumes--one for autos and one for trucks.

Auto trips at LAX driveways largely consist of employee trips, since most parking on LAX property in these areas is for employees on-site. Employee zip code data for over 10,000 employees was then used to geographically distribute these auto trips.

According to surveys of air cargo operations conducted by Landrum & Brown in March and April, 1995, approximately 80% of all truck trips from the air cargo facilities on LAX property have origins or destinations outside the LAX area, and disburse throughout the metrolpolitan Los Angeles area. The remaining 20% stay within the immediate LAX area, transferring cargo to local air freight or storage facilities. The following is a summary of the distribution of truck trips in and out of the LAX property zones.

TO/FROM	PERCENTAGE OF TRUCK TRIPS
North	40%
South	24%
Northeast	12%
Southeast	4%
LAX Area	20%
Total	100%

TABLE III-1

Equivalency Table for Zones Within LAX Property

Zone	Type	Description
1	CTA	Lower Level - Skyway
2	CTA	Lower Level - Century Boulevard
3	CTA	Lower Level - Sepulveda Boulevard
4	CTA	Lower Level - WB Century Blvd S/O Park One
5	CTA	Upper Level - Skyway
6	CTA	Upper Level - Century Boulevard
7	CTA	Upper Level - Sepulveda Boulevard
8	Car Rental	Autos and Shuttles
9	Car Rental	Shuttles
10	Car Rental	Autos
11	Car Rental	Shuttles
12	Car Rental	Autos
13	Car Rental	Shuttles and Autos
14	Car Rental	Autos and Shuttles
15	Car Rental	Autos and Shuttles
16	Car Rental	Autos and Shuttles
17	Car Rental	Autos and Shuttles
18	Car Rental	Autos and Shuttles
19	Car Rental	Autos and Shuttles
20	Privately-Owned Public Parking	Autos and Shuttles
21	Privately-Owned Public Parking	Autos and Shuttles
22	Privately-Owned Public Parking	Autos and Shuttles
23	Privately-Owned Public Parking	Autos and Shuttles
24	Privately-Owned Public Parking	Autos and Shuttles
25	Privately-Owned Public Parking	Autos and Shuttles
26	Privately-Owned Public Parking	Autos and Shuttles
27	LAX-Operated Public Parking	Lot C - Shuttles
28	LAX-Operated Public Parking	Lot C - Autos
29	LAX-Operated Public Parking	Lot B - Autos and Shuttles

TABLE III-1 (continued)

Equivalency Table for Zones Within LAX Property

Zone	Type	Description
30	LAX-Operated Employee Parking	Lot D - Shuttles
31	LAX-Operated Employee Parking	Lot D - Autos
32	LAX-Operated Employee Parking	Lot E - Autos and Shuttles
33	LAX Property Driveway	Imperial Highway/California
34	LAX Property Driveway	Imperial Terminal
35	LAX Property Driveway	Imperial Highway/Super Shuttle
36	LAX Property Driveway	Imperial Highway/Hudson General
37	LAX Property Driveway	Century Blvd - Avion Drive
38	LAX Property Driveway	Century Blvd - Airport Blvd.
39	LAX Property Driveway	Century Blvd - Postal Road
40	LAX Property Driveway	Century Blvd - International Road
41	LAX Property Driveway	Century Blvd - Bellanca Avenue
42	LAX Property Driveway	Aviation/W. 104th Street
43	LAX Property Driveway	Aviation/W. 111th Street
44	LAX Property Driveway	Imperial Highway/West of Aviation Blvd.
45	LAX Property Driveway	Imperial Highway/Douglas Street
46	LAX Property Driveway	Imperial Highway/Kilroy Center Drive
47	LAX Property Driveway	Imperial Highway/Federal Express
48	LAX Property Driveway	Imperial Highway/Korean Air
49	LAX Property Driveway	Imperial Highway/East of Sepulveda Blvd.
50	Hotel	Shuttles
51	Hotel	Shuttles
52	Hotel	Shuttles
53	Hotel	Shuttles
54	Hotel	Shuttles
55	LAX Property Driveway	World Way West at Pershing Drive

TABLE III- 2

LAX On-Airport Vehicle Classification

Type of Service	Percent of Total Traffic [1]	
	Lower Level	Upper Level
On-Airport Rental Car Shuttle Vans	4.9%	2.8%
Off-Airport Rental Car Shuttle Vans	0.6	1.4
Off-Airport Parking Vans	2.1	2.6
Hotel/Motel Vans	3.8	4.6
Door-to-Door Vans	4.2	3.7
Scheduled Vans/Buses	0.0	0.2
Chauffeured Limousines	1.0	0.9
Charter Vans/Buses	0.7	0.6
Taxi Cabs	6.1	6.7
Van Nuys Flyaway Buses	0.1	0.4
Public Transit	0.0	0.1
Interterminal Shuttles	0.7	0.6
On-Airport Parking Shuttles	1.2	0.9
Service/Delivery Vehicles	2.2	1.0
Airline Crew Buses	0.1	0.4
Private Vehicles	72.3	72.8
Other	0.0	0.3

1. Based on vehicle classification surveys conducted on the upper level (Terminal 1) and the lower level (Terminal 7), March 1995.

Table III-3
SUMMARY OF AIRPORT GENERATED TRAFFIC
Vehicle Trip Ends

	AM Peak Hour			Airport Peak Hour			Pm Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
CTA TRIPS									
Private Vehicles and Other	2855	2662	5517	4925	4340	9265	2453	3568	6021
Intermodal Transp. Ctr. Vehicles (1)	0	0	0	0	0	0	0	0	0
Rental Car Shuttles	172	172	344	310	289	599	170	170	340
LAWA Operated Airport ParkingShuttles	24	24	48	24	24	48	24	24	48
Privately Operated Airport Parking Shuttles	51	51	102	89	111	200	54	53	107
Hotel Shuttles	61	62	123	107	107	214	58	58	116
Sub-total	3163	2971	6134	5455	4871	10326	2759	3873	6632
CARGO DRIVEWAYS									
Private Vehicles	676	483	1159	582	575	1157	691	525	1216
Trucks	364	242	606	337	325	662	248	281	529
Sub-total	1040	725	1765	919	900	1819	939	806	1745
World West Way (2)									
Sub-Total	375	176	551	532	518	1050	123	297	420
ANCILLARY DRIVEWAYS (3)									
Private Vehicles	479	266	745	294	123	417	63	406	470
Trucks	205	114	319	126	53	179	27	174	201
Sub-total	684	380	1064	420	176	596	91	581	671
LAWA-OPERATED AIRPORT PARKING (4)									
Private Vehicles	78	23	101	92	72	164	48	84	132
Shuttles	24	24	48	24	24	48	24	24	48
Sub-total	102	47	149	116	96	212	72	108	180
PRIVATELY OPERATED AIRPORT PARKING									
Private Vehicles	166	49	215	341	333	674	108	186	294
Shuttles	51	51	102	89	111	200	54	53	107
Sub-Total	217	100	317	430	444	874	162	239	401
ON-AIRPORT RENTAL CAR AGENCIES									
Private Vehicles	323	255	578	584	561	1145	295	306	601
Shuttles	146	146	292	295	295	590	145	145	289
Sub-total	469	401	870	879	856	1735	439	451	890
OFF-AIRPORT RENTAL CAR AGENCIES									
Private Vehicles	57	45	102	103	99	202	52	54	106
Shuttles	26	26	52	52	52	104	26	25	51
Sub-total	83	71	154	155	151	306	78	80	157
LAWA EMPLOYEE PARKING									
Private Vehicles	207	52	259	165	110	275	211	291	502
Shuttles	12	12	24	12	12	24	12	12	24
Sub-total	219	64	283	177	122	299	223	303	525
GRAND TOTAL	6352	4935	11287	9083	8134	17217	4885	6736	11621

(1) Where applicable, this includes: Door-to Door Vans, Scheduled Buses, Charter/Tour Buses, and Courtesy Shuttles
(2) For World West Way, LFA did not estimate trips by vehicle type
(3) Assumes tat trucks comprise 30%of vehicle trips
(4) Represents Lots B & C

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Table III-4
1994 SHUTTLE TRIP SUMMARY
(Vehicle Trip-Ends)

Area/Trip Type	Zone	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Airport Peak Hour In	Airport Peak Hour Out	Airport Peak Hour Total
CTA										
RAC Shuttle		194	233	427	188	219	407	343	409	752
Off-Airport Park Shuttle		55	78	133	67	61	128	111	111	222
On-Airport Park Shuttle		19	26	45	21	20	41	21	22	43
Employee Shuttle		8	9	17	8	8	16	8	8	16
Cargo/Anc. Shuttle		0	0	0	0	0	0	0	0	0
Hotel Shuttle		61	62	123	58	58	116	107	107	214
Subtotal		337	408	745	342	366	708	590	657	1,247
RAC										
	8	6	7	13	6	7	13	11	14	25
	9	28	23	51	28	23	51	50	41	91
	10	0	0	0	0	0	0	0	0	0
	11	28	23	51	27	23	50	50	41	91
	12	0	0	0	0	0	0	0	0	0
	13	28	23	51	27	23	50	50	41	91
	14	28	23	51	27	23	50	50	41	91
	15	28	23	51	27	23	50	50	41	91
	16	28	23	51	27	23	50	50	41	91
	17	12	11	23	9	11	20	17	21	38
	18	28	23	51	27	23	50	50	41	91
	19	19	15	34	18	11	29	33	21	54
Subtotal		233	194	427	219	188	407	409	343	752
Off-Airport Parking										
	20	2	1	3	1	1	2	1	1	2
	21	19	14	33	15	17	32	28	28	56
	22	8	5	13	6	7	13	11	11	22
	23	16	11	27	12	13	25	22	22	44
	24	11	8	19	9	10	19	17	17	34
	25	19	13	32	15	17	32	28	28	56
	26	3	3	6	3	3	6	4	4	8
Subtotal		78	55	133	61	67	128	111	111	222
On-Airport Parking										
	27	12	9	21	9	10	19	10	10	20
	28	0	0	0	0	0	0	0	0	0
	29	14	10	24	10	11	21	12	11	23
Subtotal		26	19	45	20	21	41	22	21	43

Table III-4
1994 SHUTTLE TRIP SUMMARY
(Vehicle Trip-Ends)

Area/Trip Type	AM Peak Hour			PM Peak Hour			Airport Peak Hour		
Zone	In	Out	Total	In	Out	Total	In	Out	Total
Employee Parking									
30	6	5	11	5	5	10	5	5	10
31	0	0	0	0	0	0	0	0	0
32	3	3	6	3	3	6	3	3	6
Subtotal	9	8	17	8	8	16	8	8	16
Cargo/Ancillary									
33	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	0	0	0	0	0	0
Hotel Shuttles									
50	16	15	31	15	15	30	27	27	54
51	16	15	31	15	15	30	27	27	54
52	16	15	31	15	15	30	27	27	54
53	4	4	8	3	3	6	5	5	10
54	4	4	8	3	3	6	5	5	10
Subtotal	56	53	109	50	50	100	92	91	183
TOTAL	739	737	1,476	702	702	1,404	1,233	1,231	2,464

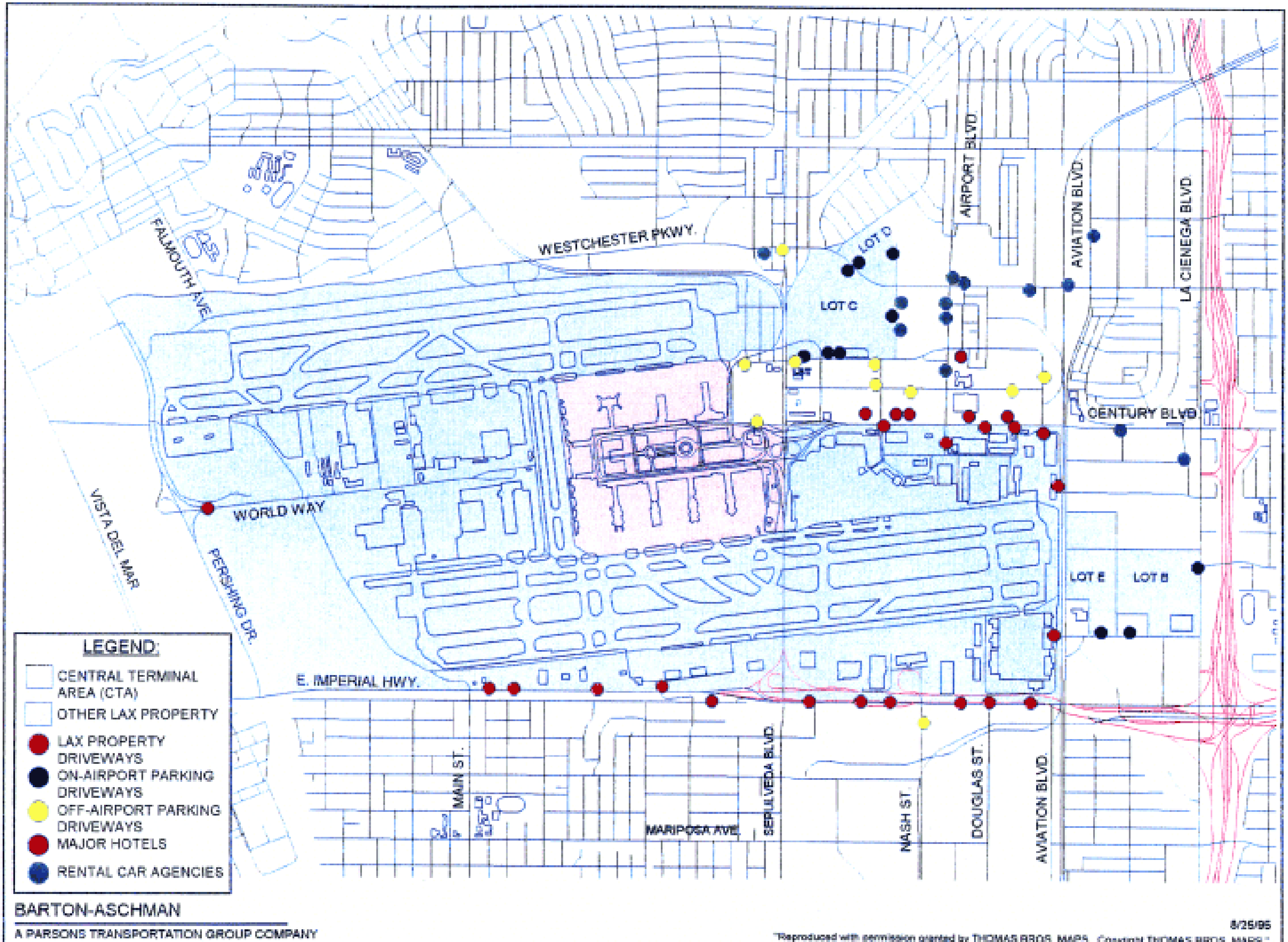
Note: Totals may differ slightly due to rounding.

Table III-5
1994 AIRPORT TRIP TABLE SUMMARY
(Passenger Car Equivalent Trip-Ends)

Area	Zone	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Airport Peak Hour In	Airport Peak Hour Out	Airport Peak Hour Total
CTA										
	1	441	422	863	453	350	803	766	440	1,206
	2	342	1,002	1,344	321	1,801	2,122	710	2,060	2,770
	3	363	531	894	370	1,000	1,370	810	1,100	1,910
	4	101	0	101	80	0	80	100	0	100
	5	638	182	820	651	160	811	830	230	1,060
	6	589	524	1,113	389	330	719	890	720	1,610
	7	700	322	1,022	500	231	731	1,360	320	1,680
Subtotal		3,174	2,983	6,157	2,764	3,872	6,636	5,466	4,870	10,336
RAC										
	8	12	13	25	12	14	26	22	27	49
	9	28	23	51	27	23	50	50	41	91
	10	55	49	104	50	58	108	99	107	206
	11	28	23	51	27	23	50	50	41	91
	12	30	26	56	28	31	59	55	56	111
	13	73	63	136	68	71	139	132	129	261
	14	83	71	154	77	80	157	149	148	297
	15	73	63	136	68	71	139	132	129	261
	16	58	49	107	55	54	109	105	97	202
	17	18	17	35	15	18	33	28	34	62
	18	58	49	107	55	54	109	105	97	202
	19	39	35	74	36	35	71	69	65	134
Subtotal		555	481	1,036	518	532	1,050	996	971	1,967
Off-Airport Parking										
	20	4	3	7	3	8	11	6	13	19
	21	90	31	121	66	81	147	188	143	331
	22	15	9	24	11	23	34	28	39	67
	23	32	17	49	24	34	58	59	59	118
	24	32	14	46	24	31	55	65	54	119
	25	35	21	56	26	47	73	64	81	145
	26	10	7	17	8	19	27	21	33	54
Subtotal		218	102	320	162	243	405	431	422	853
On-Airport Parking										
	27	12	9	21	9	10	19	10	10	20
	28	38	18	56	26	64	90	50	54	104
	29	42	14	56	29	26	55	48	24	72
Subtotal		92	41	133	64	100	164	108	88	196

Table III-5
1994 AIRPORT TRIP TABLE SUMMARY
(Passenger Car Equivalent Trip-Ends)

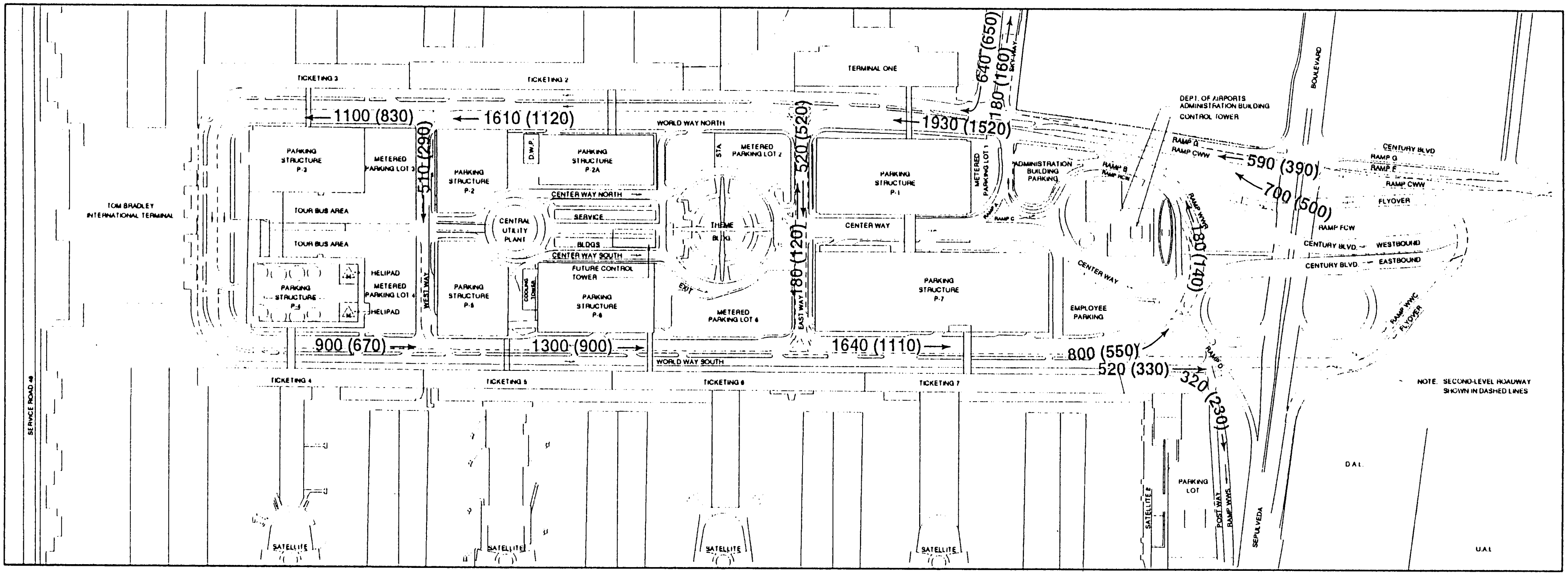
Area	AM Peak Hour			PM Peak Hour			Airport Peak Hour		
Zone	In	Out	Total	In	Out	Total	In	Out	Total
Employee Parking									
30	6	5	11	5	5	10	5	5	10
31	159	21	180	162	116	278	127	44	171
32	51	34	85	52	178	230	41	69	110
Subtotal	216	60	276	219	299	518	173	118	291
Cargo/Ancillary									
33	46	39	85	25	50	75	36	38	74
34	120	73	193	67	90	157	92	73	165
35	18	4	22	10	4	14	15	4	19
36	16	9	25	8	12	20	13	8	21
37	236	125	361	136	159	295	186	128	314
38	273	148	421	158	185	343	213	145	358
39	205	212	417	115	268	383	163	212	375
40	153	135	288	86	167	253	120	132	252
41	24	5	29	12	5	17	19	5	24
42	321	150	471	182	190	372	253	149	402
43	396	178	574	226	224	450	310	179	489
44	52	28	80	30	35	65	44	28	72
45	170	183	353	95	230	325	133	182	315
46	12	18	30	6	22	28	9	17	26
47	100	46	146	58	55	113	79	45	124
48	151	95	246	85	122	207	119	98	217
49	0	12	12	0	16	16	0	12	12
55	413	194	607	135	327	462	585	570	1,155
Subtotal	2,706	1,654	4,360	1,434	2,161	3,595	2,389	2,025	4,414
Hotel Shuttles									
50	16	15	31	15	15	30	27	27	54
51	16	15	31	15	15	30	27	27	54
52	16	15	31	15	15	30	27	27	54
53	4	4	8	3	3	6	6	5	11
54	4	4	8	3	3	6	6	5	11
Subtotal	56	53	109	51	51	102	93	91	184
TOTAL	7,017	5,374	12,391	5,212	7,258	12,470	9,656	8,585	18,241



Los Angeles International Airport Master Plan

Location of LAX Property & Direct-Use Facilities

FIGURE III-1



LEGEND

1870 Traffic volumes where indicated during commuter a.m. peak hour: 8 a.m.–9 a.m.

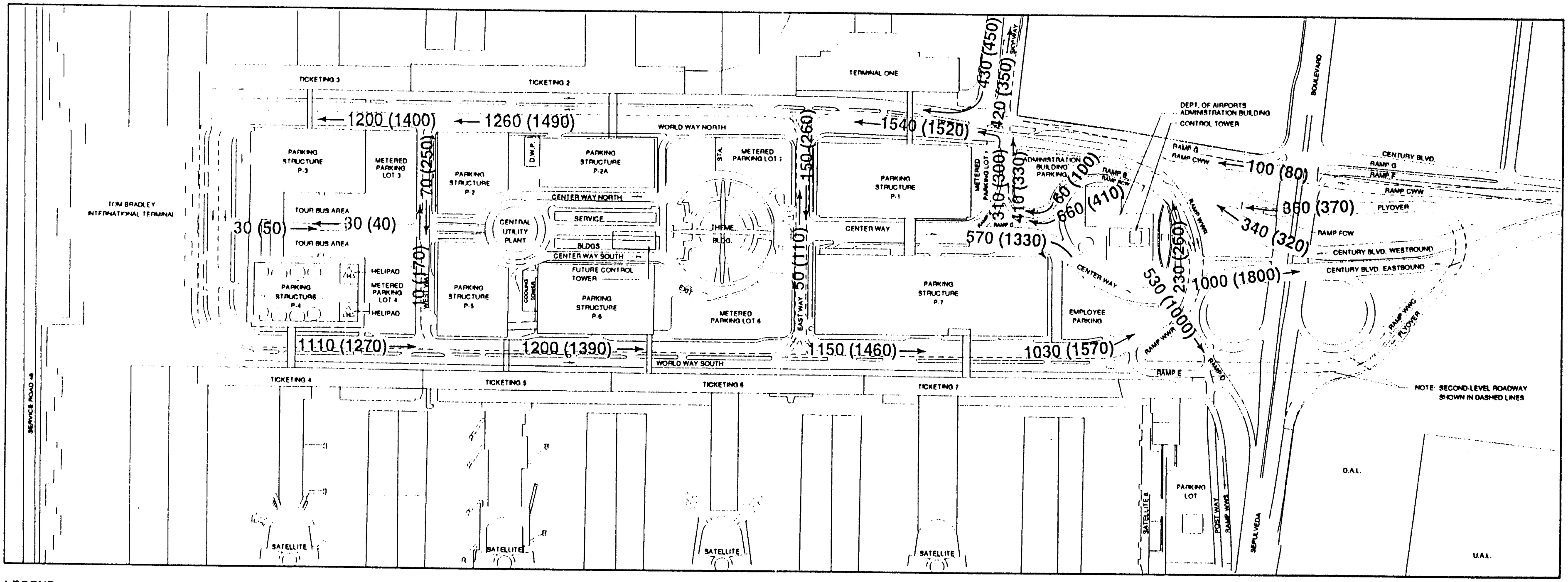
(1870) Traffic volumes where indicated during commuter p.m. peak hour: 5 p.m.–6 p.m.

Prepared by: Leigh Fisher Associates using traffic survey data collected by WILTEC during March and April 1995 and Los Angeles Department of Airports hourly traffic reports (March 6-12, 1995).
Draft, January 1996.
LAX0067934

Los Angeles International Airport Master Plan

Commuter Peak-Hour Traffic Volumes: Upper Level

Figure III-2



LEGEND

1870 Traffic volumes where indicated during commuter a.m. peak hour: 8 a.m.–9 a.m.

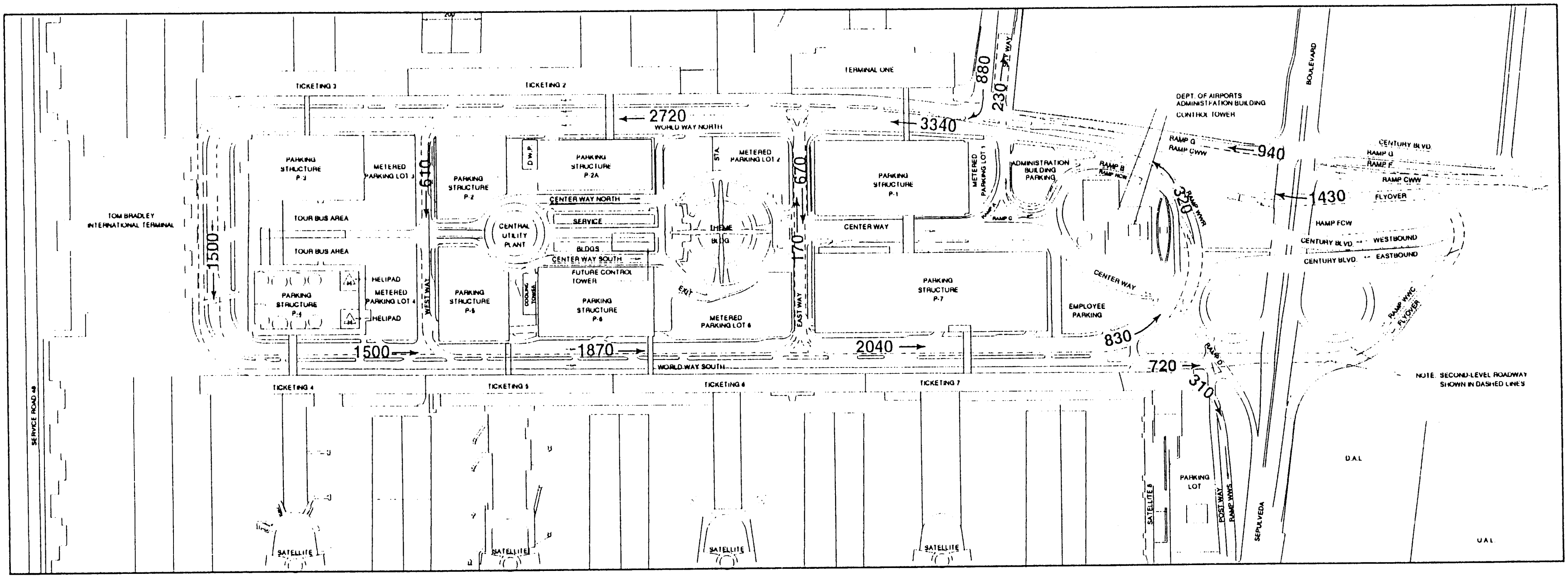
(1870) Traffic volumes where indicated during commuter p.m. peak hour: 5 p.m.–6 p.m.

Prepared by: Leigh Fisher Associates using traffic survey data collected by WILTEC during March and April 1995 and Los Angeles Department of Airports hourly traffic reports (March 6-12, 1995).
Draft, January 1996.

Los Angeles International Airport Master Plan

Commuter Peak-Hour Traffic Volumes: Lower Level

Figure
III-3



LEGEND

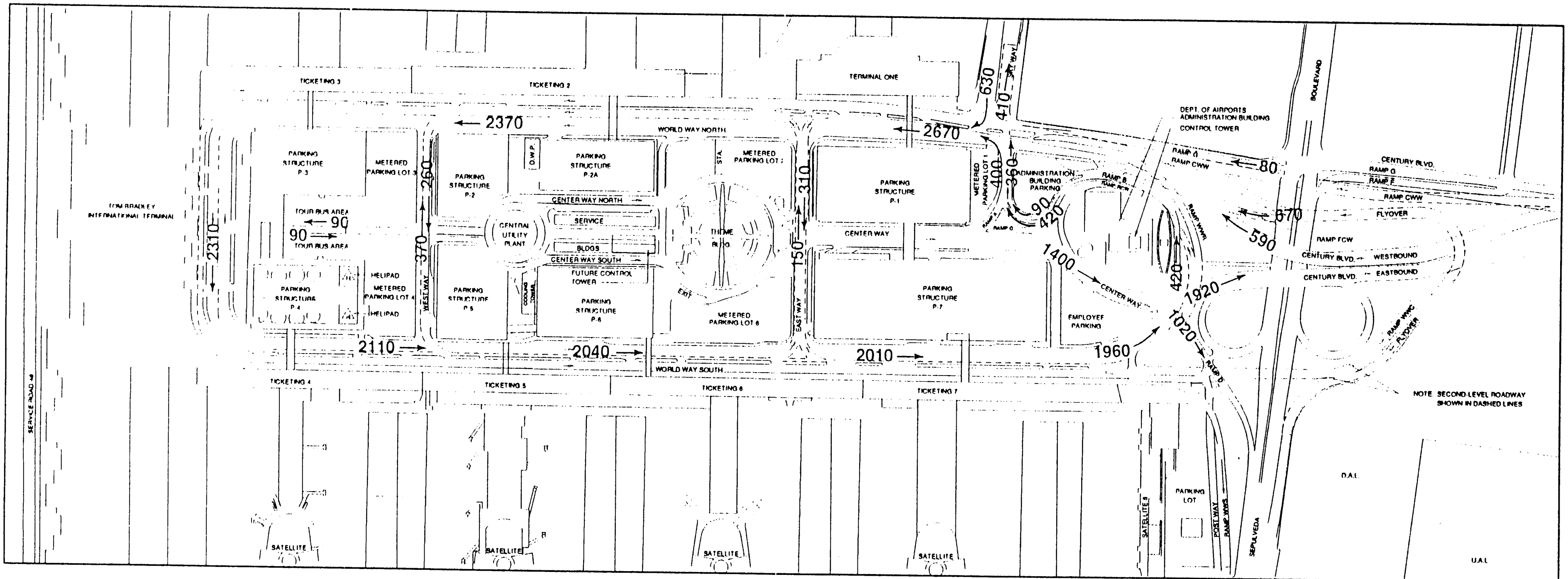
1870 Traffic volumes where indicated during Airport peak hour: Sunday 11 a.m.–12 p.m.

Prepared by: Leigh Fisher Associates, using traffic survey data collected by WILTEC during March and April 1995 and Los Angeles Department of Airports hourly traffic reports (March 6-12, 1995).
Draft, January 1996.

Los Angeles International Airport Master Plan

Airport Peak-Hour Traffic Volumes: Upper Level

Figure III-4



LEGEND

1870 Traffic volumes where indicated during Airport peak hour: Sunday 11 a.m.–12 p.m.

Prepared by: Leigh Fisher Associates using traffic survey data collected by WILTEC during March and April 1995 and Los Angeles Department of Airports hourly traffic reports (March 6-12, 1995)
Draft, January 1996.

LAX005 7/96

Los Angeles International Airport Master Plan

Airport Peak-Hour Traffic Volumes: Lower Level

Figure III-5

IV. RESULTS OF MODEL VALIDATION ANALYSIS

This chapter describes the model validation process for the AM and PM peak hours. Validation of the model for the Airport Peak hour is described in Chapter VII.

The LAX Ground Access Model is based on the calibrated and validated LA Citywide General Plan Framework Model and adds detail within the focus area. The model components (trip generation, trip distribution, modal split, and day to period) were initially calibrated to the SCAG 1990 model, just as the Framework model from which it is derived was calibrated. The LAX Master Plan Model is a 1994 model. That is, its primary validation is to traffic counts. To create the 1994 model run the model inputs were updated from 1990 to 1994. Since regional growth was relatively stagnant for this period, this entailed updating the network (e.g. adding I-105) and adding to the 1990 socio-economic data any development project in the greater project area that was identified as being completed within the 1990 to 1995 period. The model was run and the details of the AM and PM networks (Volume/Delay functions) were adjusted to reflect the operation of the roadway system and travel behavior as reflected in the traffic count data.

One of the most important elements in any validation effort is the acquisition of accurate and comprehensive count data. For this model an extensive count program was undertaken including both peak hour turning movement counts at intersections plus 24-hour machine counts at screenline locations and specific Airport related driveways. See Chapter III for more information on the driveway counts and the airport trip table creation.

A. SCREENLINE ANALYSIS

Five screenlines were created for model validation. These screenlines are shown in **Figure IV-1**. Screenline 1 surrounds the LAX properties, and so, as described in Chapter III, matches identically the trips produced by the Airport trip table. Screenline 2 runs north of Mariposa Avenue, west of Aviation Boulevard and south of Manchester Avenue. Screenline 3 runs north of Rosecrans Avenue, west of Hawthorne Boulevard and La Brea Avenue, and south of Slauson Avenue and Jefferson Boulevard. Screenline 4 runs south of Venice Boulevard and I-10, and west of La Cienega Boulevard to Slauson Avenue. Screenline 5 runs east of Lincoln Boulevard from Venice Boulevard to Manchester Avenue. Screenlines 4 and 5 combine to measure east/west travel north of the Airport.

During validation, partial screenlines were identified to aid in the understanding of model performance. Each screenline was subdivided into pieces and these partial screenlines were analyzed. **Tables IV-1 and IV-2** show the results of the screenline analysis for the full screenlines (top of table) and partial screenlines (bottom of table) for the AM and PM hours respectively. The tables show the counts crossing the screenline, the modeled volume crossing the screenline, and the modeled volume as a percentage of the counted volume. The criterion for the model developed in the work program was for the model to match the counts, at the full screenline level to within a 10% variation. All of the full screenlines are well between 90% and 110% of the counted volumes, meeting this criterion. Only screenline 2 inbound in the AM, at 93%, shows more than a 5% difference.

Even at the partial screenline level the model shows excellent agreement with the count data. For the 18 partial screenline segments, 12 in the AM and 16 in the PM are within 5% of the count volume. None of the partial screenlines is off by more than 10%

B. COMPARISON OF MODELED VOLUMES TO GROUND COUNTS

Beyond the screenline analysis, the model validation considered the performance of the model wherever count data were available. This 'total' validation was used to ensure that the model was reasonably reflecting the travel patterns over the entire study area. When comparing individual counts it must be remembered that a 10% variation in peak hour volume from day to day (and a greater percentage variation on small volume roadway) is quite common. The link comparisons should be used to determine if there are significant patterns (e.g. an entire roadway is over or under estimated) that need correction. When a roadway shows a mixture of over and under estimation, it is usually an indication that micro level detail (specific building driveways, etc.) are affecting the volume. These micro level details are dealt with by the use of link volume adjustment factors, as described in Chapter III. **Figures IV-2 and IV-3** show the total volumes for the AM and PM hours respectively. **Figures IV-4 and IV-5** show the difference between the modeled volumes and the count volumes at the same scale. Excellent agreement is evident between modelled and counted volumes for both AM and PM. There are not significantly long roadways that are wholly over or wholly under estimated. This means that while a specific link may be over or under estimated, travel patterns will be accurately reproduced.

C. Regression and RMSE Statistical Tests

Statistical comparisons of the model volumes with the count volumes on each link were made in a number of ways. First a regression of count versus modeled volume was made for screenline links, then for all links. A regression was also made for "count versus count" on links where more than one count was available. **Figures IV-6 and IV-7** show the regression for AM and PM hours respectively for links on screenlines. These show an extraordinary correlation, with R^2 values of 0.988 and 0.990 respectively. A perfect correlation would have an R^2 value of 1.000. **Figures IV-8 and IV-9** show the regression for AM and PM hours respectively for all links where counts are available. These show a very good correlation, with R^2 values of 0.904 and 0.918 respectively. **Figures IV-10 and IV-11** show the regression for AM and PM hours respectively for links where one counts could be compared to a different count on the same link. These show a rather modest correlation, with R^2 values of 0.875 and 0.775 respectively. This demonstrates that the model is doing an excellent job in reproducing travel patterns. In fact, the precision level of the model exceeds the random variance of the ground counts themselves.

In advanced modeling practice, many local agencies and MPOs have sought additional rigorous and comprehensive criteria for evaluating the validity of their models. Many MPOs have adopted and applied a measure of accuracy called the "Percent Root Mean Square Error" (%RMSE), which is similar to (but not identical to) the standard deviation in statistics.

The Percent RMSE is the RMSE divided by the average traffic count. Unlike percent error, %RMSE puts a greater weight on large errors. With some assumptions about the distribution of errors, one can use the RMSE to make statements concerning the probability that an error will be so many standard deviations from the mean. **Table IV-3** shows the RMSE and the %RMSE as well as the average (of the absolute value of the) error and the percentage of the average error. It is apparent from this comparison that the RMSE is a more stringent measure than the average error. The test is performed on links with counted volumes over 1,000 vehicles in the peak hour. The variation expected (day to day variation) on smaller facilities makes up a larger percentage, and so for links with counts less than 1,000 only the RMSE and average error (not the percentage errors) are reported. For links with over 1,000 vehicles per hour in both AM and PM periods the RMSE is less than 275 vehicles per hour and the %RMSE is 10% or less. For low volume links the RMSE is less than 200 vehicles per hour for both AM and PM peaks. These levels of error are small compared with the natural variation in traffic volumes.

Table IV-1
1994 Model Update AM Peak Hour
Screenline Validation

	Outbound			Inbound			Total		
Screenline	Count	Model	% Of Count	Count	Model	% Of Count	Count	Model	% Of Count
2	14,067	13,162	93%	14,669	15,119	103%	28,756	28,281	98%
3	44,558	42,470	95%	50,880	50,679	100%	95,438	93,149	98%
4.5	29.210	29,842	102%	30,332	29.029	96%	59,542	58,871	99%
Total	87,855	85,474	97%	95,881	94,827	99%	183,736	180,301	98%
Partial Screenline	Count	Model	% Of Count	Count	Model	% Of Count	Count	Model	% Of Count
21.22	7,663	7,117	93%	4,494	4,775	106%	12,157	11,892	96%
23,24	2,862	2,701	94%	3,956	4,185	106%	6,818	6,886	101%
25.26	3,562	3,344	94%	6,219	6,159	99%	9,781	9,503	97%
Total	14,087	13,162	93%	14,669	15,119	103%	28,756	28,281	98%
31,32	21,888	21,241	97%	16,604	15,878	96%	38,492	37,119	96%
33,34	12,713	12,059	95%	16,662	17,062	102%	29,375	29,121	99%
35,36	9,957	9,170	92%	17,614	17,739	101%	27,571	26,909	98%
Total	44,558	42,470	95%	50,880	50,679	100%	95,438	93,149	98%
41,42	17,600	18,526	105%	20,875	19,958	96%	38,475	38,484	100%
43.44	2,412	2,472	102%	3,745	3,592	96%	6,157	6,064	98%
51,52	9,198	8,844	96%	5,712	5,479	96%	14,910	14,323	96%
Total	29,210	29,842	102%	30,332	29,029	96%	59,542	58,871	99%

Source: Barton_Aschman Associates, Inc.

Table IV-2
1994 Model Update PM Peak Hour
Screenline Validation

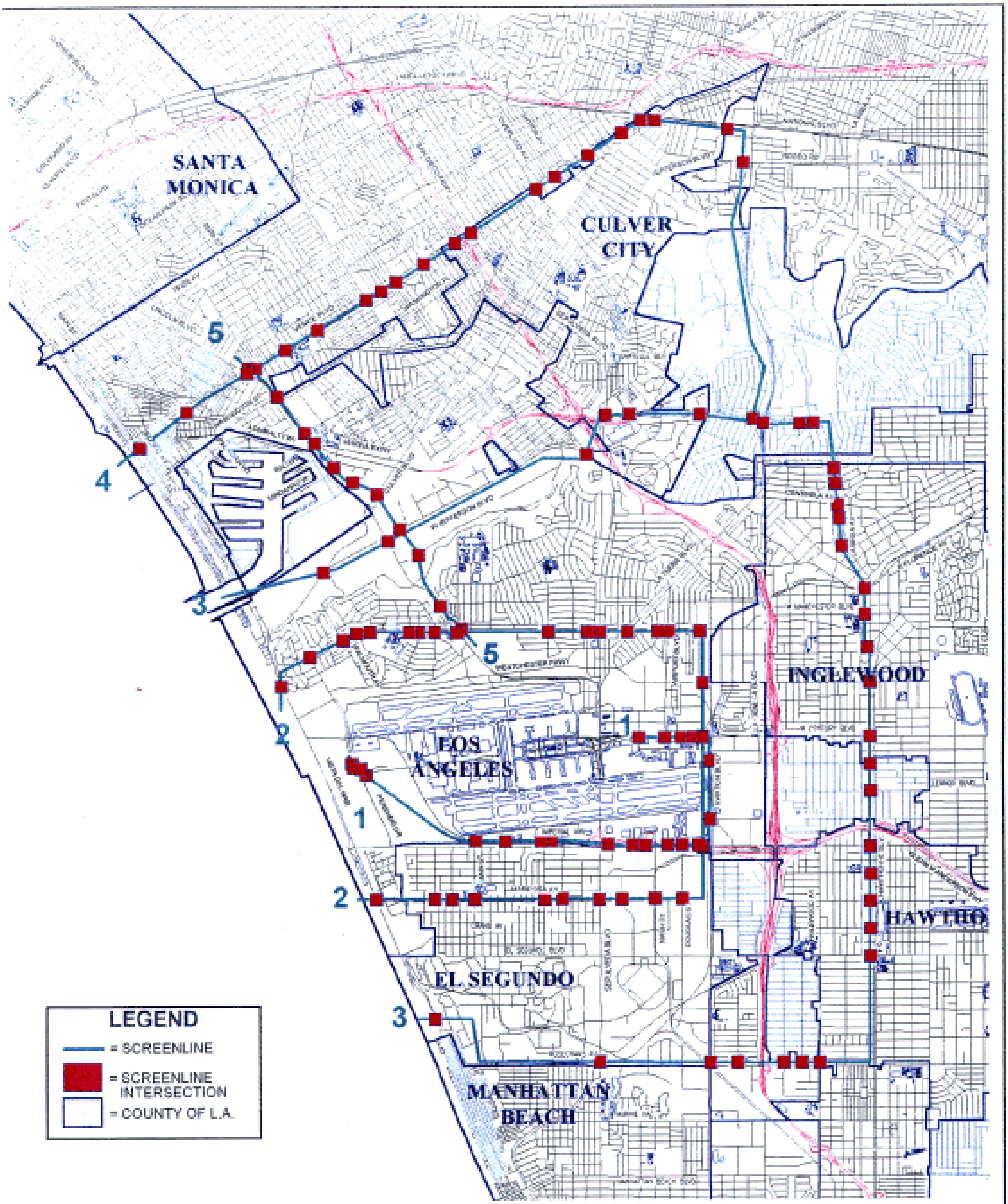
	Outbound			Inbound			Total		
Screenline	Count	Model	% Of Count	Count	Model	% Of Count	Count	Model	% Of Count
2	16,979	17,593	104%	14,059	13,784	96%	31,036	31377	101%
3	55,795	55,239	99%	50,506	50,015	99%	106,301	105,254	99%
4,5	32,747	32,595	100%	30,561	31,425	103%	63,308	64,020	101%
Total	105,521	105,427	100%	95,126	95,224	100%	200,647	200,651	100%
Partial Screenline	Count	Model	% Of Count	Count	Model	% Of Count	Count	Model	% Of Count
21.22	6,714	7,200	107%	6,687	6,316	94%	13401	13516	101%
23,24	4,864	5,026	103%	2,997	3,225	108%	7861	8251	105%
25,26	5,401	5,367	99%	4,375	4,243	97%	9776	9610	98%
Total	16,979	17,593	104%	14,059	13,784	98%	31038	31377	101%
31,32	20,611	20,270	98%	22,235	21,059	95%	42846	41329	96%
33,34	16,766	17,167	102%	15,875	16,302	103%	32641	33469	103%
35,36	18,418	17,802	97%	12,396	12,654	102%	30814	30456	99%
Total	55,795	55,239	99%	50,506	50,015	99%	106301	105254	99%
41,42	22,265	21,741	98%	19,444	20,541	106%	41709	42292	101%
43,44	3,266	3,230	99%	2,317	2,227	96%	5583	5457	98%
51,52	7,216	7,624	106%	8,800	8,657	98%	16016	16281	102%
Total	32,747	32,595	100%	30,561	31,425	103%	63,308	64,020	101%

Source: Barton_Aschman Associates, Inc.

Table IV-3
Root Mean Square Error Summary, 1994

Type	RMSE(1)	Error %	Ave Abs Err	Error %
AM PEAK HOUR				
All Links > 1,000	272	10%	195	7%
Freeways	293	3%	217	3%
Arterials > 1,000	271	16%	191	12%
Arterials < 1,000	165	-	129	-
PM PEAK HOUR				
All Links > 1,000	211	8%	152	6%
Freeways	271	3%	204	2%
Arterials > 1,000	203	13%	143	9%
Arterials < 1,000	176	-	129	-

(1) Root-Mean Square Error



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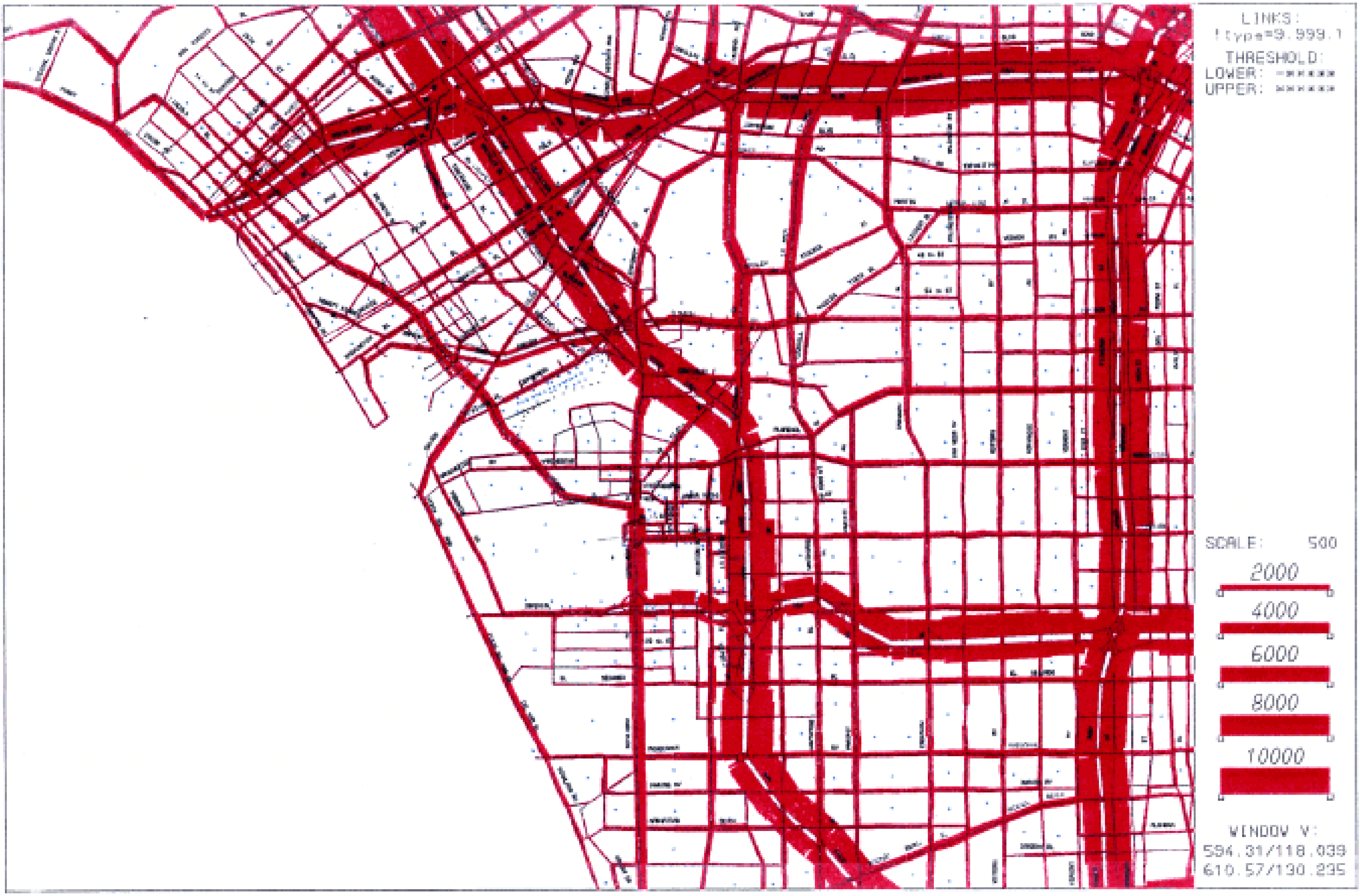
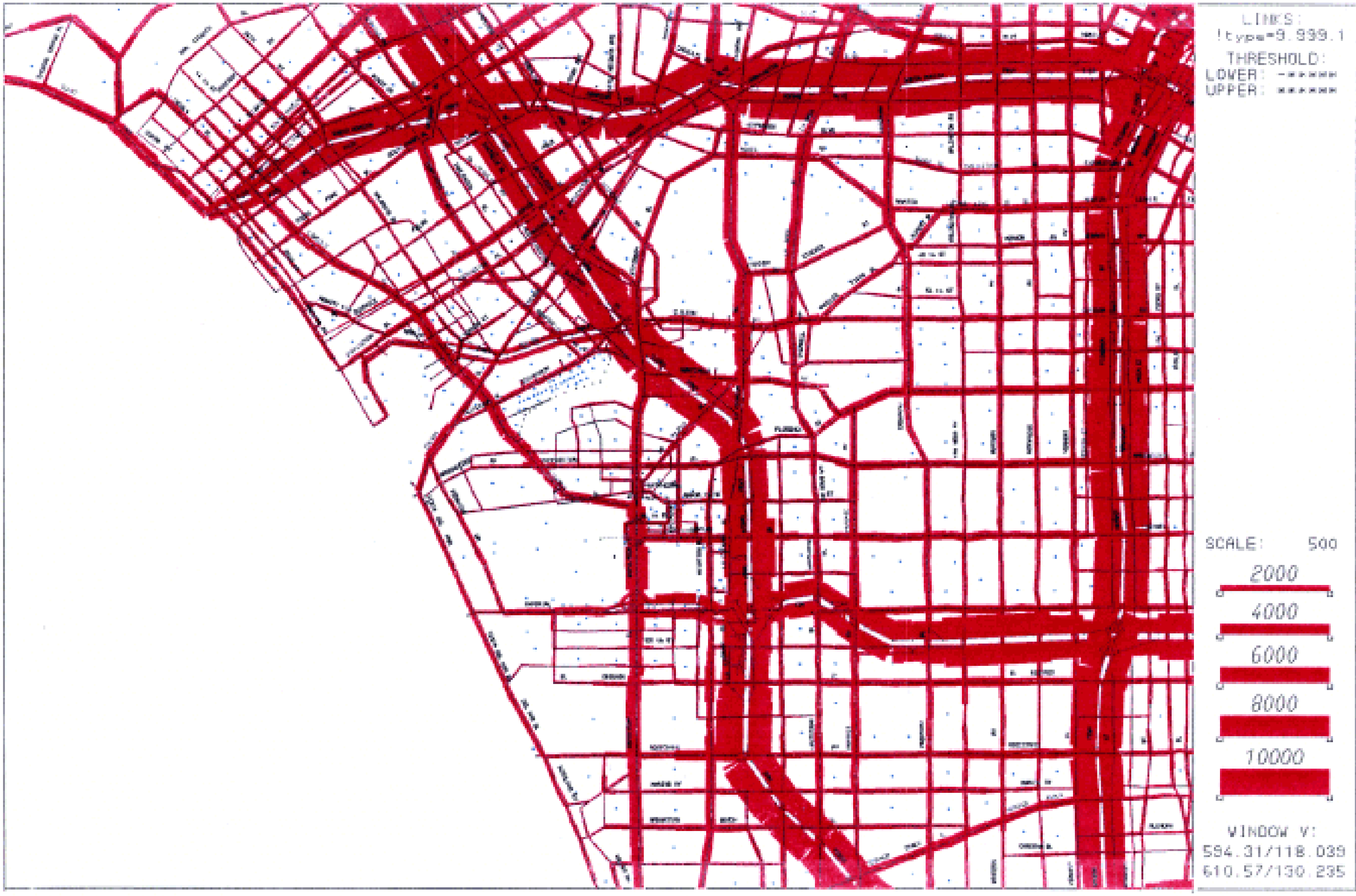
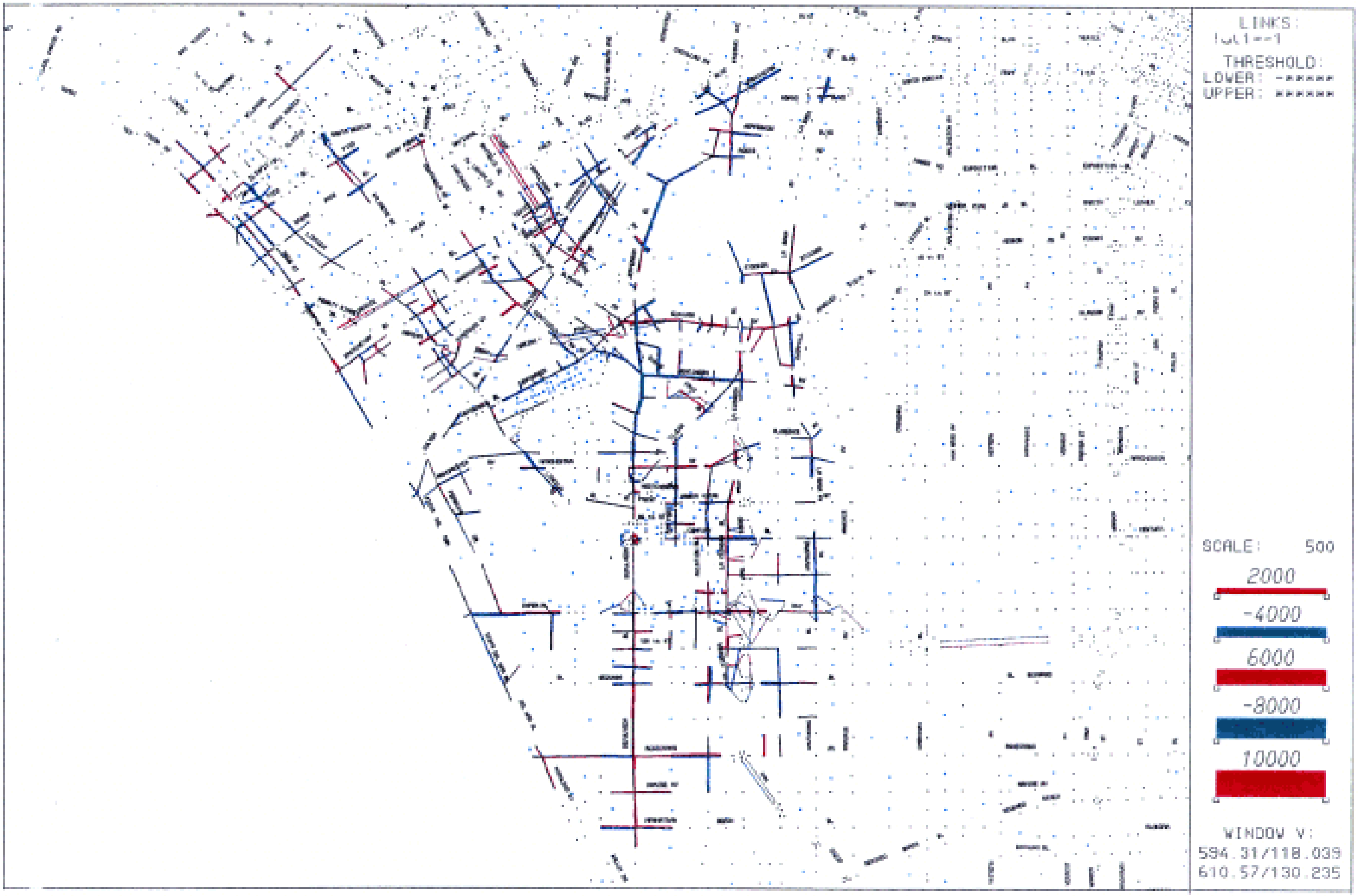


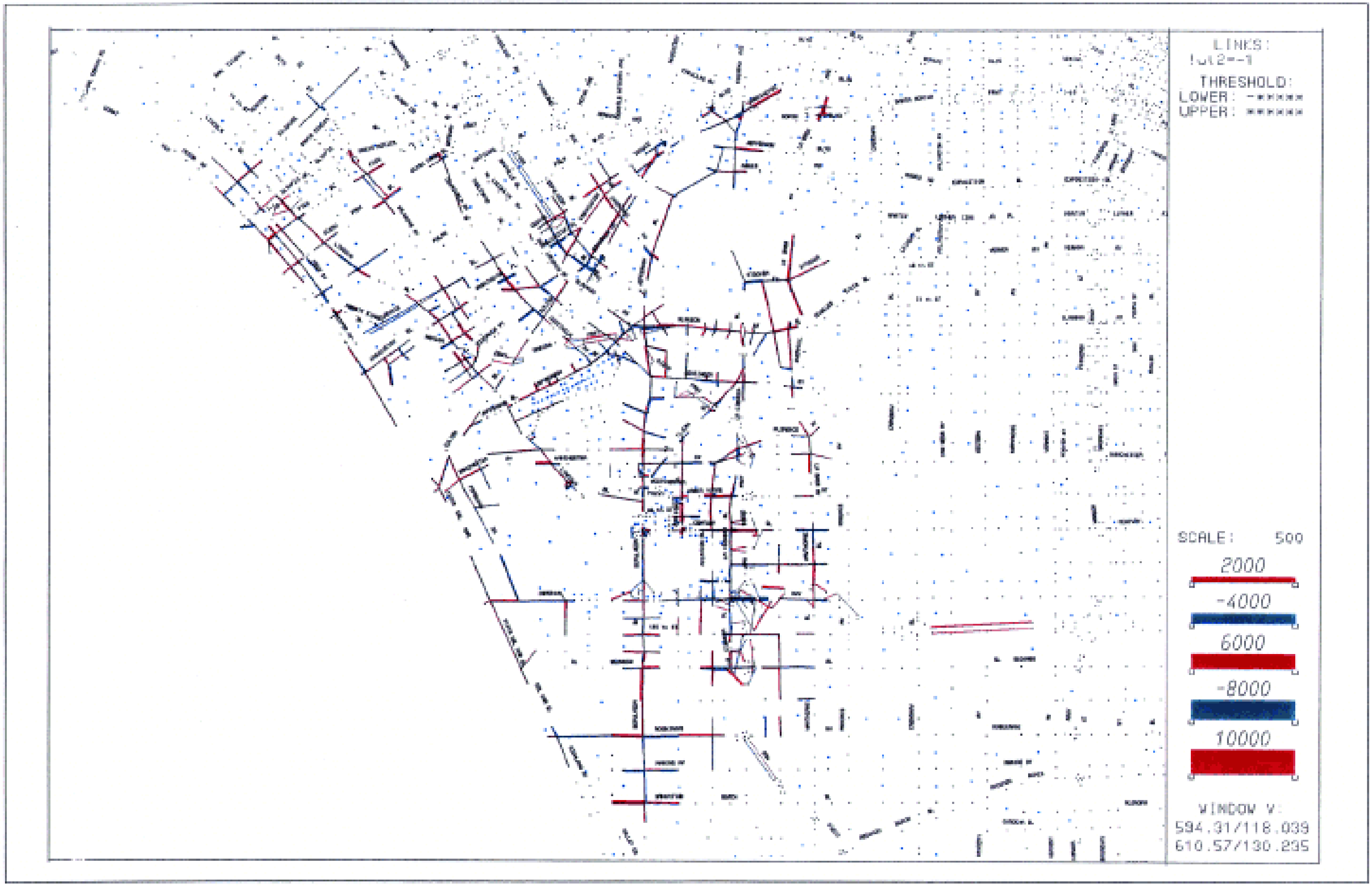
Los Angeles Internatinal Airport	A.M Validation: Total Volumes	FIGURE IV-2



Los Angeles Internatinal Airport	P.M Validation: Total Volumes	FIGURE IV-3



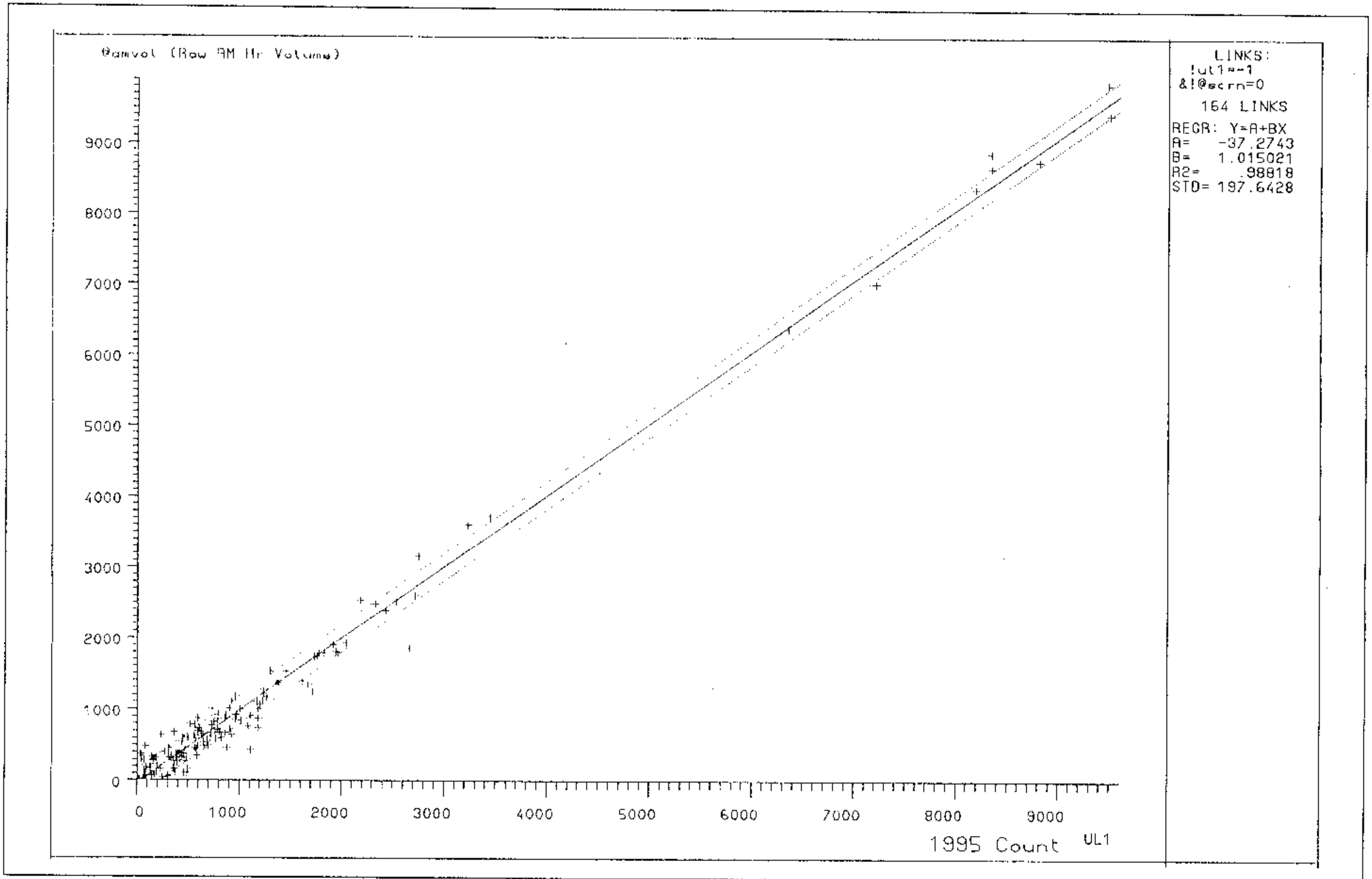
Los Angeles Internatinal Airport	A.M Validation: (Raw Model) - (Count)	FIGURE IV-4



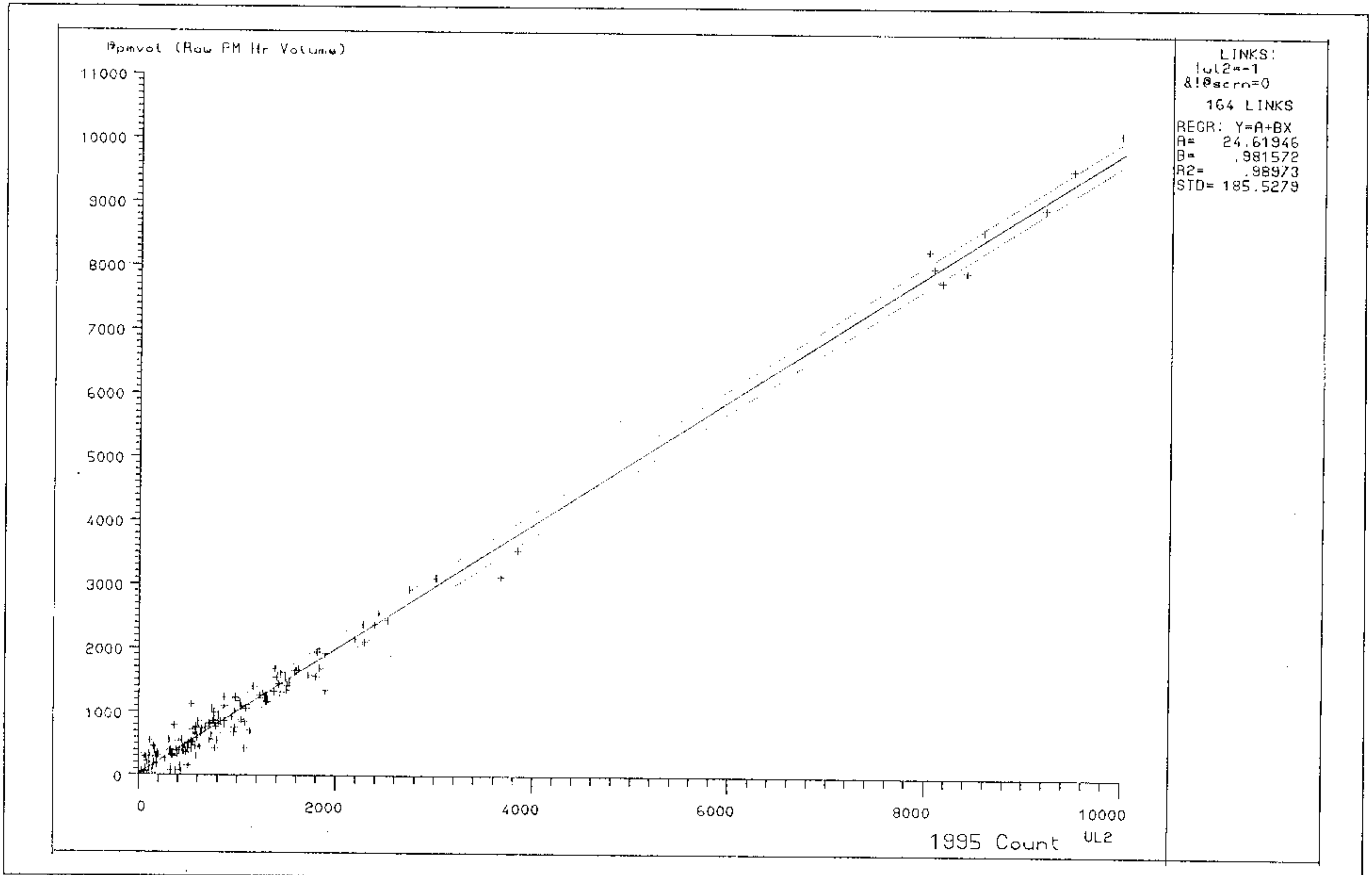
Los Angeles Internatinal Airport

P.M Validation: (Raw Model) - (Count)

FIGURE IV-5



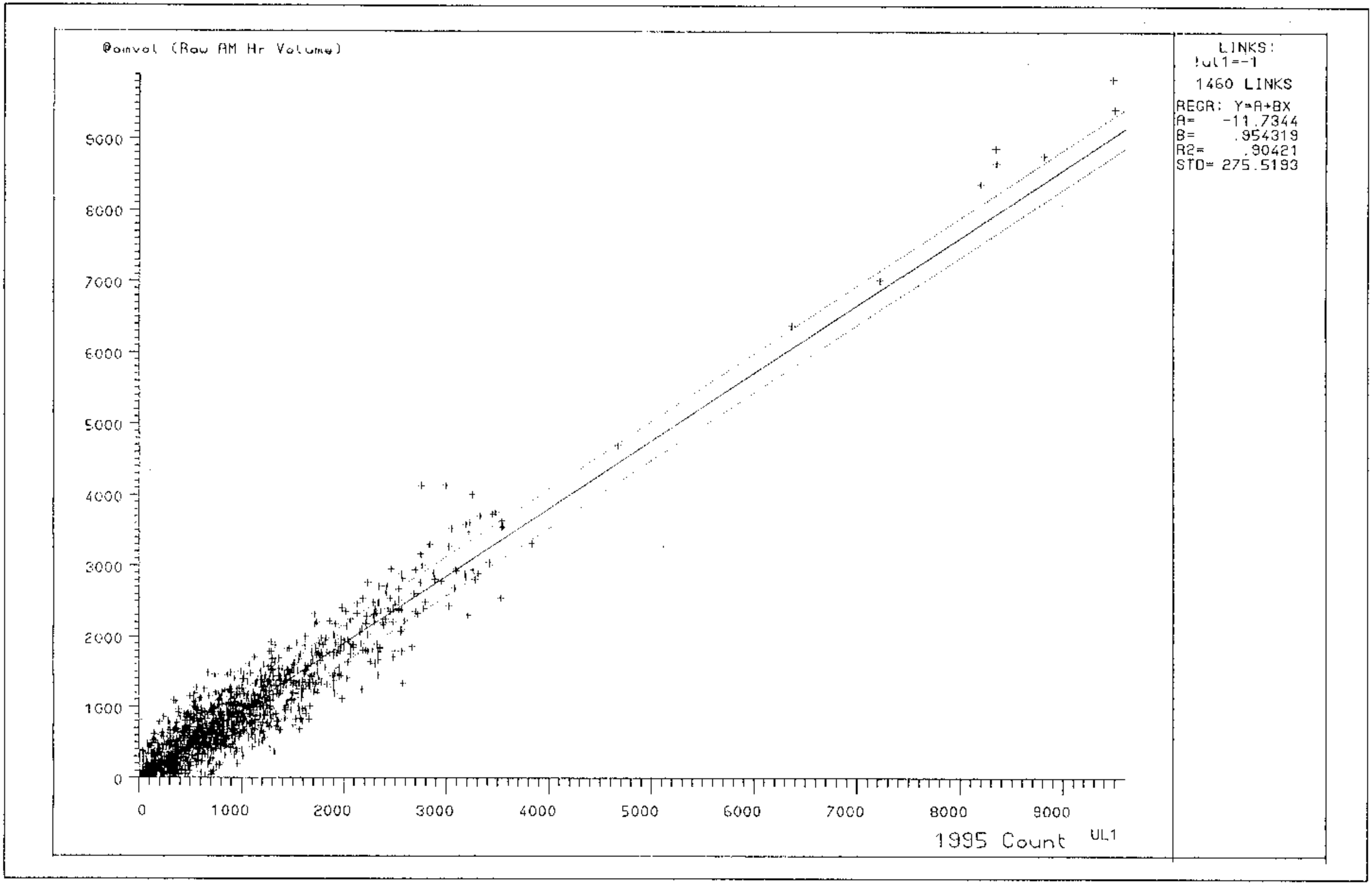
Los Angeles Internatinal Airport	A.M Validation: At Screenlines	FIGURE IV-6



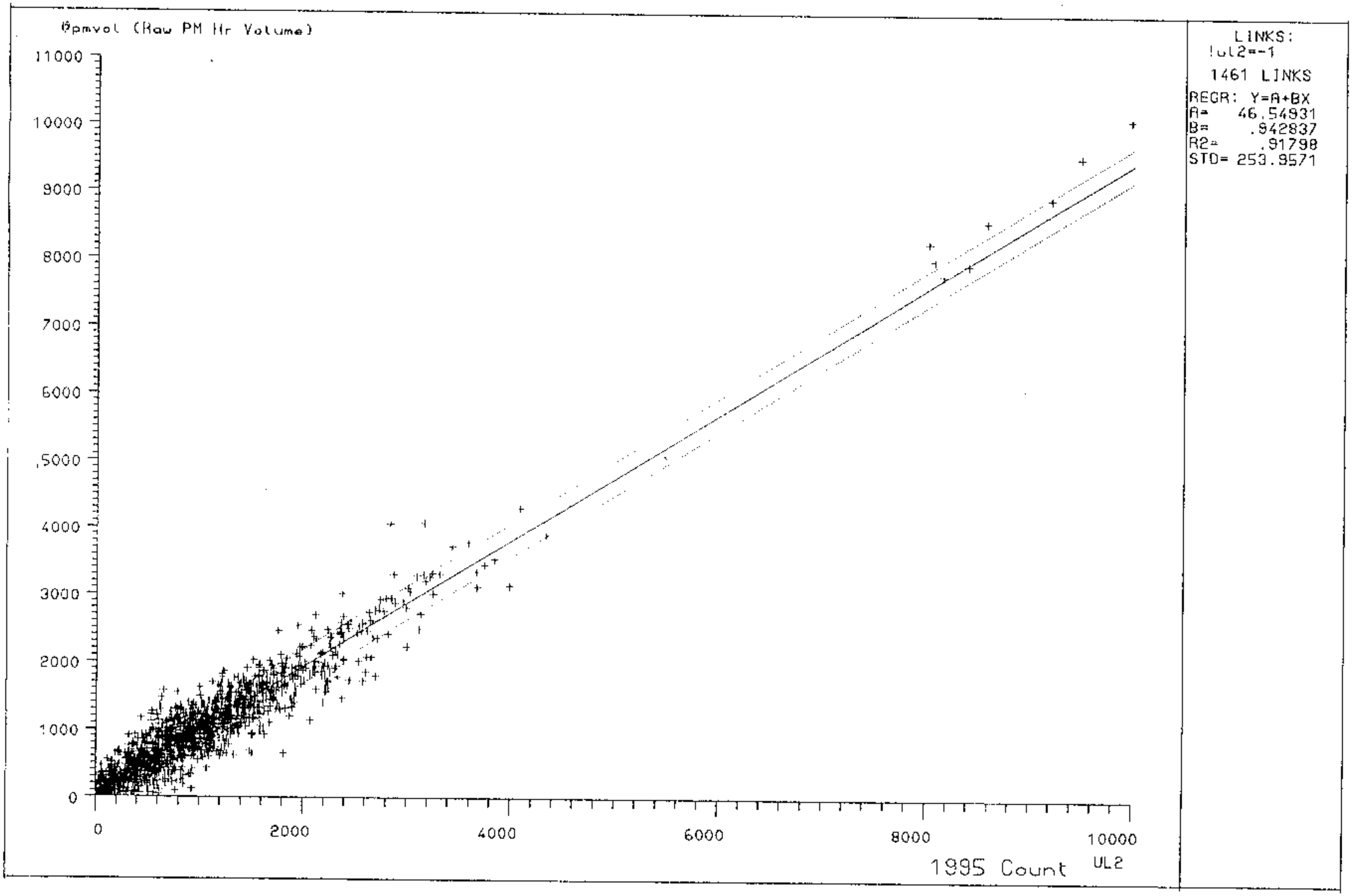
Los Angeles Internatinal Airport

P.M Validation: At Screenlines

FIGURE IV-7



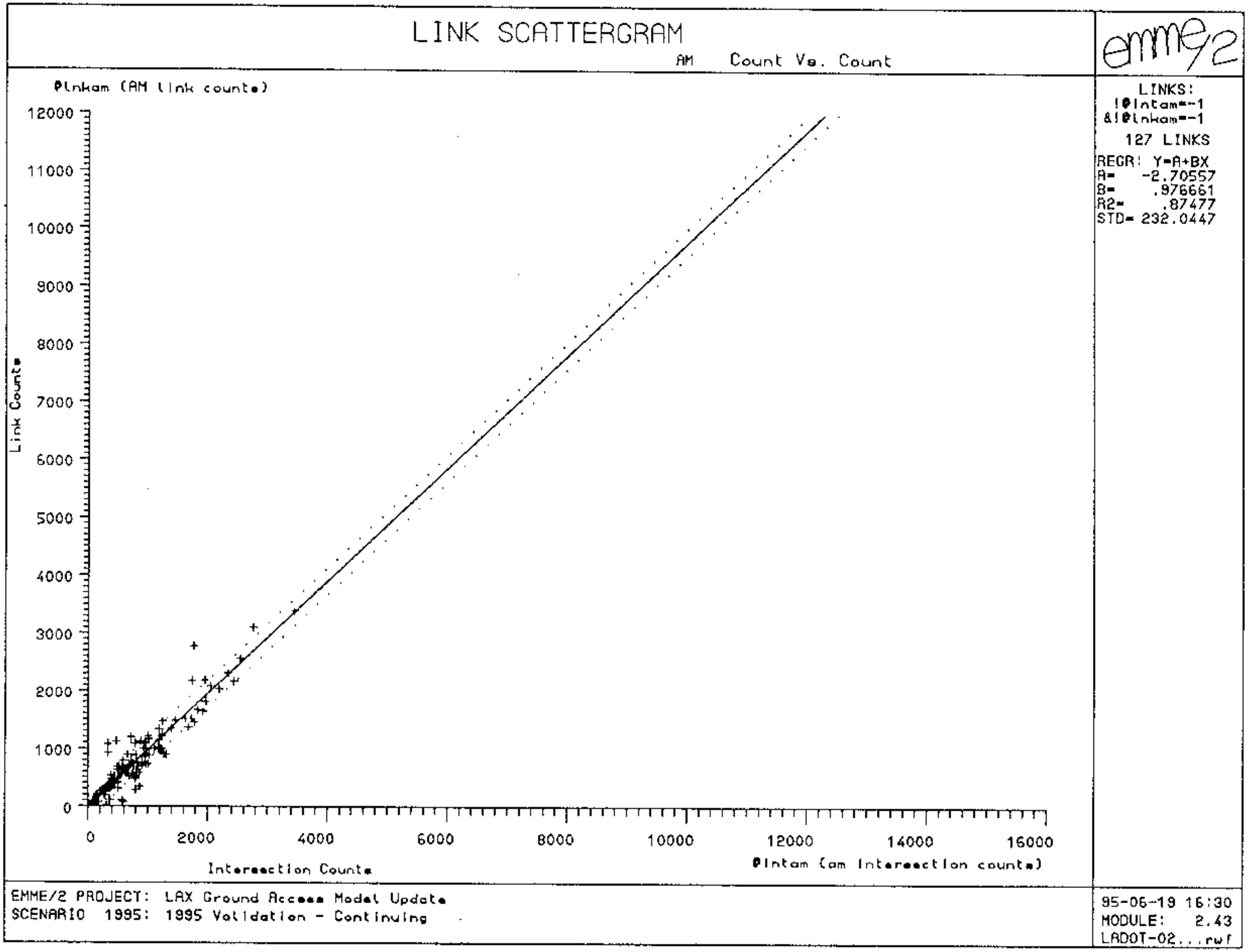
Los Angeles Internatinal Airport	A.M Validation: All Counts	FIGURE IV-8



Los Angeles Internatinal Airport

P.M Validation: All Counts

FIGURE IV-9



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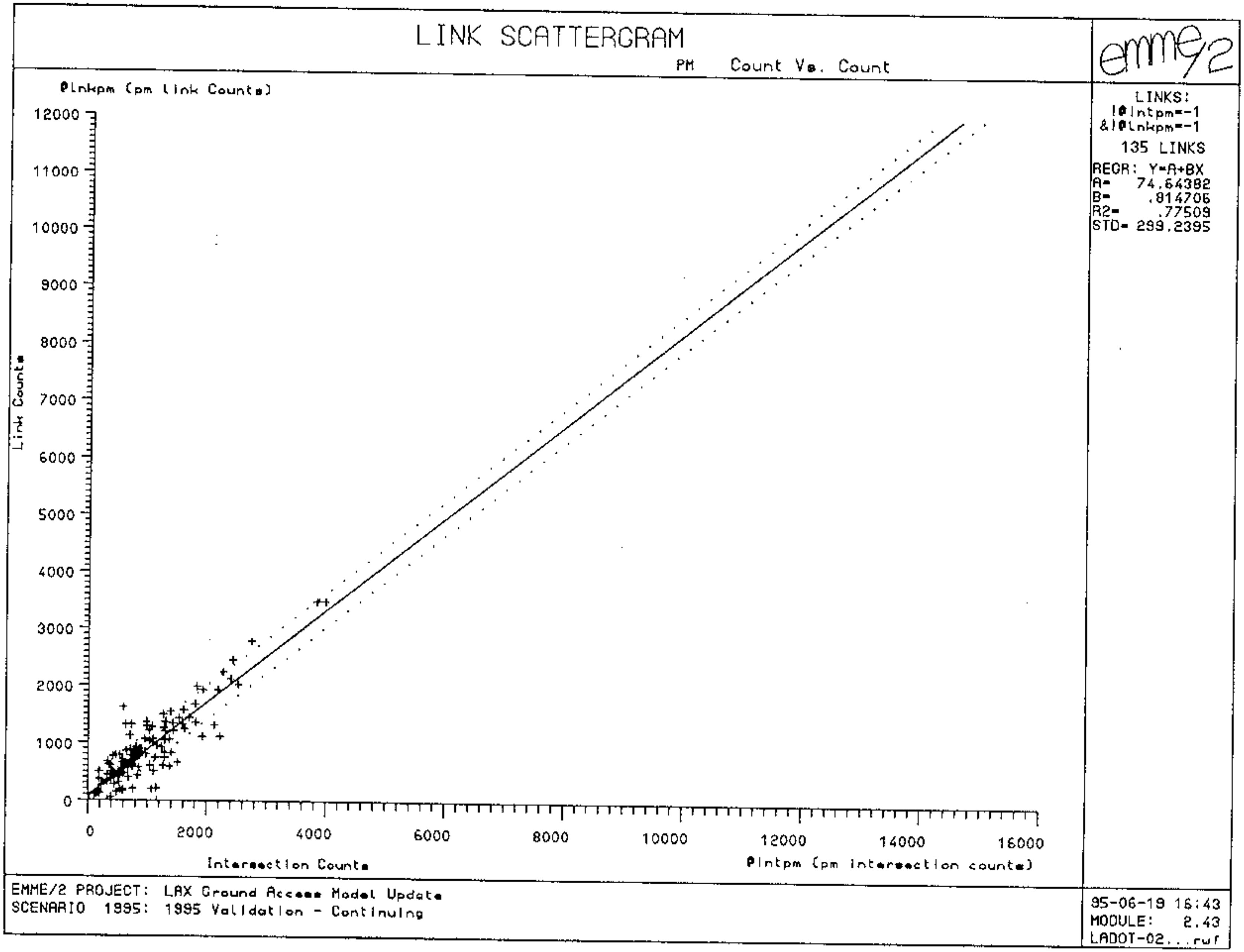
Los Angeles International Airport Master Plan

A.M. VALIDATION: Count to Count Comparison

FIGURE IV-10



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Los Angeles International Airport Master Plan	P.M. VALIDATION: Count to Count Comparison	FIGURE IV-11

V. MODEL OUTPUT AND POST PROCESSOR

A post processor has been developed which takes raw output from the LAX Ground Access Model, makes adjustments, and then reports final link volumes, intersection turn movements, and intersection levels of service. Thus the entire process of estimating traffic volumes and calculating levels of service is mechanized within the overall model.

The post-processor uses adjustment factors on many links. The adjustment factors, when applied to raw model estimates for existing 1995 conditions results in adjusted volumes that are identical to the 1995 ground counts used in model calibration. Therefore the post processor effectively eliminates any error or bias that might otherwise be in the model itself. When the model is used in forecasting future demands, the post-processor in essence calculates the <u>change</u> in demand as estimated by the model, then adds the change to the current 1995 ground count volume.

A. LINK VOLUME ADJUSTMENT FACTORS

In order to compensate for micro level detail in the roadway system or landuse patterns that are at a finer grain than can be included in any model, link volume adjustment factors are used. These factors compensate for the over or under simulation of traffic volumes by creating an "offset" for each link volume with count data. This offset, which is simply the difference between the modeled volume and the counted volume, is applied to the link. With the application of the adjustment factor, the (adjusted) 1995 model volume is equal to the counted volume at every counted link. This adjustment factor is saved, and will be used for the analysis of alternative model scenarios. For example, if a link currently has a count of 1200 and a (raw) model volume of 1250, an adjustment factor of -50 is applied to the link. If future scenario model produces a (raw) model volume of 1275, the adjustment factor will be applied to produce an (adjusted) model volume of 1225.

B. INTERSECTION POST PROCESSOR AND FURNESS "PIVOT" PROCESS

The final adjustment procedure involved splitting the approach and departure volumes at intersections into reasonable turning movement volumes. This is integrated into the process so that the link adjustsments can be applied to the intersections, and to enhance the model in it's ability to forecast intersection turning movement volumes. The methodology used is documented in the *Transportation Research Board* circular #795 by Pagitsas and Shin. In general, this procedure starts by "spliting" each approach into left, through, and right turn movements. An initial split factor for each movement is established by ground counts. The pivot process then iteratively modifies the splits until the approach and departure volumes balance for each intersection. This procedure produces reasonable turning volumes while retaining the modeled approach and departure volumes for each leg of the intersection. The specific process is detailed below.

First, the initial split factors for each leg of the intersection are multiplied by the associated approach volumes to develop a first iteration of turning movement volumes. These volumes are then summed to calculate the resulting departure volumes. The new departure volumes are then compared to the original departure volumes, and the calculated turning movements are adjusted appropriately. For example, if the original departure volume for a particular leg was 1,000 vehicles and the calculated turning volumes summed to 1,200, the three turning volumes would be adjusted by 1,000/1,200 or 0.833.

The revised turn volumes are then summed again and compared to the original approach volumes. The new approach volumes are then adjusted to match the original approach volumes, similar to the method described above. The whole process then repeats: the turn movements are summed, compared to the original departure volumes, adjusted, summed, compared to the original approach volumes, adjusted, and so on. This process continues until the calculated approach and/or departure volumes match the original volumes.

It should be noted that since there are a number of turning movement combinations that will balance the prespecified approach and departure volumes, the final resulting turning volumes are sensitive to the initial estimates of turning split factors. In most cases, existing turning proportions were used as the initial assumption inputs to develop the future turning volumes. Where a significant change in the street network occurred (e.g. three-legged intersection becoming four-legged in the future), the input turning movement split was started as 10% left turns, 80% through movements and 10% right turns. This initial split was considered a reasonable starting point for calculating arterial to arterial intersections in cases ehere no applicable count data were available.

C. Level of Service Program (CALCDB)

The level of service at study intersections was calculated using Critical Movement Analysis (CMA) methodology as required by the Los Angeles Department of Transportation. The CMA methodology was incorporated into a Paradox database by DOT staff and was used in the LAX Master Plan project.

VI. MODEL APPLICATION

The LAX Ground Access Model has been designed to provide the greatest flexibility in analyzing the various potential LAX Master Plan scenarios within the limitations of available, and predictable data. The model includes the full four step process (trip generation distribution, mode split, and assignment) for background trips and a detailed treatment of the airport as a special generator. This allows the model to test a full range of alternative scenarios.

A. TECHNICAL APPROACH TO MODEL APPLICATION

The LAX Ground Access Model is a focussed application of the LA Citywide Framework Model, which in turn is a focussed application of the SCAG Regional Model. Appendix A lists the macros used to run the model. Since there are a number of discrete steps involved, this is called the model chain. At the beginning of Appendix A are two flowcharts. One flowchart summarizes the major inputs and outputs of the model, and the other summarizes the model chain in more detail. These flowcharts can be of great benefit in understanding the use and utility of the model. The effect of varying any of the input data (consistent with the level of detail originally included) can be tested by simply changing the input data and re-running the model. The resulting differences can then be calculated.

Since the input data are at a certain level of aggregation. The alternative scenario should differ in a meaningful way at that level. For instance, since the socio-economic data for a zone includes retail and non-retail employment, it would be inappropriate to try to test the effect of a change in use of a building (e.g. from engineering to accounting) since the input data (number of nonretail employees) don't change. Similarly, some alternatives may require the consultant team to 'translate' the alternatives assumption into model input. An example of this would be a change in transit policy. Since the model chain takes transit percentages from the regional (SCAG) model, the change in policy would need to be converted into a change in transit percentages. This would typically be reflected as a statement that, e.g. there would be an increase in transit usage of X% of its existing level in a particular corridor.

B. MODEL APPLICATION PROCEDURES

The LAX Ground Access model was initially calibrated on an IBM RS/6000 C10 Workstation. The model is run with the Emme/2 software package under the AIX operating system. It has been expanded so that it can also run on a PC. The model consists of a large databank and a series of macro files that activate the various steps of this chain. In order to apply the model, the required input data must be carefully organized. These primarily consist of the highway network, the socio-economic data, the mode split assumptions to be used, and the appropriate LAX and special generator trip tables to be used. A checklist has been created for the model operator to verify that all of the required data are present.

The model is run by invoking a master macro file. This file in turn invokes the individual steps in the model chain and supplies any parameters or the names of any data files specific to the scenario being tested. Since very large datasets are involved, each model run (for one peak hour)lasts approximately 9 hours. Depending on the similarities amongst the scenarios (and hence the similarities of their input data), different scenarios can be chained together and run overnight.

This model application produces link level auto volumes, which incorporate the link post-processor adjustments. These volumes are loaded into a spreadsheet containing the intersection post processor. The intersection post processor consists of a spreadsheet and macro developed using Lotus 123 software running under Windows. The post processor converts the final model link volumes into intersection turning movement volumes. These turning movement volumes are then fed into a database for intersection Level-of-Service analysis. The Level-of-Service analysis is an application of Critical Movement Analysis (CMA) that utilizes software developed by LADOT staff. The CMA application software, known as CalcaDB, was developed using the Paradox database software under Windows.

VII. Airport Peak Hour Model Development

The LAX Ground Access Model, developed and calibrated earlier for AM and PM peak hours, was enhanced to forecast traffic operations during summer-time Airport peak conditions. As described in the *Existing Conditions Report*, the peak hour of Airport vehicle trip generation occurs on an August weekday between 11:00 AM and 12:00 Noon. The process of developing Airport Peak model included the following steps:

- Develop Airport trip tables for August weekday conditions;
- Develop regional background (non-Airport) trip tables for August weekday conditions; and
- Run model assignment for the existing (1994) scenario and perform calibration and validation.

Data on summertime mid-day travel characteristics are not as plentiful as data for the more traditional commute peak hours. Therefore the model development process was not as rigorous for the Airport , as peak for the AM and PM peak hours. Instead of meeting specific statistical targets for "goodness of fit", the Airport Peak model was developed using a series of peak hour factors. Adjustments were made to the model to match the data that were available.

A. Development of Airport Trip Tables

The procedure used in the development of the Airport trip table for the Airport peak scenario is described earlier in Chapter III . Airport Peak hour vehicle trip volumes are summarized in **Tables III-4 and III-5.**

B. Development of Background Trip Tables

The background trips comprise all regional trips that are non-Airport related. Similar to the AM and PM peak hour trip tables, the background trip tables were calculated from socio-economic data for various zones and then calibrated to match ground counts for the specific hour being modeled.

A preliminary trip table was created by applying peaking factors to daily trips by trip purpose (Home-Work, Other-Work, Home-Shop, Home-Other, and Other-Other) to provide a basic mix of trip purposes for the 11:00 AM - 12:00 Noon hour. The Caltrans document *Trips in Motion* (LARTS section , September 1975) was used as the source of these preliminary peaking factors.

The preliminary trip table was then factored such that the total number of background trips in the study area matched a pre-determined control total which was developed by comparing mid-day ground counts to PM peak hour counts. The control total was established such that the ratio of total midday trips to PM trips in the trip tables was the same as the ratio of midday to peak hour ground counts.

The 24-hour screenline counts described earlier were used to determine the rations between PM peak hours and mid-day travel for a non-summer day. After the model was adjusted to closely match the non-summer mid-day counts, the trip tables were factored once more to represent August conditions. Caltrans data on State Highways in the focus area (24-hour, 12-month counts on freeways and arterial highways) were used in this final adjustment so that August mid-day conditions could be estimated.

Table VII-1 summarizes the background trip table and also shows the combined vehicle miles for Airport and background trips in the study area.

Table VII-1

1994 AM, PM, and Airport Peak Vehicle Trips in the Study Area

	AM[1]	PM[2]	Airport Peak[3]
Airport Trips[4]	12,963	13,376	17,029
Background Trips	151,035	190,591	187,997
Total Trips	163,998	203,967	205,026
Vehicle Miles	733,283	798,527	696,255

Notes:
1 Non-summer weekday 8 AM - 9AM
2 Non-summer weekday 5 PM - 6PM
3 August weekday 11 AM - Noon
4 Airport trips reflect the trip origins and destinations within the 55 airport area zones.

C. MODEL DEVELOPMENT

The trip table was assigned to the roadway network using the LAX Ground Access Model. Several iterations were required to adjust the model so that the results match screenline counts. These counts were taken in non-summer months. After each iteration, speeds and capacities of various roadways were adjusted to improve the model's accuracy to match the ground counts. After the airport peak model was adjusted to match the counts for non-summer conditions, the trip tables were factored to reflect August mid-day conditions based on Caltrans 12-month count data.

The roadway network includes parking restrictions and turn prohibitions as required for the midday period. The assignment was carried out using an "equilibrium" assignment technique. This assignment technique recognizes that several routes exist between a pair of zones, and each route will carry some portion of the trips between those zones. Using this process, trips are assigned to reasonable paths between zones as a function of the path's relative impedance. Impedance is a function of the speed and capacity of the links that make up a path and may be thought of as the overall travel "cost" to the user. This method uses an iterative assignment process which optimizes use of all assignment paths until a state of "equilibrium" is reached.

D. MODEL VALIDATION

Model output volumes (prior to the final trip table "summertime" adjustment) were compared with traffic counts using a measure of accuracy called the "Percent Root Mean Square Error"(%RMSE). The RMSE statistic uses the square of the differences between the model output and ground counts. Therefore, large errors are weighted much more heavily than small errors.

Table VII-2 shows the RMSE and the %RMSE as well as the average absolute error (average of the absolute value of the error) and average absolute error percent. The percentages (%RMSE and average absolute error) are shown for all links and for links with volumes greater than 1,000 peak hour vehicles. For all links, the %RMSE is less than 4 percent. For links with over 1,000 vehicles per hour the RMSE is less than 150 vehicles per hour and the %RMSE is less than 10 percent. For low volume links the RMSE is less than 150 vehicles per hour. These levels of error are small compared with the natural variation in traffic volumes, and are consistent with the results of the AM and PM model validation tests.

Table VII-2

Root Mean Square Error Summary Midday Peak Hour

Type	RMSE[1]	%RMSE	Ave Abs. Error	Abs Error%
All links	142	9.4%	109	7.2%
Links with > 1,000 vph[2]	145	3.8%	108	2.8%
Links with <1,000 vph	142	-	110	-

Notes:
1 Root-Mean Square Error
2 Vehicles per hour

VIII MODEL UPDATE TO 1996 CONDITIONS

This chapter summarizes an updated model validation for LAX Ground Access Model. It includes results of model update analysis, model output and post processor to reflect 1996 conditions.

A. LAX GROUND ACCESS MODEL UPDATE

The 1996 LAX Ground Access Model is based on the calibrated and validated 1994 LAX Ground Access Model and differs only in the added development projects between year 1994 and 1996 and changes in the socio-economic data files to reflect one year growth in the five-county regions. The added development projects are projects that are built and occupied within the "50-square-mile area" which extends from City of Santa Monica to Manhattan Beach. Projected growth factor for outside the "50-square-mile" area is based on a table of state highway VMT (Vehicle Mile Travel) growth from Caltrans. The 1994 LAX Ground Access Model was based on the calibrated and validated LA Citywide General Plan Framework Model and differed only in the added detail within the focus area. The 1994 model components (trip generation, trip distribution, modal split, and day to period) were initially calibrated to 1995 ground counts, representing 1994 conditions.

The LAX Master Plan Model is now updated to reflect 1996 conditions. To create the 1996 model run, the model inputs were updated from 1994 to 1996. This entailed updating the network and adding any development project in the greater project area that was identified as being completed between 1994 and 1996. Estimates of 1996 Airport trip generation were obtained from Leigh Fisher Associates, and are showin in **Table III-1**. Minor inconsistencies in shuttle trips were resolved in the 1996 Airport trip generation estimates. The model was run and the details of the AM and PM networks (Volume/Delay functions) were adjusted to reflect the operation of the roadway system and travel behavior as reflected in the new 1996 traffic count data.

A 1996 count-program was undertaken including both peak-hour turning movement counts at 61 intersections, 24-hour machine counts at 30 selected locations and obtaining counts from Caltrans at 4 freeway mainline locations.

In updating the model to reflect 1996 conditions, a full re-calibration of the model was not performed. This is because the data available for 1996 were much less extensive than the data available for 1994. A total of 1459 individual counts on roadway links were available for the 1994 calibration, while only 462 were available for 1996. Re-calibrating the full modeling chain would weaken the model's integrity, not improve it. Major traffic flows were calibrated to the larger 1994 databse. Re-calibrating to a smaller databse would wekaen the model's ability to estimate major traffic flows. Instead, the post-processor was revised to reflect updated information at the 462 roadway links and 61 intersections where data were available. This adjustment ensures that the model's final results incorporate updated information where available, while maintaining the original integrity of the model.

COMPARISON OF MODELED VOLUMES TO GROUND COUNTS

Figures VII-1 and VII-2 show the total volumes for the AM and PM hours respectively. **Figures VII-3 and VII-4** show the difference between the modeled volumes and the 1996 count volumes at the same scale. Excellent agreement is evident between modeled and counted volumes for both AM and PM. There are no significantly long roadways that are wholly over or wholly under estimated. This means that while a specific link may be over or under estimated, travel patterns will be accurately reproduced.

REGRESSION AND RMSE STATISTICAL TESTS

Statistical comparisons of the model volumes with the count volumes on each link were made in a number of ways. A regression of count versus modeled volume was made for all links. **Figures VII-5 and VII-6** show the regression for AM and PM hours respectively for links where counts are available. These show a good correlation, with R^2 values of 0.944 and 0.943 respectively. A perfect correlation would have an R^2 value of 1.000. This demonstrates that the model is doing an excellent job in reproducing travel patterns. In fact, the precision level of the model exceeds the random variance of the ground counts themselves.

Table VIII-1 shows the RMSE and the %RMSE as well as the average of the absolute value of the error and the percentage of the average error. It is apparent from this comparison that the RMSE is a more stringent measure than the average error. The test is performed on links with counted volumes over 1,000 vehicles in the peak hour. The variation expected (day to day variation) on smaller facilities makes up a larger percentage, and so for links with counts less than 1,000 only the RMSE and average error (not the percentage errors) are reported. For links with over 1,000 vehicles per hour in both AM and PM periods the RMSE is less than 250 vehicles per hour and the %RMSE is less than 10%. For low volume links the RMSE is less than 200 vehicles per hour for both AM and PM peaks. These levels of error are small compared with the natural variation in traffic volumes.

B. MODEL OUTPUT AND POST PROCESSOR

A new post processor has been developed for 1996 conditions which takes raw output from the LAX Ground Access Model, makes adjustments, and then reports final link volumes, intersection turn movements, and intersection levels of service for the 61 study intersections. Thus the entire process of estimating traffic volumes and calculating levels of service is mechanized within the overall model.

The post-processor develops adjusted traffic volumes. These adjusted volumes represent the sum of 1996 ground counts and model-calculated marginal charges in volumes. In essence, the post-processor simply takes the model's estimate of the change in traffic volumes (based on changes in land use, highway facilities or other factors) and adds that change to the established ground counts.

LINK VOLUME ADJUSTMENT FACTORS

In order to compensate for micro level detail in the roadway system or land use patterns that are at a finer grain than can be included in any model, link volume adjustment factors are used. These factors compensate for the over or under simulation of traffic volumes by creating an "offset" for each link volume with count data. This offset, which is simply the difference between the modeled volume and the counted volume, is applied to the link. With the application of the adjustment factor, the (adjusted) 1996 model volume is equal to the counted volume at every counted link. This adjustment factor is saved, and will be used for the analysis of alternative model scenarios. For example, if a link currently has a count of 1200 and a (raw) model volume of 1250, an adjustment factor of -50 is applied to the link. If future scenario model produces a (raw) model volume of 1275, the adjustment factor will be applied to produce an (adjusted) model volume of 1225.

POST PROCESSOR AND FURNESS "PIVOT" PROCESS

The final adjustment procedure involved splitting the link approach and departure volumes into reasonable turning movement volumes. The methodology used is documented in TRB #795 by Pagitsas and Shin. In general, this procedure starts with an initial split factor for each movement and iteratively modifies the splits until the approach and departure volumes balance for each intersection. This procedure produces reasonable turning volumes while retaining the total approach and departure volumes for each leg of the intersection. The specific process is detailed below.

First, the initial split factors for each leg of the intersection are multiplied by the associated approach volumes to develop a first iteration of turning movement volumes. These volumes are then summed to calculate the resulting departure volumes. The new departure volumes are then compared to the original departure volumes, and the calculated turning movements are adjusted appropriately. For example, if the original departure volume for a particular leg was 1,000 vehicles and the calculated turning volumes summed to 1,200, the three turning volumes would be adjusted by 1,000/1,200 or 0.833.

The revised turn volumes are then summed again and compared to the original approach volumes. The new approach volumes are again compared to the original approach volumes, and the revised turning movements are adjusted again, similar to the method described above. The whole process then repeats: the turn movements are summed, compared to the original departure volumes, adjusted, summed, compared to the original approach volumes, adjusted, and so on. This process continues until the calculated approach and/or departure volumes match the original volumes.

It should be noted that since there are a number of turning movement combinations that will balance the pre-specified approach and departure volumes, the final resulting turning volumes are sensitive to the initial estimates of turning split factors. In most cases, existing turning proportions were used as the initial assumption inputs to develop the future turning volumes. Where a significant change in the street network occurred (e.g. three-legged intersection becoming four-legged in the future), the input turning movement split was started as 10% left turns, 80% through movements and 10% right turns. This initial split was considered a reasonable starting point for calculating arterial to arterial intersections.

Level of Service Program (CALCADB)

The level of service at study intersections was calculated using Critical Movement Analysis (CMA) methodology as required by the Los Angeles Department of Transportation. The CMA methodology was incorporated into a Paradox database by DOT staff and was used in the LAX Master Plan project. The results of intersection capacity analysis at the study intersections are summarized in **Table VII-2** for the AM Peak, and **Table VII-3** for the PM Peak.

C. MODEL APPLICATION

The LAX Ground Access Model has been designed to provide the greatest flexibility in analyzing the various potential LAX Master Plan scenarios within the limitations of available and predictable data. The model includes the full four-step process for background trips and a detailed treatment of the airport as a special generator. This allows the model to test a full range of alternative scenarios.

Technical Approach to Model Application

The LAX Ground Access Model is a focused application of the LA Citywide Framework Model, which in turn is a focused application of the SCAG Regional Model. Appendix A lists the macros used to run the model. Since there are a number of discrete steps involved, this is called the model chain. At the beginning of Appendix A are two flowcharts. One flowchart summarizes the major inputs and outputs of the model, and the other summarizes the model chain in more detail. These flowcharts can be of great benefit in understanding the use and utility of the model. The effect of varying any of the input data (consistent with the level of detail originally included) can be tested by simply changing the input data and re-running the model. The resulting differences can then be calculated.

Since the input data are at a certain level of aggregation, the alternative scenario should differ in a meaningful way at that level. For instance, since the socio-economic data for a zone includes retail and non-retail employment, it would be inappropriate to try to test the effect of a change in use of a building (e.g. from engineering to accounting) since the input data (number of nonretail employees) don't change. Similarly, some alternatives may require the consultant team to 'translate' the alternatives assumption into model input. An example of this would be a change in transit policy. Since the model chain takes transit percentages from the regional (SCAG) model, the change in policy would need to be converted into a change in transit percentages. This would typically be reflected as a statement that, e.g. there would be an increase in transit usage of X% of its existing level in a particular corridor.

Model Application Procedures

The LAX Ground Access model resides on an IBM RS/6000 C10 Workstation. The model is run with the Emme/2 software package under the AIX operating system. The model consists of a large databank and a series of macro files that apply the model. In order to apply the model the required input data must be organized. These primarily consist of the highway network, the socio-economic data, the mode split assumptions to be used and the appropriate LAX and Playa Vista trip tables to be used. A checklist has been created for the model operator to verify that all of the required data are present.

The model is run by invoking a master macro file. This file in turn invokes the individual steps in the model chain and supplies any parameters or the names of any data files specific to the scenario being tested. Since very large datasets are involved, each model run lasts approximately 9 hours. Depending on the similarities amongst the scenarios (and hence the similarities of their input data), different scenarios can be chained together and run overnight.

This model application produces link level auto volumes. These volumes are taken to a PC and loaded into a spreadsheet containing the post processor. The post processor is a spreadsheet and macro developed using Lotus 123 software running under Windows. The post processor converts the final model link volumes into turning movement volumes. These turning movement volumes are then fed into a database for intersection Level-of-Service analysis. The Level-of-Service analysis is an application of Critical Movement Analysis (CMA) that utilizes software developed by LADOT staff. The CMA application software was developed using the Paradox database software under Windows.

TRIP GENERATION SUMMARY FOR 1996 EXISTING CONDITIONS (1)

LOCATION	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	AIRPORT PEAK IN	AIRPORT PEAK OUT	AIRPORT PEAK TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
TERMINALS									
EAST TERMINAL (CTA)									
Private Vehicles/Other (2)	3,256	3,036	6,292	5,458	4,810	10,268	2,871	4,177	7,048
Rent-A-Car Shuttles	196	196	392	344	345	689	199	199	398
Public Parking Shuttles	12	12	24	12	12	24	12	12	24
Private Parking Shuttles	58	58	116	99	99	198	63	62	125
Employee Parking Shuttles	12	12	24	12	12	24	12	12	24
Hotel Shuttles	70	71	141	118	118	236	68	68	136
SUBTOTAL - Veh. Trips (3)	3,604	3,385	6,989	6,043	5,396	11,439	3,225	4,530	7,755
SUBTOTAL - PCE Tripends (4)	3,604	3,385	6,989	6,043	5,396	11,439	3,225	4,530	7,755
AIRPORT MISCELLANEOUS									
RENT-A-CAR									
Private Vehicles/Other (2)	433	342	775	761	732	1,493	406	421	827
Shuttles	196	196	392	345	345	690	199	199	398
SUBTOTAL - Vehicle Trips (5)	433	342	775	761	732	1,493	406	421	827
SUBTOTAL - PCE Tripends (6)	629	538	1,167	1,106	1,077	2,183	605	620	1,225
PUBLIC PARKING									
Private Vehicles/Other (2)	88	26	114	103	80	183	53	95	148
Shuttles	12	12	24	12	12	24	12	12	24
SUBTOTAL - Vehicle Trips (5)	88	26	114	103	80	183	53	95	148
SUBTOTAL - PCE Tripends (6)	100	38	138	115	92	207	65	107	172
EMPLOYEE PARKING									
Private Vehicles/Other (2)	215	54	269	171	114	285	219	302	521
Shuttles	12	12	24	12	12	24	12	12	24
SUBTOTAL - Vehicle Trips (5)	215	54	269	171	114	285	219	302	521
SUBTOTAL - PCE Tripends (6)	227	66	293	183	126	309	231	314	545
PRIVATE PARKING									
Private Vehicles/Other (2)	212	63	275	424	331	755	140	244	384
Shuttles	58	58	116	99	99	198	63	62	125
SUBTOTAL - Vehicle Trips (5)	212	63	275	424	331	755	140	244	384
SUBTOTAL - PCE Tripends (6)	270	121	391	523	430	953	203	306	509
WORLD WAY WEST									
Private Vehicles/Other (1)	357	168	525	507	493	1,000	117	283	400
SUBTOTAL - Veh. Trips	357	168	525	507	493	1,000	117	283	400
SUBTOTAL - PCE Tripends (7)	375	176	551	532	518	1,050	123	297	420
CARGO									
Private Vehicles/Other (2)	754	538	1,292	632	625	1,257	946	585	1,531
Trucks	406	269	675	365	353	718	335	314	649
SUBTOTAL - Veh. Trips	1,160	807	1,967	997	978	1,975	1,281	899	2,180
SUBTOTAL - PCE Tripends (7)	1,566	1,076	2,642	1,362	1,331	2,693	1,616	1,213	2,829
ANCILLARY									
Private Vehicles/Other (2)	479	266	745	294	123	417	64	407	471
Trucks	205	114	319	125	53	178	27	174	201
SUBTOTAL - Veh. Trips	684	380	1,064	419	176	595	91	581	672
SUBTOTAL - PCE Tripends (7)	889	494	1,383	544	229	773	118	755	873
COLLATERAL DEVELOPMENT									
LAX Northside	0	0	0	0	0	0	0	0	0
Continental City	0	0	0	0	0	0	0	0	0
SUBTOTAL - Veh. Trips	0	0	0	0	0	0	0	0	0
SUBTOTAL - PCE Tripends	0	0	0	0	0	0	0	0	0
TOTAL - Vehicle Trips (5)	3,149	1,840	4,989	3,382	2,904	6,286	2,307	2,825	5,132
TOTAL - PCE Tripends (6),(7)	4,056	2,509	6,565	4,365	3,803	8,168	2,961	3,612	6,573
TOTAL AIRPORT VEHICLE TRIPS	6,753	5,225	11,978	9,425	8,300	17,725	5,532	7,355	12,887
TOTAL AIRPORT PCE TRIPENDS	7,660	5,894	13,554	10,408	9,199	19,607	6,186	8,142	14,328
TRIPS ELIMINATED DUE TO LAND ACQUISITION -PCE Tripends	0	0	0	0	0	0	0	0	0
NET VEH. TRIP GENERATION	6,753	5,225	11,978	9,425	8,300	17,725	5,532	7,355	12,887
NET PCE TRIPEND GENERATION	7,660	5,894	13,554	10,408	9,199	19,607	6,186	8,142	14,328

(1) Airport trip generation includes trips generated on airport property, as well as trips to off-airport parking and Rent-A-Car facilities.
(2) Private vehicles/other includes automobiles, light duty trucks, recreational vehicles, taxis, limosines, door-to-door shuttles, buses, and other vehicles not otherwise identified.
(3) Vehicle trips are the number of vehicles making a trip, with no adjustments for passenger car equivalencies.
(4) PCE tripends are the number of origins plus destinations (some trips, such as Rent-A-Car shuttles, have both ends at the airport) in Passenger Car Equivalents (one truck is equivalent to two cars).
(5) In determining vehicle trips, shuttle trips between the CTA and other airport areas are counted only once (as a CTA trip).
(6) In determining PCE tripends, both ends of internal shuttle trips (the CTA end and the other airport area end) are included.
(7) In determining PCE tripends, trucks are counted twice, as the equivalent of two cars.

Table VIII-2
Root Mean Square Error Summary, 1996

Type	RMSE(1)	Error %	Ave Abs Err	Error %
AM PEAK HOUR				
All Links > 1,000	319	11%	251	9%
Freeways	339	5%	339	4%
Arterials > 1,000	305	19%	231	14%
Arterials < 1,000	210	-	210	-
PM PEAK HOUR				
All Links > 1,000	319	11%	246	9%
Freeways	307	3%	267	3%
Arterials > 1,000	325	19%	241	14%
Arterials < 1,000	264	-	207	-

(1) Root-Mean Square Error

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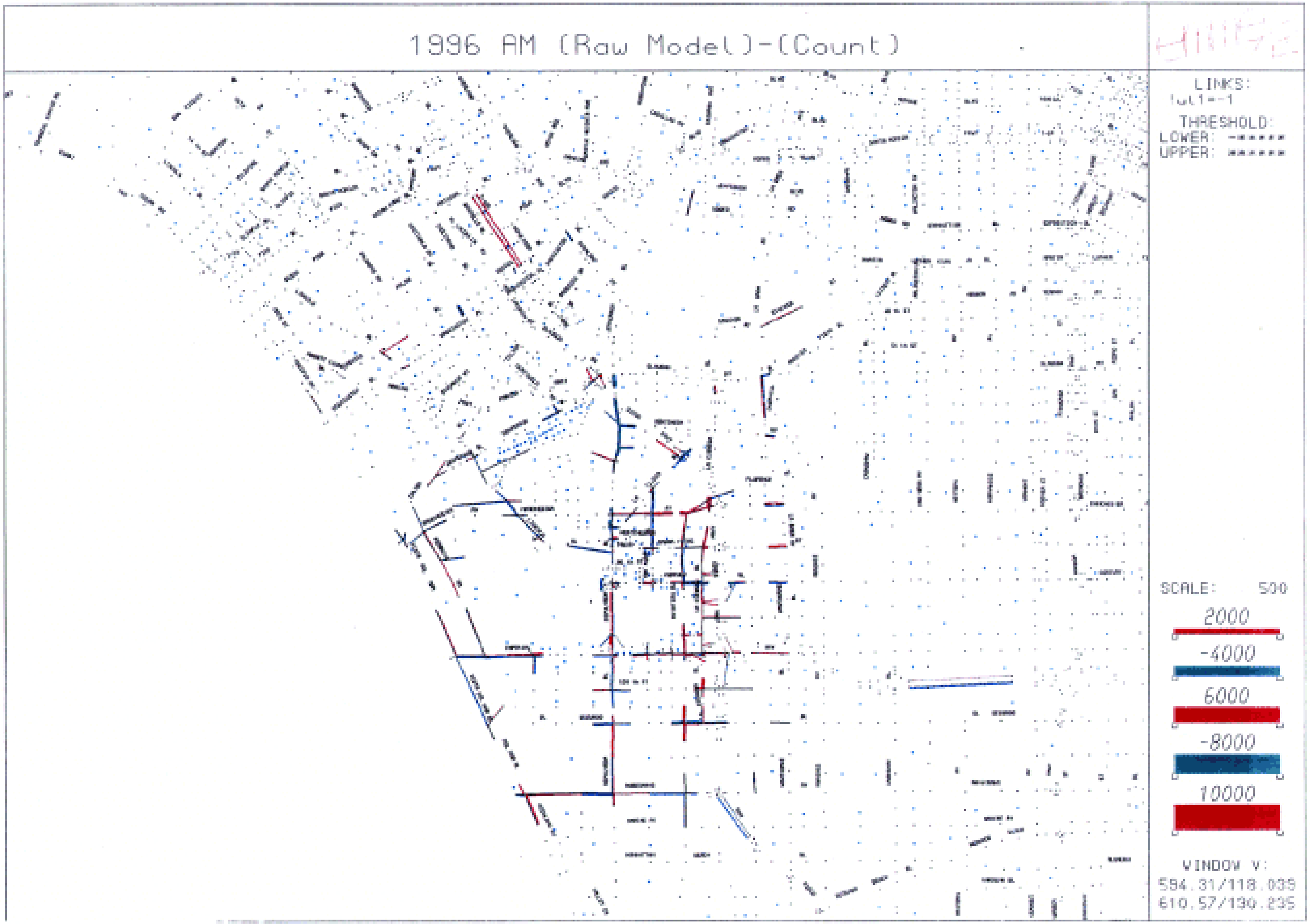
Los Angeles International Airport Master Plan	A.M. VALIDATION: Total Volumes	Figure VIII-1

Los Angeles Internatinal Airport Master Plan	P.M. Validation: Total Volumes	FIGURE VIII-2



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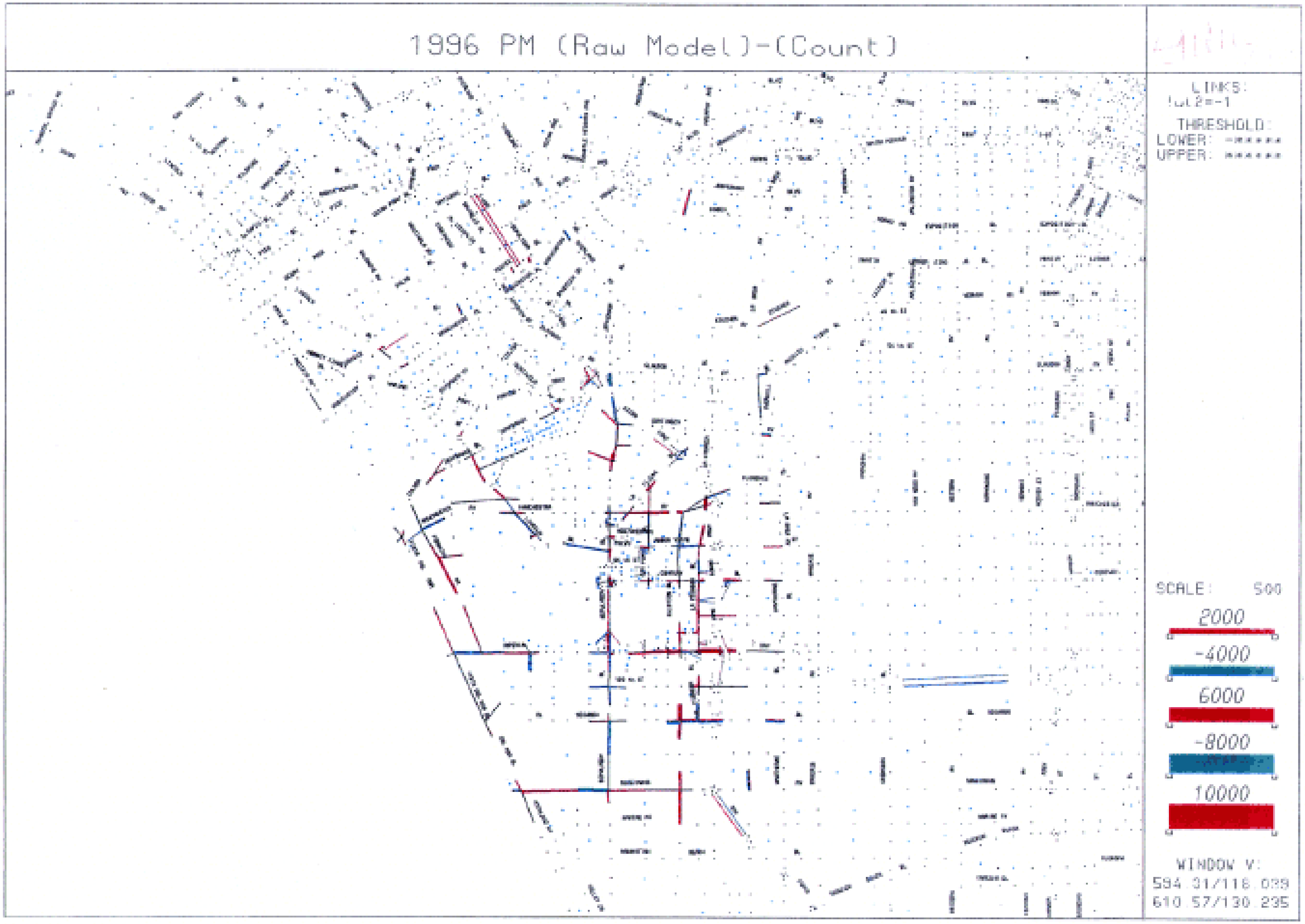
Los Angeles International Airport Master Plan	A.M. VALIDATION: (Raw Model)-(1996 Count)	Figure VIII-3



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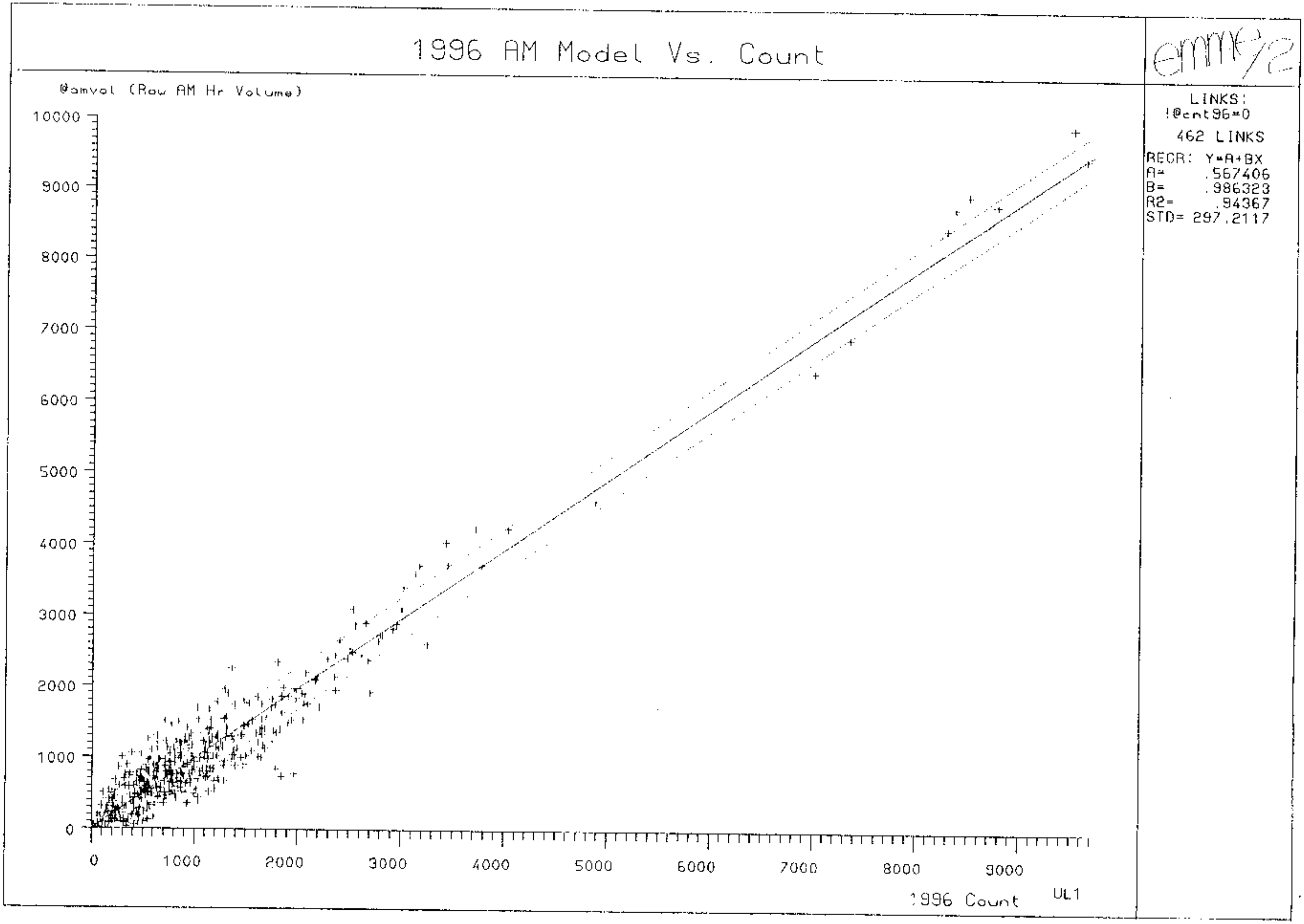
Los Angeles International Airport Master Plan	P.M. VALIDATION: (Raw Model)-(1996 Count)	Figure VIII-4



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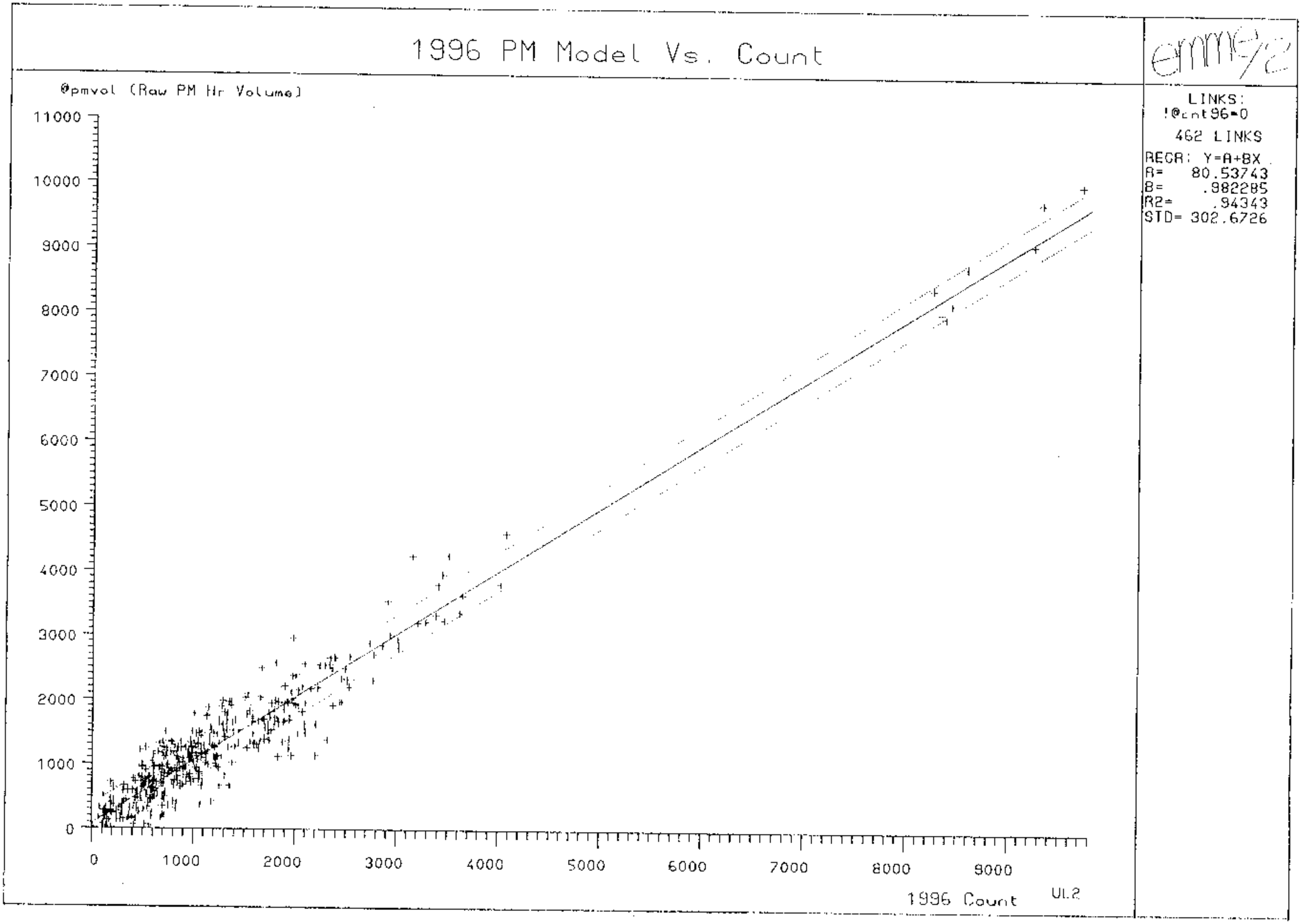
Los Angeles International Airport Master Plan	A.M. VALIDATION: (Count vs. Model Volumes)	Figure VIII-5



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Los Angeles International Airport Master Plan

P.M. VALIDATION: (Count vs. Model Volumes)

Figure VIII-6

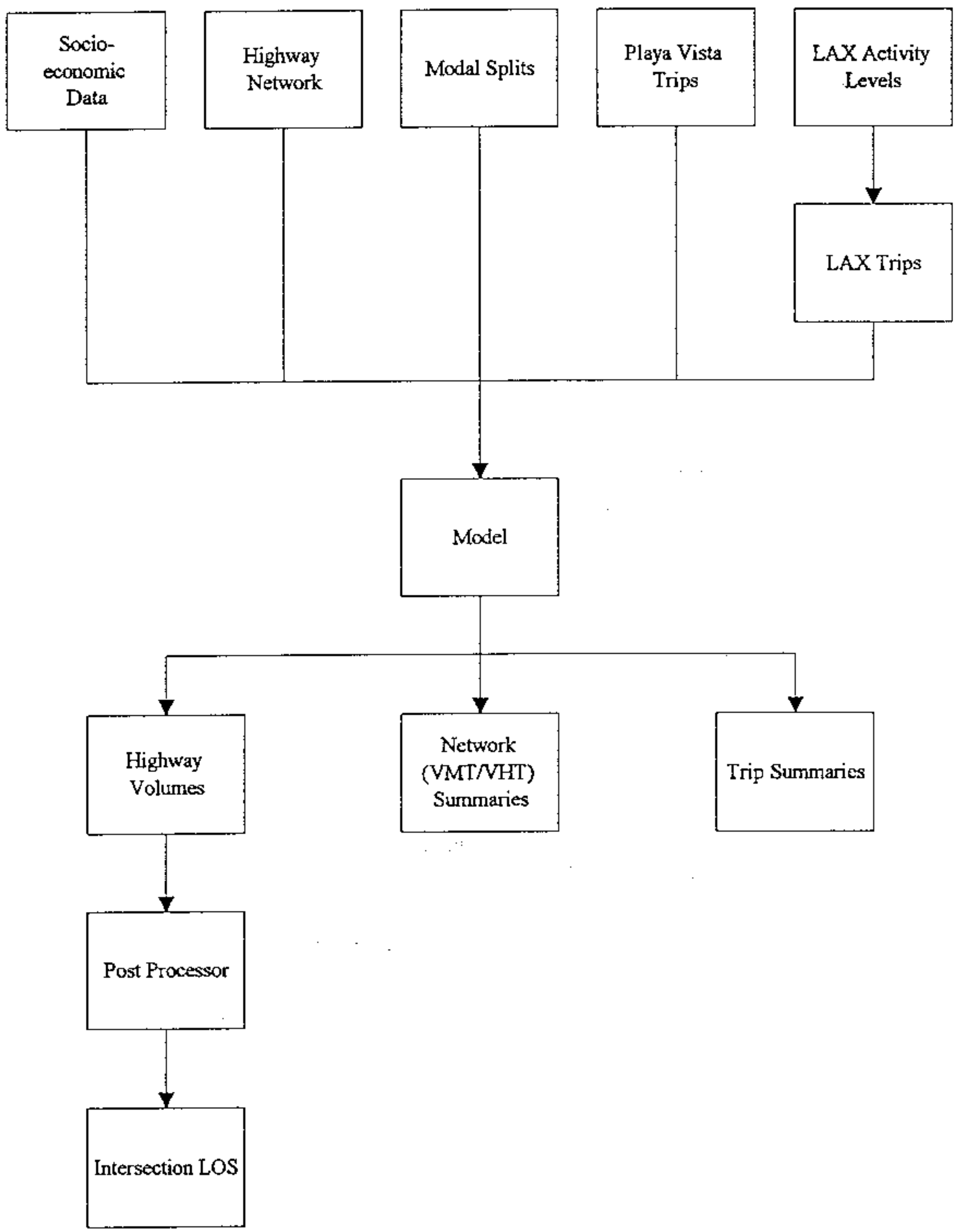
APPENDIX A

JOB SET-UP MACROS

LAX Master Plan - Phase I

Appendix A - Job Set-up Macros

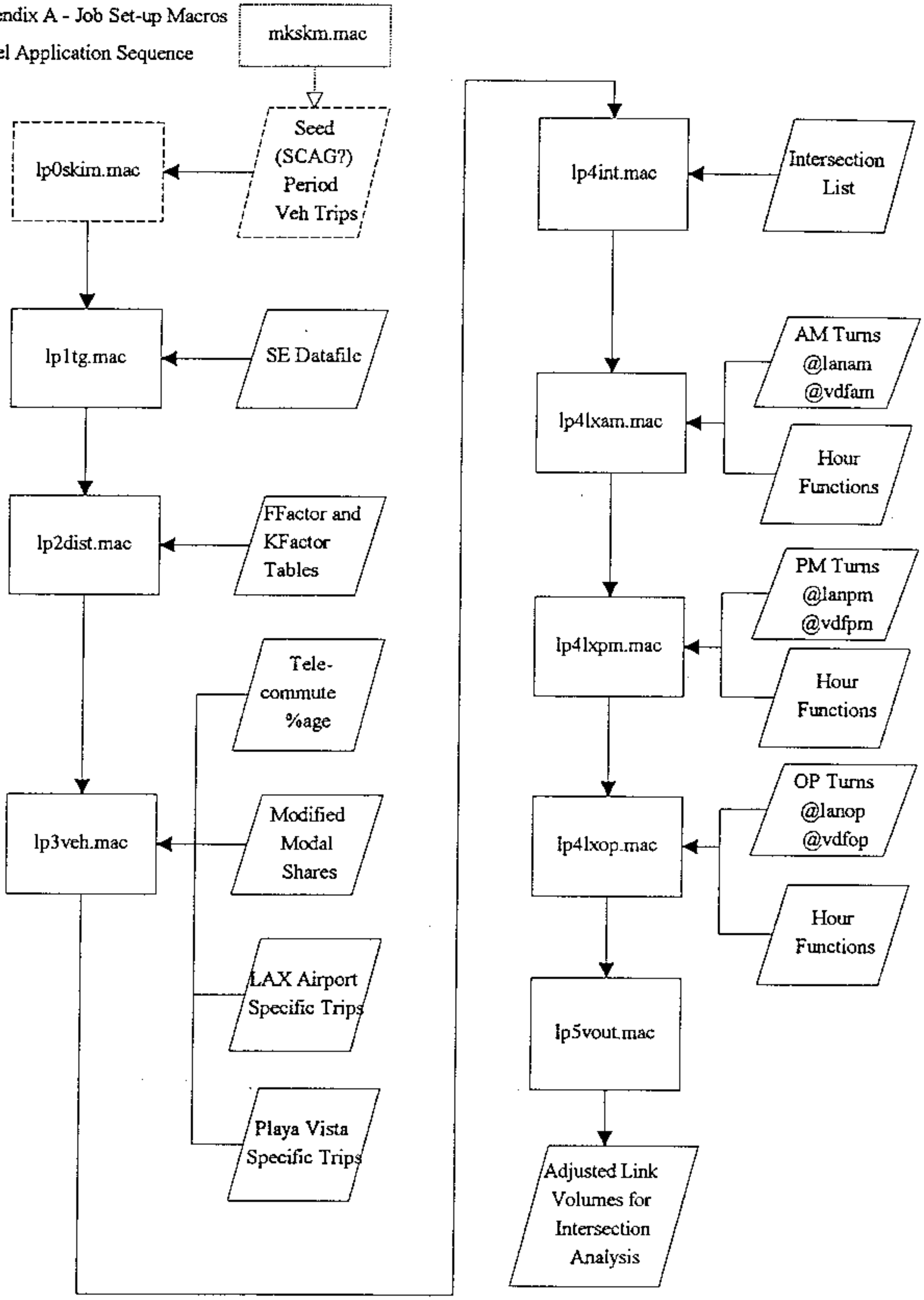
Flow of Major Input/Output Data



LAX Master Plan - Phase I

Appendix A - Job Set-up Macros

Model Application Sequence



```
-/==================================================
-/lprun.mac                                  95/06/02
-/
-/run model chain
-/--------------------------------------------------
c=begin lprun.mac
-/-------------------------
-/-------------------------
s=1995
p=0
-/                              -<mac/killmfms1.mac
-/                              -<in95/load
-<mac/lp0skima.mac
-<mac/lp1tg.mac    sec95.311
-<mac/lp2dist.mac
-/                              1990/5=0.0   2010b1=0.078   20102b=0.104   Buildout=0.15
-<mac/lp3veh.mac   0.078
-<mac/lp4int.mac
-<mac/lp4lxam.mac
-<mac/lp4lxpm.mac
-<mac/lp4lxop.mac
-<mac/lp5vout.mac
-/-------------------------
c=end of lprun.mac
-/-------------------------
```

```
~/===================================================
~/ lp0skima.mac                                95/02/15
~/
~/
~/Robert Farley
~/===================================================
~/
~/  This is macro will run a "skim" for the
~/         LAX/Playa Vista Master Plan Model
~/
~/ The trip table to produce the volumes must be in mf01
~/ The times will be stored in mf03
~/**************************************************
c=calling lp0skima.mac
~o=32        /fast
~/ ~o=16         /debug
~/
~/compute # lanes
2.41
1
y
lan
@lanop+@lanam

*
2
2
~/ get vdf
1
y
vdf
@vdfam

*
2
2
~/
q
~/   I        Load Functions                         I
reports=out/lp0skima.prn
batchin=in/funcskm.411
4.11
2                                                   I
 ~/ II        Create Skims                          II
 ~/                                                 II
 ~/ II     Assign Trips to get travel time matrix   II
 ~/                                                 II
 5.11        /Prepare for assignment                II
 1           /Auto Assignment                       II
 ~?q=2                                              II
 2           /If assigned, redo(new assignment)     II
 1
 1           /No Additional Demand                  II
 mf1         /Demand                                II


 mf03        /Matrix to hold auto times             II
 y           /change header information             II
 SKIMS       /Travel Time Skims                     II
 Travel Time Skims
```

```
 y          /Initialize Data                         II
 0          /Set to zero default                     II
~?q=1
y           /if assigned, init vols                  II
 20         /Set to 20 iterations                    II
 0.2
 0.2
 5.21       /Auto Assignment                         II
 2          /Send to Printer  iS=%s%                 II
 ~/                                                  II
 ~/                                                  II
 ~/ III    Add intra-Zonal Times                    III
~/
~/ addintra-zonal travel times @ 1/2 nearest neighbor
~/ store 1/2 nearest neighbor in mo98
~/ then modify mf3
~/
~/
 3.21      /                                        III
 1         /Calc intra time
 y
 mo98
 y
 intra
 intrazonal times
 ~?q=1
y
0
 (mf3.max.(9999*(p.eq.q)))/2


 n
 .min.
 2         /Calculating intra time                  III
 1         /Insert intra time into skim             III
 y                                                  III
 mf3                                                III
 y                                                  III
 AMSkm                                              III
 AM Skim with intras
 n                                                  III
 mf3*(p.ne.q)+mo98*(p.eq.q)


 n        /no submatrix                             III
 2        /to PRN (add intras)                      III
 q
reports=reports
batchout=batchout
~/**********************************************************
~/
c*  End of Macro lp0skima.mac
~/
~/**********************************************************
```

```
~/=================================================================
 ~/ lp1tg.mac                                                95/02/15
 ~/
 ~/----------------------------------------------------------------
 ~/Steve Ruegg, modified by Robert Farley
 ~/================================================================
c=calling macro:lp1tg.mac %t0%
~o=32              /fast
~/ ~o=16              /debug
 ~/
 ~/ ================================================================
 ~/          SCAG's Trip Generation Procedure Using EMME/2
 ~/ ================================================================
 ~/
 ~/
 ~/  Use:  ~<lp1tg.mac {sedata file name}
 ~/        where {sedata file name} is the d311 file which contains:
 ~/
 ~/        SDUs in mo1
 ~/        MDUs in mo2
 ~/         DUs in mo3
 ~/        POP  in mo4
 ~/        INC  in mo5 (in thousands, 1967 dollars, Median Family Inc.)
 ~/        RET  in md1
 ~/       NRET  in md2
 ~/        EMP  in md3
 ~/
 ~/ Note: The reports file is first deleted, then renamed to lp1tg.prn
 ~/
 ~/ ================================================================
 ~/           VARIABLES
 ~/ ----------------------------------------------------------------
 ~/           SDU = Single Occupied Dwelling Units
 ~/           MDU = Multiple Occupied Dwelling Units
 ~/            DU = Total Occupied Dwelling Units
 ~/           RET = Retail Employment
 ~/          NRET = Nonretail Employment
 ~/           EMP = Total Employment
 ~/           POP = Population
 ~/           INC = Median Family Income (1967 Dollars)
 ~/           VEH = Vehicles
 ~/       a0 - d3 = SCAG Trip Generation Coefficients
 ~/             S = SDU/DU
 ~/             P = POP/DU
 ~/ n:0, n:1, n:2 = 0, 1, or 2+ VEH where n=DU, SDU, or MDU
 ~/             Z = DU:0/DU
 ~/             R = DU:1/DU:2
 ~/          PROD = Productions
 ~/          ATTR = Attractions
 ~/            AU = Unbalanced Attractions
 ~/          HBOx = Home-Based Other where x = PROD or ATTR or AU
 ~/         NHBOx = NonHome-Based Other where x = PROD or ATTR or AU
 ~/         NHBWx = NonHome-Based Work where x = PROD or ATTR or AU
 ~/          HBWx = Home-Based Work where x = PROD or ATTR or AU
 ~/          HBSx = Home-Based School where x = PROD or ATTR or AU
 ~/        NHBOPP = NHBO Productions not reallocated
 ~/        NHBWPP = NHBW Productions not reallocated
 ~/
 ~/ ================================================================
 ~/
```

```
-/ delete reports file
-! rm ./out/lp1tg.prn
reports=./out/lp1tg.prn
page=0
-/===============
-/ I.         Determine Productions
-/----------
-/ I.A.       Input Socioeconomic Vectors & Define all
-/            other required scalars and vectors
-/
batchin=./in/tgparams.311
3.11         /Input Matrices using batch entry
2            /Send to Printer                                    I.A
-/
-/ now copy socio-economic data for the scenario year
-/
batchin=./in/%1%
3.11         /Input Matrices using batch entry
2            /Send to Printer                                    I.A
-/                                                               I.A
-/---
-/           Calculate vehicle control totals from Population
-/
3.21         /Matrix Calculations
-/
1            /Matrix Calculations
y            /Save Result
ms11
y            /Change Header
LApop
LA pop
-?q=1
y
0
mo04

' '          /No constraint matrix
y            /Submatrix
gc1

+            /aggregation operator
2            /Send to printer
-/
1            /Matrix Calculations
y            /Save Result
ms12
y            /Change Header
OCpop
OC pop
-?q=1
y
0
mo04

' '          /No constraint matrix
y            /Submatrix
gc2

+            /aggregation operator
2            /Send to printer
```

```
~/
 1            /Matrix Calculations
 y            /Save Result
 ms13
 y            /Change Header
 RVpop
 RV pop
 ~?q=1
 y
 0
 mo04

 ' '          /No constraint matrix
 y            /Submatrix
 gc3

 +            /aggregation operator
 2            /Send to printer
~/
 1            /Matrix Calculations
 y            /Save Result
 ms14
 y            /Change Header
 SBpop
 SB pop
 ~?q=1
 y
 0
 mo04

 ' '          /No constraint matrix
 y            /Submatrix
 gc4

 +            /aggregation operator
 2            /Send to printer
~/
 1            /Matrix Calculations
 y            /Save Result
 ms15
 y            /Change Header
 VTpop
 VT pop
 ~?q=1
 y
 0
 mo04

 ' '          /No constraint matrix
 y            /Submatrix
 gc5

 +            /aggregation operator
 2            /Send to printer
~/---
 1            /Matrix Calculations
 y            /Save Result
 ms11
 y            /Change Header
 LAveh
```

```
LA Vehicle Control Totals
n
ms11*0.63757249

' '         /No constraint matrix
2           /Send to printer
~/
1           /Matrix Calculations
y           /Save Result
ms12
y           /Change Header
OCveh
OC Vehicle Control Totals
n
ms12*0.72690811

' '         /No constraint matrix
2           /Send to printer
~/
1           /Matrix Calculations
y           /Save Result
ms13
y           /Change Header
RIVveh
RIV Vehicle Control Totals
n
ms13*0.63676500

' '         /No constraint matrix
2           /Send to printer
~/
1           /Matrix Calculations
y           /Save Result
ms14
y           /Change Header
SBOveh
SBO Vehicle Control Totals
n
ms14*0.64273777

' '         /No constraint matrix
2           /Send to printer
~/
1           /Matrix Calculations
y           /Save Result
ms15
y           /Change Header
VENveh
VEN Vehicle Control Totals
n
ms15*0.74034020

' '         /No constraint matrix
2           /Send to printer
q
~/===
~/
~/ I.A       Constrain income to a minimum of $3000
~/
3.21        /Matrix Calculations
```

```
1           /Matrix Calculations
y           /Save Result
mo5
n           /Change Header
3.0

mo5
0,3,include
n           /No Submatrix
2           /Send to printer
-/
-/ Done with inputs
-/==========
-/
-/ I.B       Determine Number of Vehicles (VEH) per
-/          Total Occupied Dwelling Unit (DU)
-/
-/          ln V=a0+a1(s)+a2(1/P)+a3(1/INC)+a4(1/INC^2)
-/
1           /Matrix Calculations
y           /Save Result
mo6
y           /Change Header
VEHPDU
Vehicles Per Dwelling Unit
y           /Initialize Data
0
exp(mo7+mo8*(mo1/mo3)+mo9*(mo3/mo4)+mo10/mo5+mo11/(mo5^2))

mo4
0,0,exclude
n           /No Submatrix
2           /Send to printer
-/
-/          Now limit VEH/DU to not less than 0
1           /Matrix Calculations
y           /Save Result
mo6
n           /Keep Same Header
mo6.max.0


n           /No Submatrix
2           /Send to Printer                                    I.B.
-/
-/ I.C.      Determine Number of 0 VEH DU's
-/
-/          Z=b0+b1(s)+b2*ln(P)+b3(1/INC)+b4(1/INC^2)
-/
1           /Matrix Calculation
y           /Save Result
mo12
y           /Change Header
DU:0
0 Vehicle Total Occupied DU's
y           /Initialize Data
0
mo3*(mo13+mo14*(mo1/mo3)+mo15*ln(mo4/mo3)+mo16/mo5+mo17/(mo5^2))

mo3
```

```
0,0,exclude
n           /No Submatrix
2           /Send To Printer
~/
~/           Now limit 0 VEH DU's to between 0 and total DU's
1           /Matrix Calculations
y           /Save Result
mo12
n           /Keep Same Header
(mo12.max.0).min.mo3


n           /No Submatrix
2           /Send to Printer                              I.C.
~/
~/ I.D.      Determine Ratio of 1 to 2+ VEH DU's
~/
~/           ln(R)=c0+c1(S)+c2(1/P)+c3(1/INC)+c4(1/INC^2)
~/
1           /Matrix Calculation
y           /Save result
mo18
y           /Change Header
R(3)
Ratio of 1 to 2+ Vehicle Total DU's
y           /Initialize Data
0
exp(mo19+mo20*(mo1/mo3)+mo21*(mo3/mo4)+mo22/mo5+mo23/(mo5^2))

mo4
0,0,exclude
n           /No Submatrix
2           /Send to Printer
~/
~/           Now limit Ratio of 1 to 2+ VEH DU to greater than 0
1           /Matrix Calculations
y           /Save Result
mo18
n           /Keep Same Header
mo18.max.0


n           /No Submatrix
2           /Send to Printer                              I.D.
~/ I.E.      Determine number of 2+ VEH DU's
~/
~/           (DU-DU:0)/(R+1)
~/
1           /Matrix Calculations
y           /Save Result
mo24
y           /Change Header
DU:2
2+ Vehicle Total Occupied Dwelling Units
y           /Initialize Data
0
((mo3-mo12)/(mo18+1).max.0).min.mo3


n           /No Submatrix
```

```
2           /Send To Printer                              I.E.
-/
-/ I.F.      Determine Number of 1 VEH DU's
-/
-/           DU-(DU:0+DU:2)
-/
1           /Matrix Calculations
y           /Save Result
mo25
y           /Change Header
DU:1
1 Vehicle Total Occupied DU's
y           /Initialize Data
0
((mo3-mo12-mo24).max.0).min.mo3


n           /No Submatrix
2           /Send To Printer                              I.F.
-/
-/ I.G.      Determine Number of 0 VEH Single Occupied DU's (SDU's)
-/
-/           DU:0/(d1(MDU/SDU)+1)
-/
1           /Matrix Calculations
y           /Save Result
mo26
y           /Change Header
SDU:0
0 Vehicle SDU's
y           /Initialize Data
0
mo12/(mo27*(mo2/mo1)+1)

mo1
0,0,exclude
n           /No Submatrix
2           /Send to printer                              I.G.
-/
-/ I.H.      Determine Number of 0 VEH Multiple Occupied DU's (MDU's)
-/
-/           DU:0-SDU:0
-/
1           /Matrix Calculations
y           /Save Result
mo28
y           /Change Header
MDU:0
0 Vehicle MDU's
y           /Initialize Data
0
mo12-mo26


n           /No Submatrix
2           /Send to printer                              I.H.
-/
-/ I.I.      Determine Number of 2+ VEH Single Occupied DU's (SDU's)
-/
-/           DU:2/(d2(MDU-MDU:0)/(SDU-SDU:0)+1)
```

```
-/
1           /Matrix Calculations
y           /Save Result
mo29
y           /Change Header
SDU:2
2+ Vehicle SDU's
y           /Initialize Data
0
(mo2.ge.mo28)*(mo24/(mo30*(mo2-mo28)/(mo1-mo26)+1))


n           /No Submatrix
2           /Send to printer                          I.I.
-/
-/ I.J.      Determine Number of 2+ VEH Multiple Occupied DU's (MDU's)
-/
-/           DU:2-SDU:2
-/
1           /Matrix Calculations
y           /Save Result
mo31
y           /Change Header
MDU:2
2+ Vehicle MDU's
y           /Initialize Data
0
(mo24-mo29).max.0


n           /No Submatrix
2           /Send to printer                          I.J.
-/
-/ I.K.      Determine Number of 1 VEH Single Occupied DU's (SDU's)
-/
-/           SDU-(SDU:0+SDU:2)
-/
1           /Matrix Calculations
y           /Save Result
mo32
y           /Change Header
SDU:1
1 Vehicle SDU's
y           /Initialize Data
0
(mo1-mo26-mo29).max.0


n           /No Submatrix
2           /Send to printer                          I.K.
-/
-/ I.L.      Determine Number of 1 VEH Multiple Occupied DU's (MDU's)
-/
-/           MDU-(MDU:0+MDU:2)
-/
1           /Matrix Calculations
y           /Save Result
mo33
y           /Change Header
MDU:1
```

```
1 Vehicle MDU's
y           /Initialize Data
0
(mo2-mo28-mo31).max.0


n           /No Submatrix
2           /Send to printer                              I.L.
-/
-/ I.M.      Determine Number of VEH for SDU's
-/
-/           V*DU/(d3*MDU/SDU+1)
-/
1           /Matrix Calculations
y           /Save Result
mo34
y           /Change Header
VEH:S
Number of Vehicles for SDU's
y           /Initialize Data
0
mo6*mo3/(mo35*mo2/mo1+1)


n           /No Submatrix
2           /Send to printer                              I.M.
-/
-/ I.N.      Determine Number of VEH for MDU's
-/
-/           V*DU-VEH:S
-/
1           /Matrix Calculations
y           /Save Result
mo36
y           /Change Header
VEH:M
Number of Vehicles for MDU's
y           /Initialize Data
0
mo6*mo3-mo34


n           /No Submatrix
2           /Send to printer                              I.N.
-/
-/ I.O.      Determine Number of 2+ VEH for SDU's
-/
-/           VEH:S-SDU:1
-/
1           /Matrix Calculations
y           /Save Result
mo37
y           /Change Header
VEH:S2
Number of 2+ Vehicles for SDU's
y           /Initialize Data
0
(mo34-mo32).max.0
```

```
n           /No Submatrix
2           /Send to printer                              I.O.
-/
-/ I.P.      Determine Number of 2+ VEH for MDU's
-/
-/           VEH:M-MDU:1
-/
1           /Matrix Calculations
y           /Save Result
mo38
y           /Change Header
VEH:M2
Number of 2+ Vehicles for MDU's
y           /Initialize Data
0
(mo36-mo33).max.0


n           /Submatrix
2           /Send to printer                              I.P.
-/
-/ I.P.1.1   Compute LA County Computed Vehicles
-/
-/           DU*VEH/DU
-/
1           /Matrix Calculations
y           /Save Result
ms21
y           /Change Header
VEHLA
Computed Vehicles - LA County
y           /Initialize Data
0.0
mo6*mo3


y           /Submatrix
gc1         /Sum for LA County

+           /Sum data
2           /Send to printer                              I.P.1.1
-/
-/ I.P.1.2   Compute Orange County Computed Vehicles
-/
-/           DU*VEH/DU
-/
1           /Matrix Calculations
y           /Save Result
ms22
y           /Change Header
VEHOR
Computed Vehicles - Orange County
y           /Initialize Data
0.0
mo6*mo3


y           /Submatrix
gc2         /Sum for Orange County
```

```
+           /Sum data
2           /Send to printer                              I.P.1.2
~/
~/ I.P.1.3   Compute Riverside County Computed Vehicles
~/
~/           DU*VEH/DU
~/
1           /Matrix Calculations
y           /Save Result
ms23
y           /Change Header
VEHRV
Computed Vehicles - Riverside County
y           /Initialize Data
0.0
mo6*mo3


y           /Submatrix
gc3         /Sum for Riverside County

+           /Sum data
2           /Send to printer                              I.P.1.3
~/
~/ I.P.1.4   Compute San Bernadino County Computed Vehicles
~/
~/           DU*VEH/DU
~/
1           /Matrix Calculations
y           /Save Result
ms24
y           /Change Header
VEHSB
Computed Vehicles - San Bernadino CNTY
y           /Initialize Data
0.0
mo6*mo3


y           /Submatrix
gc4         /Sum for San Bernadino County

+           /Sum data
2           /Send to printer                              I.P.1.4
~/
~/ I.P.1.5   Compute Ventura County Computed Vehicles
~/
~/           DU*VEH/DU
~/
1           /Matrix Calculations
y           /Save Result
ms25
y           /Change Header
VEHVT
Computed Vehicles - Ventura County
y           /Initialize Data
0.0
mo6*mo3
```

```
 y          /Submatrix
 gc5        /Sum for Ventura County

 +          /Sum data
 2          /Send to printer                          I.P.1.5
 ~/
 ~/ I.P.2.1   Compute LA County Normalized Vehicles/DU
 ~/
 ~/           (Control Total/Computed Total)*Original VEH/DU
 ~/
 1          /Matrix Calculations
 y          /Save Result
 mo82
 y          /Change Header
 VPDU_2
 Vehicles per Dwelling Unit, Revised
 y          /Initialize Data
 0.0
 mo6*ms11/ms21


 y          /Submatrix
 gc1        /Sum for LA County

 2          /Send to printer                          I.P.2.1
 ~/
 ~/ I.P.2.2   Compute Orange County Normalized Vehicles/DU
 ~/
 ~/           (Control Total/Computed Total)*Original VEH/DU
 ~/
 1          /Matrix Calculations
 y          /Save Result
 mo82
 n          /Do not change Header
 mo6*ms12/ms22


 y          /Submatrix
 gc2        /Sum for Orange County

 2          /Send to printer                          I.P.2.2
 ~/
 ~/ I.P.2.3   Compute Riverside County Normalized Vehicles/DU
 ~/
 ~/           (Control Total/Computed Total)*Original VEH/DU
 ~/
 1          /Matrix Calculations
 y          /Save Result
 mo82
 n          /Do not change Header
 mo6*ms13/ms23


 y          /Submatrix
 gc3        /Sum for Riverside County

 2          /Send to printer                          I.P.2.3
 ~/
 ~/ I.P.2.4   Compute San Bernadino County Normalized Vehicles/DU
 ~/
```

```
~/           (Control Total/Computed Total)*Original VEH/DU
~/
1            /Matrix Calculations
y            /Save Result
mo82
n            /Do not change Header
mo6*ms14/ms24


y            /Submatrix
gc4          /Sum for San Bernadino County

2            /Send to printer                          I.P.2.4
~/
~/ I.P.2.5   Compute Ventura County Normalized Vehicles/DU
~/
~/           (Control Total/Computed Total)*Original VEH/DU
~/
1            /Matrix Calculations
y            /Save Result
mo82
n            /Do not change Header
mo6*ms15/ms25


y            /Submatrix
gc5          /Sum for Ventura County

2            /Send to printer                          I.P.2.5
~/
~/ I.P.3     Determine Number of VEH for SDU's - RECALCULATION
~/
~/           V*DU/(d3*MDU/SDU+1)
~/
1            /Matrix Calculations
y            /Save Result
mo34
y            /Change Header
VEH:S
Number of Vehicles for SDU's
y            /Initialize Data
0
mo82*mo3/(mo35*mo2/mo1+1)


n            /No Submatrix
2            /Send to printer                          I.P.3
~/
~/ I.P.4     Determine Number of VEH for MDU's, RECALCULATION
~/
~/           V*DU-VEH:S
~/
1            /Matrix Calculations
y            /Save Result
mo36
y            /Change Header
VEH:M
Number of Vehicles for MDU's
y            /Initialize Data
0
```

```
mo82*mo3-mo34


n            /No Submatrix
2            /Send to printer                              I.P.4
~/
~/ I.P.5      Determine Number of 2+ VEH for SDU's, RECALCULATION
~/
~/            VEH:S-SDU:1
~/
1            /Matrix Calculations
y            /Save Result
mo37
y            /Change Header
VEH:S2
Number of 2+ Vehicles for SDU's
y            /Initialize Data
0
(mo34-mo32).max.0


n            /No Submatrix
2            /Send to printer                              I.P.5
~/
~/ I.P.6      Determine Number of 2+ VEH for MDU's, RECALCULATION
~/
~/            VEH:M-MDU:1
~/
1            /Matrix Calculations
y            /Save Result
mo38
y            /Change Header
VEH:M2
Number of 2+ Vehicles for MDU's
y            /Initialize Data
0
(mo36-mo33).max.0


n            /Submatrix
2            /Send to printer                              I.P.6
~:VPSDU
~/
~/ I.Q.1      Check that number of 2+ Vehicle Ownership, Single DU,
~/            "makes sense" (i.e., between 2 & 5 vehicles per DU).
~/            If it doesn't, reallocate.
~/
~/            2V/SDU=VEH:S2/SDU:2
~/
1            /Matrix Calculations
y            /Save Result
mo39
y            /Change Header
2V/SDU
2+ Vehicles per SDU
y            /Initialize Data
2.3
mo37/mo29

mo29
```

```
0,0,exclude
n           /No Submatrix
2           /Send to printer                                    I.Q.1
~/
~/ I.Q.2     Create check Scalar: Should sum to zero if data checks
~/
1           /Matrix calculation
y           /Save Result
ms65
y           /Change Header
CHKSUM
Count of zones with v/sdu <2 or >5
y           /Initialize Data
0
(mo39.lt.1.99).or.(mo39.gt.5.01)


n           /No Submatrix
+           /Sum Data
2           /Send to Printer                                    I.Q.2
~/
~/           Check to see if the average vehicle ownership
~/           for SDU:2 "makes sense"--i.e., the average number
~/           of VEH/SDU:2 should be between 2 and 5.  If any zone does
~/           NOT meet this check, then the macro is terminated.
~/
~x=%ms65%
~?x>0
~$RCSDU
~:VPMDU
~/           Data is OK for SDU's now check MDU's
~/
~/ I.Q.3     Check that number of 2+ Vehicle Ownership, Multiple DU,
~/           "makes sense" (i.e., between 2 & 5 vehicles per DU).
~/           If it doesn't, reallocate.
~/
~/           2V/MDU=VEH:M2/MDU:2
~/
1           /Matrix Calculations
y           /Save Result
mo39
y           /Change Header
2V/MDU
2+ Vehicles per MDU
y           /Initialize Data
2.3
mo38/mo31

mo31
0,0,exclude
n           /No Submatrix
2           /Send to printer                                    I.Q.2
~/
~/ I.Q.4     Create check Scalar: Should sum to zero if data checks
~/
1           /Matrix calculation
y           /Save Result
ms65
y           /Change Header
CHKSUM
```

```
Count of zones with v/mdu <2 or >5
y           /Initialize Data
0
(mo39.lt.1.99).or.(mo39.gt.5.01)


n           /No Submatrix
+           /Sum Data
2           /Send to Printer                                  I.Q.4
~/
~/           Check to see if the average vehicle ownership
~/           for MDU:2 "makes sense"--i.e., the average number
~/           of VEH/MDU:2 should be between 2 and 5.  If any zone does
~/           NOT meet this check, then the macro is terminated.
~/
~x=%ms65%
~?x>0
~$RCMDU
~/           Data is OK for MDU's therefore the macro will continue!
~/
~/ I.R       Establish Trip Rate Scalars by Purpose for LA County
~/           this is done in I.A
~/
~/ I.S       Calculate productions for each cell and purpose
~/           (SDU:0, SDU:1, etc.)
~/
~/           Trip Rate*(DU or VEH) summed for each cell
~/
~/ I.S.1     HBO Productions (W/O Allocation)
~/
1           /Matrix Calculations
y           /Save Result
mo40
y           /Change Header
HBOP
HBO Productions
y           /Initialize Data
0
mo26*mo52+mo32*mo53+mo37*mo54+mo28*mo55+mo33*mo56+mo38*mo57


n           /No Submatrix
2           /Send to Printer                                  I.S.1
~/
~/ I.S.2     NHBO Productions (W/O Allocation)
~/
1           /Matrix Calculations
y           /Save Result
mo41
y           /Change Header
NHBOPP
NHBO Productions (W/O Reallocation)
y           /Initialize Data
0
mo26*mo58+mo32*mo59+mo37*mo60+mo28*mo61+mo33*mo62+mo38*mo63


n           /No Submatrix
2           /Send to Printer                                  I.S.2
~/
```

```
-/ I.S.3     NHBW Productions (W/O Allocation)
-/
1           /Matrix Calculations
y           /Save Result
mo42
y           /Change Header
NHBWPP
NHBW Productions (W/O Reallocation)
y           /Initialize Data
0
mo26*mo64+mo32*mo65+mo37*mo66+mo28*mo67+mo33*mo68+mo38*mo69


n           /No Submatrix
2           /Send to Printer                                 I.S.3
-/
-/ I.S.4     HBW Productions
-/
1           /Matrix Calculations
y           /Save Result
mo43
y           /Change Header
HBWP
HBW Productions
y           /Initialize Data
0
mo26*mo70+mo32*mo71+mo37*mo72+mo28*mo73+mo33*mo74+mo38*mo75


n           /No Submatrix
2           /Send to Printer                                 I.S.4
-/
-/ I.S.5     HBS Productions
-/
1           /Matrix Calculations
y           /Save Result
mo44
y           /Change Header
HBSP
HBS Productions
y           /Initialize Data
0
mo26*mo76+mo32*mo77+mo37*mo78+mo28*mo79+mo33*mo80+mo38*mo81


n           /No Submatrix
2           /Send to Printer                                 I.S.5
-/
-/ ==================================================================
-/
-/ II.       Reallocate Productions (   OO     &  OW       Reallocated)
-/                                 by county   global
-/
-/ II.A.1    First add up Population and Retail to check to see
-/           if this is zero
-/
1           /Matrix Calculations
y           /Save Result
md52
y           /Change Header
```

```
POPRET
Population Plus Retail Employment
y           /Initialize Data
0
mo4'+md1


n           /No Submatrix
2           /Send to Printer                                    II.A.1
~/
~/ II.A.2    Determine NHBO Reallocation Factor
~/           set to zero if there is not retail employment
~/           set to zero if less than 0
~/
~/           R2=a0+a1(POP)+a2(RET)
~/
1           /Matrix Calculations
y           /Save Result
md4
y           /Change Header
R2
NHBO Reallocation Factor SCAG's TGM(4)
y           /Initialize Data
0
(md5*md99+md6*mo4'+md7*md1).max.0

md52
0,0,exclude
n           /No Submatrix
2           /Send to Printer                                    II.A.2
~/
~/ II.B      Determine NHBW Reallocation Factor
~/           Set to zero if total employment = 0
~/           Set to zero if less than 0
~/
~/           R3=b0+b1(RET)+b2(NRET)
~/
1           /Matrix Calculations
y           /Save Result
md8
y           /Change Header
R3
NHBW Reallocation Factor SCAG's TGM(4)
y           /Initialize Data
0
(md9*md99+md10*md1+md11*md2).max.0

md3
0,0,exclude
n           /No Submatrix
2           /Send to Printer                                    II.B
~/
~/ II.C.1.1  Sum up R2 for LA County for NHBO Trips
~/
~/
1           /Matrix Calculations
y           /Save Result
ms33
y           /Change Header
+R2LA
```

```
Sum of NHBO Reallocation Factor -LAC
y           /Initialize Data
0
md4


y           /Submatrix
gc1         /LA County Only

+           /Sum Total
2           /Send to Printer                            II.C.1.1
-/
-/ II.C.1.2  Sum up R3 Allocation Factor for NHBW trips
-/
1           /Matrix Calculations
y           /Save Result
ms34
y           /Change Header
+R3LA
Sum of NHBW Reallocation Factor
y           /Initialize Data
0
md8


n           /Submatrix
+           /Sum Total
2           /Send to Printer                            II.C.1.2
-/
-/ II.C.1.3  Sum up NHBO trips for LA county
-/
1           /Matrix Calculations
y           /Save Result
ms30
y           /Change Header
NHBOP1
Sum of NHBO Trips - LA County
y           /Initialize Data
0
mo41


y           /Submatrix
gc1         /LA County Only

+           /Sum Total
2           /Send to Printer                            II.C.1.3
-/
-/ II.C.1.4  Sum up NHBW trips
-/
1           /Matrix Calculations
y           /Save Result
ms31
y           /Change Header
NHBWP1
Sum of NHBW Trips - LA County
y           /Initialize Data
0
mo42
```

```
n           /Submatrix
+           /Sum Total
2           /Send to Printer                         II.C.1.4
~/
~/ II.C.1.5  Calculate New NHBO Trips for LA County
~/
1           /Matrix Calculations
y           /Save Result
mo46
y           /Change Header
NHBOP
NHBO Productions
y           /Initialize Data
0
ms30*md4'/ms33


y           /Submatrix
gc1         /LA County Only

2           /Send to Printer                         II.C.1.5
~/
~/ II.C.1.6  Calculate Reallocated NHBW trips
~/
1           /Matrix Calculations
y           /Save Result
mo47
y           /Change Header
NHBWP
NHBW Productions
y           /Initialize Data
0
ms31*md8'/ms34


n           /Submatrix
2           /Send to Printer                         II.C.1.6
~/
~/ II.C.2.1  Sum up R2 for OR County for NHBO Trips
~/
~/
1           /Matrix Calculations
y           /Save Result
ms33
y           /Change Header
+R2OR
Sum of NHBO Reallocation Factor -ORC
y           /Initialize Data
0
md4


y           /Submatrix
gc2         /OR County Only

+           /Sum Total
2           /Send to Printer                         II.C.2.1
~/
~/
```

```
~/ II.C.2.3  Sum up NHBO trips for OR county
~/
1           /Matrix Calculations
y           /Save Result
ms30
y           /Change Header
NHBOP2
Sum of NHBO Trips - OR County
y           /Initialize Data
0
mo41


y           /Submatrix
gc2         /OR County Only

+           /Sum Total
2           /Send to Printer                              II.C.2.3
~/
~/
~/ II.C.2.5  Calculate New NHBO Trips for OR County
~/
1           /Matrix Calculations
y           /Save Result
mo46
n           /Change Header
ms30*md4'/ms33


y           /Submatrix
gc2         /OR County Only

2           /Send to Printer                              II.C.2.5
~/
~/ II.C.3.1  Sum up R2 for RV County for NHBO Trips
~/
~/
1           /Matrix Calculations
y           /Save Result
ms33
y           /Change Header
+R2RV
Sum of NHBO Reallocation Factor -RVC
y           /Initialize Data
0
md4


y           /Submatrix
gc3         /RV County Only

+           /Sum Total
2           /Send to Printer                              II.C.3.1
~/
~/
~/ II.C.3.3  Sum up NHBO trips for RV county
~/
1           /Matrix Calculations
y           /Save Result
ms30
```

```
y           /Change Header
NHBOP3
Sum of NHBO Trips - RV County
y           /Initialize Data
0
mo41


y           /Submatrix
gc3         /RV County Only

+           /Sum Total
2           /Send to Printer                                II.C.3.3
~/
~/
~/ II.C.3.5  Calculate New NHBO Trips for RV County
~/
1           /Matrix Calculations
y           /Save Result
mo46
n           /Change Header
ms30*md4'/ms33


y           /Submatrix
gc3         /RV County Only

2           /Send to Printer                                II.C.3.5
~/
~/
~/ II.C.4.1  Sum up R2 for SB County for NHBO Trips
~/
~/
1           /Matrix Calculations
y           /Save Result
ms33
y           /Change Header
+R2SB
Sum of NHBO Reallocation Factor -SBC
y           /Initialize Data
0
md4


y           /Submatrix
gc4         /SB County Only

+           /Sum Total
2           /Send to Printer                                II.C.4.1
~/
~/
~/ II.C.4.3  Sum up NHBO trips for SB county
~/
1           /Matrix Calculations
y           /Save Result
ms30
y           /Change Header
NHBOP4
Sum of NHBO Trips - SB County
y           /Initialize Data
```

```
0
mo41


y           /Submatrix
gc4         /SB County Only

+           /Sum Total
2           /Send to Printer                          II.C.4.3
-/
-/
-/ II.C.4.5  Calculate New NHBO Trips for SB County
-/
1           /Matrix Calculations
y           /Save Result
mo46
n           /Change Header
ms30*md4'/ms33


y           /Submatrix
gc4         /SB County Only

2           /Send to Printer                          II.C.4.5
-/
-/
-/ II.C.5.1  Sum up R2 for VT County for NHBO Trips
-/
-/
1           /Matrix Calculations
y           /Save Result
ms33
y           /Change Header
+R2VT
Sum of NHBO Reallocation Factor -VTC
y           /Initialize Data
0
md4


y           /Submatrix
gc5         /VT County Only

+           /Sum Total
2           /Send to Printer                          II.C.5.1
-/
-/
-/ II.C.5.3  Sum up NHBO trips for VT county
-/
1           /Matrix Calculations
y           /Save Result
ms30
y           /Change Header
NHBOP5
Sum of NHBO Trips - VT County
y           /Initialize Data
0
mo41
```

```
y           /Submatrix
gc5         /VT County Only

+           /Sum Total
2           /Send to Printer                          II.C.5.3
-/
-/
-/ II.C.5.5  Calculate New NHBO Trips for VT County
-/
1           /Matrix Calculations
y           /Save Result
mo46
n           /Change Header
ms30*md4'/ms33


y           /Submatrix
gc5         /VT County Only

2           /Send to Printer                          II.C.5.5
-/
-/
-/ ================================================================
-/
-/ III.     Determine Attractions
-/
-/ III.A    Establish Regression Coefficients
-/          Done in Section I.A
-/
-/ III.B    Calculate Unbalanced Attractions by Purpose
-/
-/          c0+c1(POP)+c2(EMP)+c3(RET)
-/
-/ III.B.1  Calculate Unbalanced HBO Attractions
-/
1           /Matrix Calculations
y           /Save Result
md12
y           /Change Header
HBOAU
HBO Attractions (Unbalanced)
y           /Initialize Data
0
ms35*md99+ms36*mo4'+ms37*md3+ms38*md1


y           /Submatrix, not externals
gc1,gc5

2           /Send To Printer                          III.B.1
-/
-/ III.B.2  Calculate Unbalanced NHBO Attractions
-/
1           /Matrix Calculations
y           /Save Result
md13
y           /Change Header
NHBOAU
NHBO Attractions (Unbalanced)
y           /Initialize Data
```

```
0
ms39*md99+ms40*mo4'+ms41*md3+ms42*md1


y           /Submatrix, not externals
gc1,gc5

2           /Send To Printer                          III.B.2
-/
-/ III.B.3   Calculate Unbalanced NHBW Attractions
-/
1           /Matrix Calculations
y           /Save Result
md14
y           /Change Header
NHBWAU
NHBW Attractions (Unbalanced)
y           /Initialize Data
0
ms43*md99+ms44*mo4'+ms45*md3+ms46*md1


y           /Submatrix, not externals
gc1,gc5

2           /Send To Printer                          III.B.3
-/
-/ III.B.4   Calculate Unbalanced HBW Attractions
-/
1           /Matrix Calculations
y           /Save Result
md15
y           /Change Header
HBWAU
HBW Attractions (Unbalanced)
y           /Initialize Data
0
ms47*md99+ms49*mo4'+md48*md3+ms50*md1


y           /Submatrix, no externals
gc1,gc5

2           /Send To Printer                          III.B.4
-/
-/ III.B.5   Calculate Unbalanced HBS Attractions
-/
1           /Matrix Calculations
y           /Save Result
md16
y           /Change Header
HBSAU
HBS Attractions (Unbalanced)
y           /Initialize Data
0
ms51*md99+ms52*mo4'+ms53*md3+ms54*md1


y           /Submatrix, no externals
gc1, gc5
```

```
2          /Send To Printer                                    III.B.5
~/
~/ ==================================================================
~/
~/ IV.       Balance Attractions to Productions
~/
~/ IV.A.     Create Summation Scalars for Productions by Purpose
~/
~/ IV.A.1    Summation Scalar for HBO Productions
~/
1          /Matrix Calculations
y          /Save result
ms55
y          /Change Header
+HBOP
Sum of HBO Productions
y          /Initialize Data
0
mo40


n          /No submatrix
+          /Sum Data
2          /Send to Printer                                    IV.A.1
~/
~/ IV.A.2    Summation Scalar for NHBO Productions
~/
1          /Matrix Calculations
y          /Save result
ms56
y          /Change Header
+NHBOP
Sum of NHBO Productions
y          /Initialize Data
0
mo46


n          /No submatrix
+          /Sum Data
2          /Send to Printer                                    IV.A.2
~/
~/ IV.A.3    Summation Scalar for NHBW Productions
~/
1          /Matrix Calculations
y          /Save result
ms57
y          /Change Header
+NHBWP
Sum of NHBW Productions
y          /Initialize Data
0
mo47


n          /No submatrix
+          /Sum Data
2          /Send to Printer                                    IV.A.3
~/
```

```
~/ IV.A.4    Summation Scalar for HBW Productions
~/
1           /Matrix Calculations
y           /Save result
ms58
y           /Change Header
+HBWP
Sum of HBW Productions
y           /Initialize Data
0
mo43


n           /No submatrix
+           /Sum Data
2           /Send to Printer                        IV.A.4
~/
~/ IV.A.5    Summation Scalar for HBS Productions
~/
1           /Matrix Calculations
y           /Save result
ms59
y           /Change Header
+HBSP
Sum of HBS Productions
y           /Initialize Data
0
mo44


n           /No submatrix
+           /Sum Data
2           /Send to Printer                        IV.A.5
~/
~/ IV.B      Create Summation Scalars for Attractions by Purpose
~/
~/ IV.B.1    Summation Scalar for HBO Attractions
~/
1           /Matrix Calculations
y           /Save result
ms60
y           /Change Header
+HBOA
Sum of HBO Attractions
y           /Initialize Data
0
md12


n           /No submatrix
+           /Sum Data
2           /Send to Printer                        IV.B.1
~/
~/ IV.B.2    Summation Scalar for NHBO Attractions
~/
1           /Matrix Calculations
y           /Save result
ms61
y           /Change Header
+NHBOA
```

```
Sum of NHBO Attractions
y           /Initialize Data
0
md13


n           /No submatrix
+           /Sum Data
2           /Send to Printer                              IV.B.2
-/
-/ IV.B.3    Summation Scalar for NHBW Attractions
-/
1           /Matrix Calculations
y           /Save result
ms62
y           /Change Header
+NHBWA
Sum of NHBW Attractions
y           /Initialize Data
0
md14


n           /No submatrix
+           /Sum Data
2           /Send to Printer                              IV.B.3
-/
-/ IV.B.4    Summation Scalar for HBW Attractions
-/
1           /Matrix Calculations
y           /Save result
ms63
y           /Change Header
+HBWA
Sum of HBW Attractions
y           /Initialize Data
0
md15


n           /No submatrix
+           /Sum Data
2           /Send to Printer                              IV.B.4
-/
-/ IV.B.5    Summation Scalar for HBS Attractions
-/
1           /Matrix Calculations
y           /Save result
ms64
y           /Change Header
+HBSA
Sum of HBS Attractions
y           /Initialize Data
0
md16


n           /No submatrix
+           /Sum Data
2           /Send to Printer                              IV.B.5
```

```
~/
~/ IV.C      Balance Attractions to Productions
~/
~/ ***NOTE:  Straight proration used - SCAG's procedure unknown. ***
~/
~/           (sum of PROD)/(sum of ATTR)*ATTR
~/
~/ IV.C.1    Balance HBO Attractions
~/
1           /Matrix Calculations
y           /Save result
md17
y           /Change Header
HBOA
HBO Attractions (Balanced)
y           /Initialize Data
0
md12*ms55/ms60


n           /No submatrix
2           /Send to Printer                              IV.C.1
~/
~/ IV.C.2    Balance NHBO Attractions
~/
1           /Matrix Calculations
y           /Save result
md18
y           /Change Header
NHBOA
NHBO Attractions (Balanced)
y           /Initialize Data
0
md13*ms56/ms61


n           /No submatrix
2           /Send to Printer                              IV.C.2
~/
~/ IV.C.3    Balance NHBW Attractions
~/
1           /Matrix Calculations
y           /Save result
md19
y           /Change Header
NHBWA
NHBW Attractions (Balanced)
y           /Initialize Data
0
md14*ms57/ms62


n           /No submatrix
2           /Send to Printer                              IV.C.3
~/
~/ IV.C.4    Balance HBW Attractions
~/
1           /Matrix Calculations
y           /Save result
md20
```

```
y           /Change Header
HBWA
HBW Attractions (Balanced)
y           /Initialize Data
0
md15*ms58/ms63


n           /No submatrix
2           /Send to Printer                                IV.C.4
~/
~/ IV.C.5    Balance HBS Attractions
~/
1           /Matrix Calculations
y           /Save result
md21
y           /Change Header
HBSA
HBS Attractions (Balanced)
y           /Initialize Data
0
md16*ms59/ms64


n           /No submatrix
2           /Send to Printer                                IV.C.5
q           /Exit module
~/
~/
~$END
~:RCSDU
~/
~/ I.Q.2.1   Calculate decrease in +2 Veh SDU's for veh/du <2.00
~/           this value will also be added to 0 and 1 Veh SDU's on a
~/           prorated basis
~/
~/  Change in SDU's =
~/
~/   2*SDU:1*SDU:2 + 2*SDU:0*SDU:2 - VEH:S2*SDU:1 - VEH:S2*SDU:0
~/   ------------------------------------------------------------
~/                      SDU:1 + 2*SDU:0
~/
1           /Matrix Calculations
y           /Save Result
mo50
y           /Change Header
DELTAS
Change in SDUs for low veh per SDU:2
y           /Initialize Data
0
(2*mo32*mo29+2*mo26*mo29-mo37*mo32-mo37*mo26)/(mo32+2*mo26)

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                         I.Q.2.1
~/
~/ I.Q.2.1.1 Now redistribute,  to increase SDU:0
~/
1           /Matrix Calculations
```

```
y           /Save Result
mo26
n           /Do Not Change Header
mo26+mo50*(mo26/(mo26+mo32))

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                          I.Q.2.1.1
~/
~/ I.Q.2.1.2 Now redistribute,  to increase DU:0
~/
1           /Matrix Calculations
y           /Save Result
mo12
n           /Do Not Change Header
mo26+mo28

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                          I.Q.2.1.2
~/
~/ I.Q.2.1.3 Now redistribute,  to increase SOU:1
~/
1           /Matrix Calculations
y           /Save Result
mo32
n           /Do Not Change Header
mo32+mo50*(mo32/(mo26+mo32))

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                          I.Q.2.1.3
~/
~/ I.Q.2.1.4 Now redistribute,  to increase DU:1
~/
1           /Matrix Calculations
y           /Save Result
mo25
n           /Do Not Change Header
mo32+mo33

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                          I.Q.2.1.4
~/
~/ I.Q.2.1.5 Now redistribute,  to increase SOU:2
~/
1           /Matrix Calculations
y           /Save Result
mo29
n           /Do Not Change Header
(mo29-mo50).max.0

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
```

```
 2          /send to printer                          I.Q.2.1.5
 -/
 -/ I.Q.2.1.6 Now redistribute,  to increase DU:2
 -/
 1          /Matrix Calculations
 y          /Save Result
 mo24
 n          /Do Not Change Header
 mo29+mo31

 mo39       /use only veh per du<2 as constraint
 2,9999,exclude
 n          /no submatrix
 2          /send to printer                          I.Q.2.1.6
 -/
 -/ I.Q.2.2   Now adjust VEH:S2
 -/
 1          /Matrix Calculations
 y          /Save Result
 mo37
 n          /Do Not Change Header
 (mo34-mo32).max.0

 mo39       /use only veh per du<2 as constraint
 2,9999,exclude
 n          /no submatrix
 2          /send to printer                          I.Q.2.2
 -/
 -/ I.Q.2.3.1 Eliminate Excess vehicles from VEH:S2 for vpsdu>5.0
 -/
 1          /Matrix Calculations
 y          /Save Result
 mo37
 n          /Do Not Change Header
 mo29*5.0

 mo39       /use only veh per du>5 as constraint
 0,5,exclude
 n          /no submatrix
 2          /send to printer                          I.Q.2.3.1
 -/
 -/ I.Q.2.3.2 Adjust total SDU vehicles
 -/
 1          /Matrix Calculations
 y          /Save Result
 mo34
 n          /Do Not Change Header
 mo32+mo37

 mo39       /use only veh per du>5 as constraint
 0,5,exclude
 n          /no submatrix
 2          /send to printer                          I.Q.2.3.2
 -/
 -/          All done with SDU adjustment, now back to calculate
 -/          VEH:S2/SDU:2
 -/
 -$VPSDU
 -:RCMDU
 -/
```

```
~/ I.Q.4.1   Calculate decrease in +2 Veh MDU's for veh/du <2.00
~/           this value will also be added to 0 and 1 Veh MDU's on a
~/           prorated basis
~/
~/  Change in MDU's =
~/
~/   2*MDU:1*MDU:2 + 2*MDU:0*MDU:2 - VEH:M2*MDU:1 - VEH:M2*MDU:0
~/   ----------------------------------------------------------
~/                     MDU:1 + 2*MDU:0
~/
1           /Matrix Calculations
y           /Save Result
mo50
y           /Change Header
DELTAM
Change in MDUs for low veh per MDU:2
y           /Initialize Data
0
(2*mo33*mo31+2*mo28*mo31-mo38*mo33-mo38*mo28)/(mo33+2*mo28)

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                         I.Q.4.1
~/
~/ I.Q.4.1.1 Now redistribute,  to increase MDU:0
~/
1           /Matrix Calculations
y           /Save Result
mo28
n           /Do Not Change Header
mo28+mo50*(mo28/(mo28+mo33))

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                         I.Q.4.1.1
~/
~/ I.Q.4.1.2 Now redistribute,  to increase DU:0
~/
1           /Matrix Calculations
y           /Save Result
mo12
n           /Do Not Change Header
mo26+mo28

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                         I.Q.4.1.2
~/
~/ I.Q.4.1.3 Now redistribute,  to increase MDU:1
~/
1           /Matrix Calculations
y           /Save Result
mo33
n           /Do Not Change Header
mo33+mo50*(mo33/(mo28+mo33))

mo39        /use only veh per du<2 as constraint
```

```
2,9999,exclude
n           /no submatrix
2           /send to printer                              I.Q.4.1.3
-/
-/ I.Q.4.1.4 Now redistribute,  to increase DU:1
-/
1           /Matrix Calculations
y           /Save Result
mo25
n           /Do Not Change Header
mo32+mo33

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                              I.Q.4.1.4
-/
-/ I.Q.4.1.5 Now redistribute,  to increase MDU:2
-/
1           /Matrix Calculations
y           /Save Result
mo31
n           /Do Not Change Header
(mo31-mo50).max.0

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                              I.Q.4.1.5
-/
-/ I.Q.4.1.6 Now redistribute,  to increase DU:2
-/
1           /Matrix Calculations
y           /Save Result
mo24
n           /Do Not Change Header
mo29+mo31

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                              I.Q.4.1.6
-/
-/ I.Q.4.2   Now adjust VEH:M2
-/
1           /Matrix Calculations
y           /Save Result
mo38
n           /Do Not Change Header
(mo36-mo33).max.0

mo39        /use only veh per du<2 as constraint
2,9999,exclude
n           /no submatrix
2           /send to printer                              I.Q.4.2
-/
-/ I.Q.4.3.1 Eliminate Excess vehicles from VEH:M2 for vpsdu>5.0
-/
1           /Matrix Calculations
y           /Save Result
```

```
mo38
n            /Do Not Change Header
mo31*5.0

mo39         /use only veh per du>5 as constraint
0,5,exclude
n            /no submatrix
2            /send to printer                        I.Q.4.3.1
~/
~/ I.Q.4.3.2 Adjust total MDU vehicles
~/
1            /Matrix Calculations
y            /Save Result
mo36
n            /Do Not Change Header
mo33+mo38

mo39         /use only veh per du>5 as constraint
0,5,exclude
n            /no submatrix
2            /send to printer                        I.Q.4.3.2
~/
~/            All done with MDU adjustment, now back to calculate
~/            VEH:M2/MDU:2
~/
~$VPMDU
~:END
reports=reports
batchin=batchin
batchout=batchout
~/ ====================================================================
~/
c=  END OF MACRO lptg1.mac
~/
~/ ====================================================================
```

```
~/=============================================
~/  lp2dist.mac                          95/02/15
~/
~/Robert Farley
~/=============================================
c=calling macro: lp2dist.mac
~/  ~o=38
~/  ~o=16
~/
~/  This is the Trip Distribution Module for the
~/        LA Citywide Framework Model
~/
~/  The model uses the gravity model, with calibrated F and K factors,
~/  estimated to match 1990 SCAG model results.
~/
~/  The gravity model formulation is:
~/
~/
~/              P(i)*A(j)*F(t(ij))*K(ij)
~/  T(ij) =  ------------------------
~/              Sum (A(j)*F(t(ij))*K(ij))
~/             all j
~/
~/  This is implemented in EMME/2 by creating a full matrix for the
~/  combined term F(t(ij))*K(ij) to create the "interchange preponderance."
~/  Two-Dimensional Matrix balancing is then used to  converge the
~/  production and attraction totals based on the "interchange preponderance"
~/
~/
~/  This macro is organized as follows:
~/
~/  I. Set Input Matricies
~/     A. Initialize those to be used in model
~/     B. Read in Intra-Zonal times and K-Factors
~/ II. Create All-Or-Nothing Skims
~/     A. Run AON Assignment, saving travel times
~/     B. Add intra-zonal Travel times
~/III. Run Gravity Model by purpose
~/     A. HW
~/     B. OW
~/     C. HO
~/     D. HS
~/     E. OO
~/
~/     Required external files are as follows:
~/
~/     gdist.301    - Large-Area Ensemble, used to batchin K-Factors
~/     ffhw1.311    ffhw2.311  kfhw.311
~/     ffow1.311    ffow2.311  kfow.311
~/     ffho1.311    ffho2.311  kfho.311
~/     ffhs1.311    ffhs2.311  kfhs.311
~/     ffoo1.311    ffoo2.311  kfoo.311
~/
~/
~/
~/
~/
~/     In addition, the Trip Generation Program Must have been
~/     Previously run, and a valid scenario must be selected
~/     Also, a skim matrix with intrazonal times MUST exist as mf03
```

```
~/
~/     Warning:  This macro will write over the following matrices:
~/          ms1-ms99
~/          mo1, mo12-mo16, mo98
~/          mf04-mf11, mf16-mf20
~/
~/ I.       Initialize Data                          I.
~/
~/ I.A      Initialize matricies to be used later    I.A
~/
~/                                                   I.A
~!rm ./out/lp2dist.rep
reports=./out/lp2dist.prn
~/                                                   I.A
~/                                                   I.B
~/ I.B     read in zone group                        I.B
~/                                                   I.B
batchin=./in/gdist.301
3.01                   /                             I.B
1                      /                             I.B
2                      /Batch in zone groups         I.B
q                      /Quit to Main Menue           I.B
~/
~/  Set balancing parameters
~/
3.22                   /                             I.C
3                      /Change module parameters     I.C
75                     /Max 75 Iterations            I.C
.0005                  /Max re. error 0.0005         I.C
y                      /Save to Disk                 I.C
q                      /quit to Main Menue           I.C
~/
~/
~/
~/   Step II (create skim) not done in this macro    II.
~/       see instructions at top of file             II.
~/
~/
~/                                                   III.
~/ III.A HW Gravity Model                            III.A
~/                                                   III.A
~/ III.A.1 Create Friction Factors                   III.A.1
~/                                                   III.A.1
~/ III.A.1.a Read in K-Factors                       III.A.1.a
~/
batchin=./in/kfhw.311
3.11
2          / reading in K-factors HW                 III.A.1.a
~/
~/ III.A.1.b Read in first set of Friction Factors III.A.1.b
~/                                                 III.A.1.b
batchin=./in/ffhw1.311
3.11       /batchin first range of f factors       III.A.1.b
2          /printer output                         III.A.1.b
~/                                                 III.A.1.b
~/ III.A.1.b Calculate FFactors, times<80 min      III.A.1.c
~/                                                 III.A.1.c
3.21       /Matrix Calculations                    III.A.1.c
1          /Proceed with Calculations              III.A.1.c
y          /Save Result                            III.A.1.c
```

```
mf5        /FFactor Matrix                          III.A.1.c
y          /Change Header                           III.A.1.c
HWff       /Name Matrix                             III.A.1.c
FFactors for  HW Gravity Model
-?q=1
y          /Initialize matrix                       III.A.1.c
0          /Set default to zero                     III.A.1.c
ms(int(mf03)+1)

mf03       /Use constraint matrix, skim times       III.A.1.c
0,80.0,include  /Include only ics less than 80 min III.A.1.c
n          /no submatrix                            III.A.1.c
2          /Send to printer file                    III.A.1.c
2          /Exit matrix calculations                III.A.1.c
~/                                                  III.A.1.c
~/ III.A.1.d Read in Second Set of Friction FactorsIII.A.1.d
~/                                                  III.A.1.d
batchin=./in/ffhw2.311
3.11       /batch input matrices
2          /printer output                          III.A.1.d
~/                                                  III.A.1.d
~/ III.A.1.e Calculate Numerator times>80 min       III.A.1.e
~/                                                  III.A.1.e
3.21       /Select Matrix Calculations              III.A.1.e
1          /Proceed with Matrix Calculations        III.A.1.e
y          /Save Result                             III.A.1.e
mf5        /FFactor Matrix                          III.A.1.e
n          /Do not initialize  matrix               III.A.1.e
ms( (int(mf03) +1 -80).min.40)

mf03       /use constraint matrix, skim times       III.A.1.e
0,80.0,exclude  /Include only ics>=80 min           III.A.1.e
n          /no submatrix                            III.A.1.e
2          /Send to Printer                         III.A.1.e
1          /Apply K-Factors                         III.A.2
y
mf5
n
mf5*mf4

' '        /no constraint matrix                    III.A.2
n          /no submatrix                            III.A.2
2          /send to PRN                             III.A.2
q                                                   III.A.2
~/
~/
~/                                                  III.A.4
3.22       /matrix balancing                        III.A.4
1          /2-Dimensional balancing                 III.A.4
mf05       /Matrix to be balanced                   III.A.4
mo43       /Totals on Productions                   III.A.4
md20       /Totals on Attractions                   III.A.4
n          /no submatrix                            III.A.4

2          /Send to printer                         III.A.4
1          /Save result                             III.A.4
mf05       /Save into trip matrix                   III.A.4
y
HWPT
Home-Work Person trips
```

```
n          /Do not initialize                       III.A.4
2          /Send to Printer                         III.A.4
q
~/                                                  III.
~/ III.B OW Gravity Model                           III.B
~/                                                  III.B
~/ III.B.1 Create Friction Factors                  III.B.1
~/                                                  III.B.1
~/ III.B.1.a Read in K-Factors                      III.B.1.a
~/
batchin=./in/kfow.311
3.11
2          / reading in K-factors OW                III.B.1.a
~/
~/ III.B.1.b Read in first set of Friction Factors III.B.1.b
~/                                                  III.B.1.b
batchin=./in/ffow1.311
3.11       /batchin first range of f factors        III.B.1.b
2          /printer output                          III.B.1.b
~/                                                  III.B.1.b
~/ III.B.1.b Calculate FFactors, times<80 min       III.B.1.c
~/                                                  III.B.1.c
3.21       /Matrix Calculations                     III.B.1.c
1          /Proceed with Calculations               III.B.1.c
y          /Save Result                             III.B.1.c
mf6        /FFactor Matrix                          III.B.1.c
y          /Change Header                           III.B.1.c
OWff       /Name Matrix                             III.B.1.c
FFactors for  OW Gravity Model
~?q=1
y          /Initialize matrix                       III.B.1.c
0          /Set default to zero                     III.B.1.c
ms(int(mf03)+1)

mf03       /Use constraint matrix, skim times       III.B.1.c
0,80.0,include  /Include only ics less than 80 min III.B.1.c
n          /no submatrix                            III.B.1.c
2          /Send to printer file                    III.B.1.c
2          /Exit matrix calculations                III.B.1.c
~/                                                  III.B.1.c
~/ III.B.1.d Read in Second Set of Friction FactorsIII.B.1.d
~/                                                  III.B.1.d
batchin=./in/ffow2.311
3.11       /batch input matrices
2          /printer output                          III.B.1.d
~/                                                  III.B.1.d
~/ III.B.1.e Calculate Numerator times>80 min       III.B.1.e
~/                                                  III.B.1.e
3.21       /Select Matrix Calculations              III.B.1.e
1          /Proceed with Matrix Calculations        III.B.1.e
y          /Save Result                             III.B.1.e
mf6        /FFactor Matrix                          III.B.1.e
n          /Do not initialize  matrix               III.B.1.e
ms( (int(mf03) +1 -80).min.40)

mf03       /use constraint matrix, skim times       III.B.1.e
0,80.0,exclude  /Include only ics>=80 min           III.B.1.e
n          /no submatrix                            III.B.1.e
2          /Send to Printer                         III.B.1.e
1          /Apply K-Factors                         III.B.2
```

```
 y
 mf6
 n
 mf6*mf4

 ' '        /no constraint matrix              III.B.2
 n          /no submatrix                      III.B.2
 2          /send to PRN                       III.B.2
 q                                             III.B.2
~/
~/
~/                                             III.B.4
3.22        /matrix balancing                  III.B.4
1           /2-Dimensional balancing           III.B.4
mf06        /Matrix to be balanced             III.B.4
mo47        /Totals on Productions             III.B.4
md19        /Totals on Attractions             III.B.4
n           /no submatrix                      III.B.4

2           /Send to printer                   III.B.4
1           /Save result                       III.B.4
mf06        /Save into trip matrix             III.B.4
y
OWPT
Other-Work Person trips
n           /Do not initialize                 III.B.4
2           /Send to Printer                   III.B.4
q
 ~/                                            III.
 ~/ III.C HO Gravity Model                     III.C
 ~/                                            III.C
 ~/ III.C.1 Create Friction Factors            III.C.1
 ~/                                            III.C.1
 ~/ III.C.1.a Read in K-Factors                III.C.1.a
 ~/
 batchin=./in/kfho.311
 3.11
 2          / reading in K-factors HO          III.C.1.a
 ~/
 ~/ III.C.1.b Read in first set of Friction Factors III.C.1.b
 ~/                                            III.C.1.b
 batchin=./in/ffho1.311
 3.11       /batchin first range of f factors  III.C.1.b
 2          /printer output                    III.C.1.b
 ~/                                            III.C.1.b
 ~/ III.C.1.b Calculate FFactors, times<80 min III.C.1.c
 ~/                                            III.C.1.c
 3.21       /Matrix Calculations               III.C.1.c
 1          /Proceed with Calculations         III.C.1.c
 y          /Save Result                       III.C.1.c
 mf7        /FFactor Matrix                    III.C.1.c
 y          /Change Header                     III.C.1.c
 HOff       /Name Matrix                       III.C.1.c
 FFactors for  HO Gravity Model
 ~?q=1
 y          /Initialize matrix                 III.C.1.c
 0          /Set default to zero               III.C.1.c
 ms(int(mf03)+1)

 mf03       /Use constraint matrix, skim times III.C.1.c
```

```
0,80.0,include  /Include only ics less than 80 min III.C.1.c
n          /no submatrix                          III.C.1.c
2          /Send to printer file                  III.C.1.c
2          /Exit matrix calculations              III.C.1.c
-/                                                III.C.1.c
-/ III.C.1.d Read in Second Set of Friction FactorsIII.C.1.d
-/                                                III.C.1.d
batchin=./in/ffho2.311
3.11       /batch input matrices
2          /printer output                        III.C.1.d
-/                                                III.C.1.d
-/ III.C.1.e Calculate Numerator times>80 min     III.C.1.e
-/                                                III.C.1.e
3.21       /Select Matrix Calculations            III.C.1.e
1          /Proceed with Matrix Calculations      III.C.1.e
y          /Save Result                           III.C.1.e
mf7        /fFactor Matrix                        III.C.1.e
n          /Do not initialize  matrix             III.C.1.e
ms( (int(mf03) +1 -80).min.40)

mf03       /use constraint matrix, skim times     III.C.1.e
0,80.0,exclude  /Include only ics>=80 min         III.C.1.e
n          /no submatrix                          III.C.1.e
2          /Send to Printer                       III.C.1.e
1          /Apply K-Factors                       III.C.2
y
mf7
n
mf7*mf4

' '        /no constraint matrix                  III.C.2
n          /no submatrix                          III.C.2
2          /send to PRN                           III.C.2
q                                                 III.C.2
-/
-/
-/                                                III.C.4
3.22       /matrix balancing                      III.C.4
1          /2-Dimensional balancing               III.C.4
mf07       /Matrix to be balanced                 III.C.4
mo40       /Totals on Productions                 III.C.4
md17       /Totals on Attractions                 III.C.4
n          /no submatrix                          III.C.4

2          /Send to printer                       III.C.4
1          /Save result                           III.C.4
mf07       /Save into trip matrix                 III.C.4
y
HOPT
Home-Other Person trips
n          /Do not initialize                     III.C.4
2          /Send to Printer                       III.C.4
q
-/                                                III.
-/ III.D HS Gravity Model (Home-Shop)             III.D
-/                                                III.D
-/ III.D.1 Create Friction Factors                III.D.1
-/                                                III.D.1
-/ III.D.1.a Read in K-Factors                    III.D.1.a
-/
```

```
batchin=./in/kfhs.311
3.11
2          / reading in K-factors HS              III.D.1.a
~/
~/ III.D.1.b Read in first set of Friction Factors III.D.1.b
~/                                                III.D.1.b
batchin=./in/ffhs1.311
3.11       /batchin first range of f factors      III.D.1.b
2          /printer output                        III.D.1.b
~/                                                III.D.1.b
~/ III.D.1.b Calculate FFactors, times<80 min     III.D.1.c
~/                                                III.D.1.c
3.21       /Matrix Calculations                   III.D.1.c
1          /Proceed with Calculations             III.D.1.c
y          /Save Result                           III.D.1.c
mf8        /FFactor Matrix                        III.D.1.c
~?q=1
y          /Change Header                         III.D.1.c
HSff       /Name Matrix                           III.D.1.c
FFactors for  HS Gravity Model
~?q=1
y          /Initialize matrix                     III.D.1.c
0          /Set default to zero                   III.D.1.c
ms(int(mf03)+1)

mf03       /Use constraint matrix, skim times     III.D.1.c
0,80.0,include  /Include only ics less than 80 min III.D.1.c
n          /no submatrix                          III.D.1.c
2          /Send to printer file                  III.D.1.c
2          /Exit matrix calculations              III.D.1.c
~/                                                III.D.1.c
~/ III.D.1.d Read in Second Set of Friction FactorsIII.D.1.d
~/                                                III.D.1.d
batchin=./in/ffhs2.311
3.11       /batch input matrices
2          /printer output                        III.D.1.d
~/                                                III.D.1.d
~/ III.D.1.e Calculate Numerator times>80 min     III.D.1.e
~/                                                III.D.1.e
3.21       /Select Matrix Calculations            III.D.1.e
1          /Proceed with Matrix Calculations      III.D.1.e
y          /Save Result                           III.D.1.e
mf8        /FFactor Matrix                        III.D.1.e
n          /Do not initialize  matrix             III.D.1.e
ms( (int(mf03) +1 -80).min.40)

mf03       /use constraint matrix, skim times     III.D.1.e
0,80.0,exclude  /Include only ics>=80 min         III.D.1.e
n          /no submatrix                          III.D.1.e
2          /Send to Printer                       III.D.1.e
1          /Apply K-Factors                       III.D.2
y
mf8
n
mf8*mf4

' '        /no constraint matrix                  III.D.2
n          /no submatrix                          III.D.2
2          /send to PRN                           III.D.2
q                                                 III.D.2
```

```
~/
-/
~/                                              III.D.4
3.22        /matrix balancing                   III.D.4
1           /2-Dimensional balancing            III.D.4
mf08        /Matrix to be balanced              III.D.4
mo44        /Totals on Productions              III.D.4
md21        /Totals on Attractions              III.D.4
n           /no submatrix                       III.D.4

2           /Send to printer                    III.D.4
1           /Save result                        III.D.4
mf08        /Save into trip matrix              III.D.4
y
HSPT
Home-Shop Person trips
n           /Do not initialize                  III.D.4
2           /Send to Printer                    III.D.4
q
 -/                                             III.
 -/ III.E OO Gravity Model                      III.E
 -/                                             III.E
 -/ III.E.1 Create Friction Factors             III.E.1
 ~/                                             III.E.1
 -/ III.E.1.a Read in K-Factors                 III.E.1.a
 -/
 batchin=./in/kfoo.311
 3.11
 2           / reading in K-factors OO          III.E.1.a
 -/
 ~/ III.E.1.b Read in first set of Friction Factors III.E.1.b
 -/                                             III.E.1.b
 batchin=./in/ffoo1.311
 3.11        /batchin first range of f factors  III.E.1.b
 2           /printer output                    III.E.1.b
 -/                                             III.E.1.b
 ~/ III.E.1.b Calculate FFactors, times<80 min  III.E.1.c
 -/                                             III.E.1.c
 3.21        /Matrix Calculations               III.E.1.c
 1           /Proceed with Calculations         III.E.1.c
 y           /Save Result                       III.E.1.c
 mf9         /FFactor Matrix                    III.E.1.c
 -?q=1
 y           /Change Header                     III.E.1.c
 OWff        /Name Matrix                       III.E.1.c
 FFactors for  OO Gravity Model
 -?q=1
 y           /Initialize matrix                 III.E.1.c
 0           /Set default to zero               III.E.1.c
 ms(int(mf03)+1)

mf03        /Use constraint matrix, skim times  III.E.1.c
0,80.0,include  /Include only ics less than 80 min III.E.1.c
n           /no submatrix                       III.E.1.c
2           /Send to printer file               III.E.1.c
2           /Exit matrix calculations           III.E.1.c
-/                                              III.E.1.c
-/ III.E.1.d Read in Second Set of Friction FactorsIII.E.1.d
-/                                              III.E.1.d
batchin=./in/ffoo2.311
```

```
 3.11        /batch input matrices
 2           /printer output                      III.E.1.d
 ~/                                               III.E.1.d
 ~/ III.E.1.e Calculate Numerator times>80 min    III.E.1.e
 ~/                                               III.E.1.e
 3.21        /Select Matrix Calculations          III.E.1.e
 1           /Proceed with Matrix Calculations    III.E.1.e
 y           /Save Result                         III.E.1.e
 mf9         /Ffactor Matrix                      III.E.1.e
 n           /Do not initialize  matrix           III.E.1.e
 ms( (int(mf03) +1 -80).min.40)

 mf03        /use constraint matrix, skim times   III.E.1.e
 0,80.0,exclude  /Include only ics>=80 min        III.E.1.e
 n           /no submatrix                        III.E.1.e
 2           /Send to Printer                     III.E.1.e
 1           /Apply K-Factors                     III.E.2
 y
 mf9
 n
 mf9*mf4

 ' '         /no constraint matrix                III.E.2
 n           /no submatrix                        III.E.2
 2           /send to PRN                         III.E.2
 q                                                III.E.2
~/
~/
~/                                                III.E.4
3.22         /matrix balancing                    III.E.4
1            /2-Dimensional balancing             III.E.4
mf09         /Matrix to be balanced               III.E.4
mo46         /Totals on Productions               III.E.4
md18         /Totals on Attractions               III.E.4
n            /no submatrix                        III.E.4

2            /Send to printer                     III.E.4
1            /Save result                         III.E.4
mf09         /Save into trip matrix               III.E.4
y
OOPT
Other-Other Person trips
n            /Do not initialize                   III.E.4
2            /Send to Printer                     III.E.4
q
reports=reports
batchin=batchin
~/==================================================================
~/
c=  End of Macro lp2dist.mac
~/
~/==================================================================
~/
~/
~/ The calling parameter for lp3veh.mac should contain the additional
~/      Home-Work fraction to remove for Telecommuting.
~/      The Base Year model contains a nacent 2.5%.
~/      SCAG uses an additional  7.8% for Baseline 1
~/                              10.4% for Plan 2B
~/                     and we use 15.0% for Post 2010
```

```
~/      To remove an additional 15% from HBW  call ./mac/lp3veh.mac 0.150
~/
~/-----------------------------------------------------------------------
```

```
~/==================================================================
~/ lp3veh.mac                                                95/03/29
~/
~/------------------------------------------------------------------
~/Robert Farley
~/==================================================================
c=calling lp3veh.mac %t0%
~o=32          /fast
~/  ~o=16          /debug
~/-----
~/
~/ create period Vehicle OD trip table for assignment
~/ from daily PA Person trip tables
~/
~/ The calling parameter %1% should contain the additional
~/      Home-Work fraction to remove for Telecommuting.
~/      The Base Year model contains a nacent 2.2%.
~/      SCAG uses an additional  7.8% for Baseline 1
~/                              10.4% for Plan 2B
~/                   and we use 15.0% for Post 2010
~/      To remove an additional 15% from HBW  call  ~<mac/lp3veh.mac 0.150
~/
~/ The following matrices are required to have the appropriate data!!
~/       PrsnTrps   Trn%     AutoOcc
~/  HW   mf5        mf15     mf16
~/  OW   mf6        mf17     mf18
~/  NW   mf7,8,9    mf19     mf20
~/
~/
~/  mf2 = mask to substitute PV, LAX trips (mf21-mf26) over model generated trips.
~/                      LAX    PV
~/  am special trips:  mf21   mf24
~/  pm special trips:  mf22   mf25
~/  op special trips:  mf23   mf26
~/
~/  mf10-mf14 will be overwritten to create vehicle trip (24HrPA) and transpose matrices
~/  The results will be stored in mf27-mf29
~/
~x=%0%
~?x=1
~$good
~$bad
~/
~/     I    Calculate Vehicle Trips (24HrPA)
~/     II   Create Transpose Matrices
~/     III  Calculate PM Period OD Vehicles
~/==================================================================
~:good
~/
~/
~!rm ./out/lp3veh.rep
reports=./out/lp3veh.prn
 3.21                              /          1
~/
~/ set z and adjust Home-Work Trip Table
~/  to remove additional Telecommuters
1
y
ms1
y
```

```
tc
telecommuting et al reduction
y
0
%1%


2
~/
1                                                   I.
y                                                   I.
mf05                                                I.
n                                                   I.
mf5*(1-ms1)


n                                                   I.
2                                                   I.
~/ first change persons to vehicles
~/   (Persons)*(1-Trn%)/(AutoOcc.)
~/
 1                                      /           I.A
 y                                                  I.A
 mf10                                   /           I.A
 y
 HWVT
 Home-Work Veh. Trips
~?q=1
y                                                   I.A
0
 mf5*(1-mf15)/mf16


 n                                                  I.A
 2                                                  I.A
 1                                                  I.B
 y                                                  I.B
 mf11                                               I.B
 y                                                  I.B
 OWVT
 Other-Work Veh. Trips
~?q=1
y
0                                                   I.B
 mf6*(1-mf17)/mf18


 n                                                  I.B
 2                                                  I.B
 1                                                  I.C
 y                                                  I.C
 mf12                                               I.C
 y                                                  I.C
 NWVT                                               I.C
 Non-Work Veh. Trips
~?q=1
y
0                                                   I.C
 (mf7+mf8+mf9)*(1-mf19)/mf20
```

```
n                                        I.C
2                                        I.C
q
~/
~/ create transpose copies of the (24HrPA) Veh. Trips to speed processing
~/
3.12                        /           II.A
4                           /           II.A
3                           /           II.A
mf10                        /           II.A
mf13                        /           II.A
y                           /           II.A
HWVX                        /           II.A
Home-Work Veh. Trips - Transpose
~?q=1                                   II.A
y                                       II.A
0                                       II.A
4                                       II.B
3                                       II.B
mf12                                    II.B
mf14                                    II.B
y                                       II.B
NWVX                                    II.B
Non-Work Veh. Trips - Transpose
~?q=1                                   II.B
y                                       II.B
0                                       II.B
q
~/---------------------------------------------------
~/
~/ now period Veh Trips
~/
3.21                        /           III
1                           /           III.A
y                                       III.A
mf27                                    III.A
y                                       III.A
AMVeh                                   III.A
AM Hr Vehicles for Assignment s=%s%
~?q=1                                   III.A
y                                       III.A
0                                       III.A
(0.2898*mf10 + 0.0053*mf13
            + 0.1181*mf11
+ 0.0551*mf12 + 0.0051*mf14)*0.55*(mf2.eq.0)
+ (mf21+mf24)*(mf2.ne.0)

,   ,                       /no constr
n                                       III.A
2                                       III.A
~/---
1                           /           III.B
y                                       III.B
mf28                                    III.B
y                                       III.B
PMVeh                                   III.B
PM Hr Vehicles for Assignment s=%s%
~?q=1                                   III.B
y                                       III.B
```

```
 0                                              III.B
 (0.0317*mf10 + 0.2980*mf13
              + 0.3032*mf11
+ 0.1261*mf12 + 0.1145*mf14)*0.30*(mf2.eq.0)
+ (mf22+mf25)*(mf2.ne.0)

 '   '                              /no constr
 n                                              III.B
 2                                              III.B
-/---
 1                                  /           III.C
 y                                              III.C
 mf29                                           III.C
 y                                              III.C
 OPVeh                                          III.C
 OP Hr Vehicles for Assignment s=%s%
 -?q=1                                          III.C
 y                                              III.C
 0                                              III.C
 (0.2110*mf10 + 0.1640*mf13
              + 0.5787*mf11
+ 0.4699*mf12 + 0.2293*mf14)*0.06*(mf2.eq.0)
+ (mf23+mf26)*(mf2.ne.0)

 '   '                              /no constr
 n                                              III.C
 2                                              III.C
 -/---
 q
 -$end
 -:bad
 -/===   ===   ===   ===   ===   ===   ===   ===   ===   ===   ===
 -/ You MUST call with the Telecommute %age as a parameter!!
 -/  e.g.  ~<mac/lp3veh.mac 0.078
   ===   ===   ===   ===   ===   ===   ===   ===   ===   ===   ===
stop
-/
-/
-/
-/
 -:end
reports=reports
-/=================================================
-/
c= End of macro lp3veh.mac
-/
-/=================================================
```

```
-/==============================================
-/ lp4int.mac                              95/03/29
-/
-/----------------------------------------------
-/Robert Farley
-/==============================================
c=calling macro:lp4int.mac
-o=32     /fast
-/    -o=16      /debug
-/
-/----------------------------------------------
-/----------------------------------------------
-/
-!rm out/lp4int.prn
reports=./out/lp4int.prn
-/----------
-/-----------
-/batch in turn penalties
batchin=in/%s%tall.231
2.31
2
2
q
-/-----------
-/==============================================
c=end of lp4int.mac
-/==============================================
```

```
~/==============================================
~/ lp4lxam.mac                        95/03/20
~/select zones
~/----------------------------------------------
~/Robert Farley
~/==============================================
c=calling macro:lp4lxam.mac
~o=32      /fast
~/    ~o=16      /debug
~/
~/----------------------------------------------
~/ This macro will assign the am Trip Table
~/
~/       Assign mf27,  Select mf21
~/       Save times into mf30
~/
~/----------------------------------------------
~/
~!rm out/lp4asnam.prn
reports=./out/lp4lxam.prn
~/-------------
~/ compute # lanes
2.41
1
y
lan
@lanop+@lanam

*
2
2
~/ get vdf
1
y
vdf
@vdfam

*
2
2
~/
q
~/--------------
~/batch in intersections and turns
batchin=in/%s%tam.231
2.31
2
2
q
~/--------------
~/batch in functions
batchin=in/funchr.411
4.11
2
~/--------------
~/
5.11
1                    /fixed demand
~?q=2
2                    /if prev. assigned, start over w/ new assignment
```

```
1                      /single class
5                      /additional options assignment
mf27                   /assign mf27
' '                    /no auto equiv matrix
mf21                   /assign LAX as slave
mf30                   /save time in mf30
y                      /change header
amTime
am Highway Travel Time s=%s%
~?q=1                  /if exists
y                      /initialize matrix
0                      /initialize to 0
5                      /
~?q=1                  /if exist auto vols
y                      /initialize auto vols
25                     /iterations
0.15                   /relative gap
0.15                   /normalized gap
~/
5.21
2                      /assign mf28  (am)
~/=================================================================
~/   Initialize the @AMVOL Attribute
~/=================================================================
2.41
1
y
@amvol
n
0

*
4
~/
~/=================================================================
~/   Calculate AM Peak Hour Volumes
~/=================================================================
1
y
@amvol
n
int(volau + 0.5 )

*
2
2
~/===============
1
y
@laxam
n
int(volad + 0.5 )

*
2
2
~/===============
1
y
@advam
```

```
n
@amvol+@adfam

*
2
2
~/===============
~/save turns am
~/===============
 1          /calc
 y          /save
 @tuam
 n          /no rename
 int(pvolau+0.5)

 *
 *
 2          /summary report
 2          /to prn
q
~/=============================================================
batchin=
reports=
~/=============================================================
~/
c= end of lp4lxam.mac
~/
~/=============================================================
```

```
~/==============================================
~/ lp4lxpm.mac                          95/03/20
~/select zones
~/----------------------------------------------
~/Robert Farley
~/==============================================
c=calling macro:lp4lxpm.mac
~o=32     /fast
~/    ~o=16      /debug
~/
~/----------------------------------------------
~/ This macro will assign the pm Trip Table
~/
~/       Assign mf28,  Select mf22
~/       Save times into mf31
~/
~/----------------------------------------------
~/
~!rm out/lp4asnpm.prn
reports=./out/lp4lxpm.prn
~/-------------
~/ compute # lanes
2.41
1
y
lan
@lanop+@lanpm

*
2
2
~/ get vdf
1
Y
vdf
@vdfpm

*
2
2
~/
q
~/-------------
~/batch in intersections and turns
batchin=in/%s%tpm.231
2.31
2
2
q
~/-------------
~/batch in functions
batchin=in/funchr.411
4.11
2
~/-------------
~/
5.11
1                    /fixed demand
~?q=2
2                    /if prev. assigned, start over w/ new assignment
```

```
1                     /single class
5                     /additional options assignment
mf28                  /assign mf28
' '                   /no auto equiv matrix
mf22                  /assign LAX as slave
mf31                  /save time in mf31
y                     /change header
pmTime
pm Highway Travel Time s=%s%
~?q=1                 /if exists
y                     /initialize matrix
0                     /initialize to 0
5                     /
~?q=1                 /if exist auto vols
y                     /initialize auto vols
25                    /iterations
0.15                  /relative gap
0.15                  /normalized gap
~/
5.21
2                     /assign mf28  (pm)
~/=================================================================
~/   Initialize the @PMVOL Attribute
~/=================================================================
2.41
1
y
@pmvol
n
0

*
4
~/
~/=================================================================
~/   Calculate PM Peak Hour Volumes
~/=================================================================
1
y
@pmvol
n
int(volau + 0.5 )

*
2
2
~/==============
1
y
@laxpm
n
int(volad + 0.5 )

*
2
2
~/==============
1
y
@advpm
```

```
n
@pmvol+@adfpm

*
2
2
~/===============
~/save turns pm
~/===============
 1         /calc
 y         /save
 @tupm
 n         /no rename
 int(pvolau+0.5)

 *
 *
 2         /summary report
 2         /to prn
q
~/===================================================================
batchin=
reports=
~/*******************************************************************
~/
c= end of lp4lxpm.mac
~/
~/===================================================================
```

```
~/===============================================
~/ lp4lxop.mac                              95/03/20
~/select zones
~/-----------------------------------------------
~/Robert Farley
~/===============================================
c=calling macro:lp4lxop.mac
~o=32     /fast
~/    ~o=16      /debug
~/
~/-----------------------------------------------
~/ This macro will assign the op Trip Table
~/
~/       Assign mf29,  Select mf23
~/       Save times into mf32
~/
~/-----------------------------------------------
~/
~!rm out/lp4asnop.prn
reports=./out/lp4lxop.prn
~/-------------
~/ compute # lanes
2.41
1
y
lan
@lanop

*
2
2
~/ get vdf
1
y
vdf
@vdfop

*
2
2
~/
q
~/-------------
~/batch in intersections and turns
batchin=in/%s%top.231
2.31
2
2
q
~/-------------
~/batch in functions
batchin=in/funchr.411
4.11
2
~/-------------
~/
5.11
1                    /fixed demand
~?q=2
2                    /if prev. assigned, start over w/ new assignment
```

```
1                    /single class
5                    /additional options assignment
mf29                 /assign mf29
' '                  /no auto equiv matrix
mf23                 /assign LAX as slave
mf32                 /save time in mf32
y                    /change header
opTime
op Highway Travel Time s=%s%
-?q=1                /if exists
y                    /initialize matrix
0                    /initialize to 0
5                    /
-?q=1                /if exist auto vols
y                    /initialize auto vols
25                   /iterations
0.15                 /relative gap
0.15                 /normalized gap
-/
5.21
2                    /assign mf28  (op)
-/==================================================================
-/   Initialize the @OPVOL Attribute
-/==================================================================
2.41
1
y
@opvol
n
0

*
4
-/
-/==================================================================
-/   Calculate OP Peak Hour Volumes
-/==================================================================
1
y
@opvol
n
int(volau + 0.5 )

*
2
2
-/===============
1
y
@laxop
n
int(volad + 0.5 )

*
2
2
-/===============
1
y
@advop
```

```
n
@opvol+@adfop

*
2
2
~/===============
~/save turns op
~/===============
 1         /calc
 y         /save
 @tuop
 n         /no rename
 int(pvolau+0.5)

 *
 *
 2         /summary report
 2         /to prn
q
~/=================================================================
batchin=
reports=
~/=================================================================
~/
c= end of lp4lxop.mac
~/
~/=================================================================
```

```
~/==============================================
~/ LP5VOUT.MAC                          95/04/21
~/
~/----------------------------------------------
~/Dave Chow/Robert Farley
~/
~/Punch adjusted volumes for selected intersections
~/==============================================
c=begin lp5vout.mac
~o=32
batchout=temp
~/----------------------------------------------
~/place AM OP PM data into user fields
~/
 2.41
 1
 y
 ul1
 @advam

 *
 5
 1
 1
 y
 ul2
 @advop

 *
 5
 1
 1
 y
 ul3
 @advpm

 *
 5
 1
 q
~/----------------------------------------------
~/punch data 1 intersection at a time
~/
2.14
5
n

n
j=10666
i=10666

5
n

n
j=9945
i=9945

5
n
```

n
j=10331
i=10331

5
n

n
j=10368
i=10368

5
n

n
j=10258
i=10258

5
n

n
j=10216
i=10216

5
n

n
j=10332
i=10332

5
n

n
j=10333
i=10333

5
n

n
j=50025
i=50025

5
n

n
j=10369
i=10369

5
n

n
j=10524
i=10524

5
n

n
j=10435
i=10435

5
n

n
j=10217
i=10217

5
n

n
j=10587
i=10587

5
n

n
j=12384
i=12384

5
n

n
j=10143
i=10143

5
n

n
j=10144
i=10144

5
n

n
j=10082
i=10082

5
n

n
j=10080
i=10080

5
n

n
j=10079
i=10079

5
n

n
j=10078
i=10078

5
n

n
j=8519
i=8519

5
n

n
j=9958
i=9958

5
n

n
j=10372
i=10372

5
n

n
j=10370
i=10370

5
n

n
j=10367
i=10367

5
n

n
j=10198
i=10198

5
n

n
j=4642
i=4642

5
n

n
j=50012
i=50012

5
n

n
j=12515
i=12515

5
n

n
j=10208
i=10208

5
n

n
j=13409
i=13409

5
n

n
j=10523
i=10523

5
n

n
j=99845
i=99845

5
n

n
j=29002
i=29002

5
n

n
j=8565
i=8565

5
n

n

j=50005
i=50005

5
n

n
j=10218
i=10218

5
n

n
j=10220
i=10220

5
n

n
j=10438
i=10438

5
n

n
j=10584
i=10584

5
n

n
j=10206
i=10206

5
n

n
j=26018
i=26018

5
n

n
j=99629
i=99629

5
n

n
j=10433
i=10433

5

```
n

n
j=13404
i=13404

s
n

n
j=10432
i=10432

s
n

n
j=10434
i=10434

s
n

n
j=10431
i=10431

s
n

n                   /#50th
j=10436
i=10436

s
n

n
j=9959
i=9959

s
n

n
j=99649
i=99649

s
n

n
j=5107
i=5107

s
n

n
j=8691
```

i=8691

5
n

n
j=10199
i=10199

5
n

n
j=8774
i=8774

5
n

n
j=10051
i=10051

5
n

n
j=6442
i=6442

5
n

n
j=6443
i=6443

5
n

n
j=11208
i=11208

5
n

n
j=11221
i=11221

5
n

n
j=11228
i=11228

5
n

n
j=11227
i=11227

5
n

n
j=11231
i=11231

5
n

n
j=6440
i=6440

5
n

n
j=6441
i=6441

5
n

n
j=10276
i=10276

5
n

n
j=9967
i=9967

5
n

n
j=10016
i=10016

5
n

n
j=6414
i=6414

5
n

n
j=50024
i=50024

5
n

n
j=6914
i=6914

5
n

n
j=6989
i=6989

5
n

n
j=10156
i=10156

5
n

n
j=10399
i=10399

5
n

n
j=10274
i=10274

5
n

n
j=8727
i=8727

5
n

n
j=5186
i=5186

5
n

n
j=15638
i=15638

5
n

n
j=10013
i=10013

5
n

n
j=8528
i=8528

5
n

n
j=8564
i=8564

5
n

n
j=6800
i=6800

5
n

n
j=6801
i=6801

5
n

n
j=99492
i=99492

5
n

n
j=10215
i=10215

5
n

n
j=10325
i=10325

5
n

n
j=8387
i=8387

5
n

n
j=4810
i=4810

5
n

n
j=10227
i=10227

5
n

n
j=10211
i=10211

5
n

n
j=10047
i=10047

5
n

n
j=50016
i=50016

5
n

n
j=10192
i=10192

5
n

n
j=8765
i=8765

5
n

n
j=10330
i=10330

5
n

n

```
j=99550
i=99550

s
n

n
j=9946
i=9946

s
n

n
j=50077
i=50077

s
n

n                      /#100th
j=9953
i=9953

s
n

n
j=3651
i=3651

s
n

n
j=10209
i=10209

s
n

n
j=10214
i=10214

s
n

n
j=10487
i=10487

s
n

n
j=5181
i=5181

s
```

5
n

n
j=3699
i=3699

5
n

n
j=6665
i=6665

5
n

n
j=6673
i=6673

5
n

n
j=3705
i=3705

5
n

n
j=8767
i=8767

5
n

n
j=8760
i=8760

5
n

n
j=6658
i=6658

5
n

n
j=8523
i=8523

5
n

n

j=8560
i=8560

5
n

n
j=15726
i=15726

5
n

n
j=8524
i=8524

5
n

n
j=99803
i=99803

5
n

n
j=3706
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n
j=99802
i=99802

5
n

n
j=8726
i=8726

5
n

n
j=8742
i=8742

5
n

n
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i=15713

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n

n
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i=50092

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n

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i=10586

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n

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i=26010

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n

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j=15696
i=15696

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n
j=9963
i=9963

5
n

n
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i=8522

5
n

n
j=5183
i=5183

5
n

n
j=8677

i=8677

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n

n
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i=6883

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n

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j=3711
i=3711

5
n

n
j=50107
i=50107

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n

n
j=50106
i=50106

5
n

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j=50075
i=50075

5
n

n
j=8723
i=8723

5
n

n
j=6763
i=6763

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n

n
j=6777
i=6777

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i=50101

5
n

n
j=29001
i=29001

5
n

n
j=10076
i=10076

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n

n
j=10273
i=10273

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n

n
j=50118
i=50118

5
n

n
j=50087
i=50087

5
n

n
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i=99463

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n

n
j=10077
i=10077

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i=10200

5
n

n
j=50103
i=50103

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n

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j=50111
i=50111

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n

n
j=50026
i=50026

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n

n
j=10048
i=10048

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n

n
j=50013
i=50013

5
n

n
j=9949
i=9949

5
n

n
j=12382
i=12382

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n

n
j=10229
i=10229

5
n

n
j=15694
i=15694

5
n

n
j=9947
i=9947

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n

n
j=9950
i=9950

5
n

n
j=15710
i=15710

5
n

n
j=15712
i=15712

5
n

n
j=9964
i=9964

5
n

n
j=50099
i=50099

5
n

n
j=9957
i=9957

5
n

n
j=8757
i=8757

5
n

n
j=8773
i=8773

5
n

n /#150th
j=5108
i=5108

5
n

n
j=50017
i=50017

5
n

n
j=50093
i=50093

5
n

n
j=6718
i=6718

5
n

n
j=9962
i=9962

5
n

n
j=4645
i=4645

5
n

n
j=12445
i=12445

5
n

n

j=8720
i=8720

5
n

n
j=8719
i=8719

5
n

n
j=8718
i=8718

5
n

n
j=50003
i=50003

5
n

n
j=50004
i=50004

5
n

n
j=50009
i=50009

5
n

n
j=50083
i=50083

5
n

n
j=50000
i=50000

5
n

n
j=3652
i=3652

5

n

n
j=8432
i=8432

5
n

n
j=50120
i=50120

5
n

n
j=12870
i=12870

5
n

n
j=10658
i=10658

5
n

n
j=10672
i=10672

5
n

n
j=10075
i=10075

5
n

n
j=8433
i=8433

5
n

n
j=8237
i=8237

5
n

n
j=99700

i=99700

5
n

n
j=12340
i=12340

5
n

n
j=99773
i=99773

5
n

n
j=99680
i=99680

5
n

n
j=99772
i=99772

5
n

n
j=8238
i=8238

5
n

n
j=13273
i=13273

5
n

n
j=8722
i=8722

5
n

n
j=8435
i=8435

5
n

n
j=12354
i=12354

5
n

n
j=8240
i=8240

5
n

n
j=99774
i=99774

5
n

n
j=6338
i=6338

5
n

n
j=6337
i=6337

5
n

n
j=99667
i=99667

5
n

n
j=99668
i=99668

5
n

n
j=6920
i=6920

5
n

n
j=6931
i=6931

5
n

n
j=5101
i=5101

5
n

n
j=26042
i=26042

5
n

n
j=10401
i=10401

5
n

n
j=10400
i=10400

5
n

n
j=10527
i=10527

5
n

n
j=10525
i=10525

5
n

n
j=10489
i=10489

5
n

n
j=99707
i=99707

5
n

n /#200th
j=99706
i=99706

5
n

n
j=99670
i=99670

5
n

n
j=99749
i=99749

5
n

n
j=99674
i=99674

5
n

n
j=9966
i=9966

5
n

n
j=99676
i=99676

5
n

n
j=50014
i=50014

5
n

n
j=3698
i=3698

5
n

n
j=3697
i=3697

```
n

n
j=9954
i=9954

q
-/
-/*******************************
-/*****  VOLUMES BATCHED OUT *****
-/*******************************
batchout=
-/-----------------------------------------------
-/Now clean up punch with awk script
-/
-! awk '{print $2,$3,$9,$10,$11}' temp > out/%s%.lp5vol.prn
-!rm temp
-/***********************************************
c=End of LP5VOUT.MAC
-/***********************************************
```

APPENDIX B

ZONAL CORRESPONDENCE TABLE

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	16		375	7029.00 b	2753.12 a	600						76
	16		375	7029.00 b	2753.12 a	600						77
	16		375	7029.00 b	2753.12 a	600						78
	16		375	7029.00 b	2753.12 a	600						79
	16		375	7029.00 b	2753.12 a	600						80
	16		375	7029.00 b	2753.12 a	600						81
	16		375	7029.00 b	2753.12 a	600						82
	16		375	7029.00 b	2753.12 a	600						83
	16		375	7029.00 b	2753.12 a	600						84
	16		375	7029.00 b	2753.12 a	600						85
	16		375	7029.00 b	2753.12 a	600						86
	16		375	7029.00 b	2753.12 a	600						87
	16		375	7029.00 b	2753.12 a	600						88
	16		375	7029.00 b	2753.12 a	600						89
	16		375	7029.00 b	2753.12 a	600						90
	16		375	7029.00 b	2753.12 a	600						91
	16		375	7029.00 b	2753.12 a	600						92
	16		375	7029.00 b	2753.12 a	600						93
	16		375	7029.00 b	2753.12 a	600						94
	16		375	7029.00 b	2753.12 a	600						95
	16		375	7029.00 b	2753.12 a	600						96
	16		375	7029.00 b	2753.12 a	600						97
	16		375	7029.00 b	2753.12 a	600						98
	16		375	7029.00 b	2753.12 a	600						99
	16		375	7029.00 b	2753.12 a	600						100
	16		375	7029.00 b	2753.12 a	600						101
	16		375	7029.00 b	2753.12 a	600						102
	16		375	7029.00 b	2753.12 a	600						103
	16		375	7029.00 b	2753.12 a	600						104
	16		375	7029.00 b	2753.12 a	600						105
	16		375	7029.00 b	2753.12 a	600						106
	16		375	7029.00 b	2753.12 a	600						107
	16		375	7029.00 b	2753.12 a	600						108
	16		375	7029.00 b	2753.12 a	600						109
	16		375	7029.00 b	2753.12 a	600						110
	16		375	7029.00 b	2753.12 a	600						111
	16		375	7029.00 b	2753.12 a	600						112
	16		375	7029.00 b	2753.12 a	600						113
	16		375	7029.00 b	2753.12 a	600						114
	16		375	7029.00 b	2753.12 a	600						115
	16		375	7029.00 b	2753.12 a	600						116
	16		375	7029.00 b	2753.12 a	600						117
	18		480	7029.00 a	2766.01 b	622	68					118
	16		373	7029.00 a	2753.02 a	598	67					119
	16		373	7029.00 a	2753.02 a	598	67					120
	16	16028	372	7029.00 da	7029.00 a	1014	69					121
	16	16028	372	7029.00 da	7029.00 a	1014	69					122
	16	16028	372	7029.00 da	7029.00 a	1014	69					123
Snta Mnca	16	16013	357	7019.00 b		1033						151
Snta Mnca	16	16013	357	7019.00 c		1033						152
Snta Mnca	16	16013	357	7019.00 d		1033						153
Snta Mnca	16	16018	362	7020.00 b		1041						154
Snta Mnca	16	16018	362	7021.00 b		1040						155
CULVER CITY	17	17074	449	7024.00 b		1018						156
CULVER CITY	17	17074	449	7024.00 b		1018						157
CULVER CITY	17	17075	450	7025.00 b		1020						158
CULVER CITY	17	17075	450	7025.00 b		1020						159
CULVER CITY	17	17072	447	7028.01 b		1017						160
CULVER CITY	17	17075	450	7027.00 b		1019						161
CULVER CITY	17	17075	450	7027.00 b		1019						162
CULVER CITY	17	17072	447	7028.02 b		1015						163
	16		374	b	2751.00 a	602						164
	16		374	c	2751.00 a	602						165
CULVER CITY	17	17077	452	7026.00 b		1021						166
CULVER CITY	17	17077	452	7026.00 c		1021						167
CULVER CITY	17	17077	452	7026.00 d		1021						168
L.A. COUNTY	17	17097	472	7030.02 b	a	1010		85				169

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
L.A. COUNTY	17	17097	472	7030.02 b	b	1010		271				170
CULVER CITY	17	17099	474	7030.01 ab	7030.01 a	1190						171
CULVER CITY	17	17099	474	7030.01 ac	7030.01 a	1190						172
CULVER CITY	17	17071	446	7028.03 b		1016						173
CULVER CITY	17	17071	446	7028.03 c		1016						174
--	16		373	2753.01 a	2753.11 ab	599						175
	16		373		2754.00	601						176
	16		373	2753.02 c	2753.02 b	598	0					177
	16		373	2753.02 d	2753.02 b	598	0					178
L.A.	18	18018	493	6018.00 b		1125	38					179
L.A.	18	18018	493	6017.00 b		1124	42					180
L.A.	18	18021	496	6021.01 b		1200	44					181
L.A.	18	18021	496	6021.02 b		1200	47					182
L.A.	18	18035	510	6204.00 b		1211			9			183
L.A. COUNTY	16	16028	372	7029.00 eb	7029.00 b	1014	70					184
L.A. COUNTY	16	16028	372	7029.00 db	7029.00 a	1014	69					185
L.A. COUNTY	16	16028	372	7029.00 dc	7029.00 a	1014	69					186
	16		370		2738.00 b	618						187
	18		480		2766.02	623	64					188
	18		482	2762.00	2760.00 c1	729	23					189
	18		486		2780.00 c1	731	12					190
	18		481		2760.00 a1	732	13					191
	21		612		2031.00	1						201
	21		612		2033.00	2						202
	24		806		1881.00	3						203
	24		806		1883.00	4						204
	24		814		1813.00	5						205
	24		814		1861.00	6						206
	24		815		1814.00	7						207
	24		817		1816.00	8						208
	24		817		1833.00	9						209
	24		817		1834.00	10						210
	24		818		1815.00	11						211
	24		818		1832.00	12						212
	24		820		1864.01	13						213
	24		820		1864.02	14						214
	24		820		1871.00	15						215
	24		829		1862.00	16						216
	24		829		1863.00	17						217
	24		830		1835.00	18						218
	24		830		1836.00	19						219
	24		830		1838.00	20						220
	24		831		1831.01	21						221
	24		831		1831.02	22						222
	24		832		1851.00	23						223
	24		832		1852.01	24						224
	24		833		1837.00	25						225
	24		835		1852.02	26						226
	24		835		1853.00	27						227
	24		836		1990.00	28						228
	24		836		1994.00	29						229
	24		836		1997.00	30						230
	24		837		1992.01	31						231
	24		837		1992.02	32						232
	24		837		1993.00	33						233
	24		838		2012.00	34						234
	24		838		2013.01	35						235
	24		838		2013.02	36						236
	24		839		2011.00	37						237
	24		839		2015.01	38						238
	24		840		1991.00	39						239
	24		840		1998.00	40						240
	24		840		1999.00	41						241
	24		841		2014.01	42						242
	24		841		2014.02	43						243
	24		842		2015.02	44						244
	24		842		2016.00	45						245

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	24		843		2017.00	46						246
	21		611		2034.00	47						247
	21		611		2035.00	48						248
	21		613		2032.00	49						249
	21		613		2036.00	50						250
	21		613		2037.00	51						251
	21		613		2038.00	52						252
	21		622		2046.00	53						253
	21		622		2047.00	54						254
	21		623		2042.00	55						255
	21		623		2043.00	56						256
	21		623		2044.00	57						257
	21		624		2039.00	58						258
	21		624		2041.00	59						259
	21		634		2051.00	60						260
	21		635		2048.00	61						261
	21		635		2049.00	62						262
	17		445		2311.00	63						263
	17		445		2318.00	64						264
	17		460		2319.00	65						265
	17		460		2328.00	66						266
	21		631		2264.00	67						267
	21		631		2267.00	68						268
	21		632		2270.00	69						269
	21		646		2283.00	70						270
	21		646		2284.00	71						271
	21		647		2281.00	72						272
	21		647		2282.00	73						273
	21		656		2285.00	74						274
	21		656		2293.00	75						275
	21		657		2286.00	76						276
	21		657		2292.00	77						277
	21		658		2287.00	78						278
	21		658		2288.00	79						279
	21		660		2294.00	80						280
	21		660		2392.00	81						281
	21		661		2289.00	82						282
	21		661		2291.00	83						283
	21		663		2396.00	84						284
	21		664		2395.00	85						285
	21		671		2397.00	86						286
	21		671		2398.00	87						287
	21		679		2402.00	88						288
	21		679		2405.00	89						289
	21		680		2400.00	90						290
	21		680		2406.00	91						291
	21		680		2407.00	92						292
	21		682		2421.00	93						293
	21		682		2422.00	94						294
	21		682		2423.00	95						295
	21		685		2411.00	96						296
	21		685		2414.00	97						297
	21		686		2408.00	98						298
	21		686		2409.00	99						299
	21		686		2410.00	100						300
	21		687		2420.00	101						301
	21		687		2426.00	102						302
	21		687		2427.00	103						303
	21		688		2430.00	104						304
	21		688		2431.00	105						305
	23		792		2246.00	106						306
	17		422		2696.00	107						307
	17		422		2697.00 b	108		70				308
	17		422		2697.00 a	108		16				309
	17		422		2702.00 c	109		71				310
	17		422		2702.00 b	109		23				311
	17		422		2702.00 a	109		17				312

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	17		422		2703.00 c	110		127				313
	17		422		2703.00 b	110		126				314
	17		422		2703.00 a	110		72				315
	17		427		2183.00 c	111		226				316
	17		427		2183.00 b	111		129				317
	17		427		2183.00 a	111		128				318
	17		427		2184.00 b	112		130				319
	17		427		2184.00 a	112		73				320
	17		427		2185.00 b	113		131				321
	17		427		2185.00 a	113		74				322
	17		428		2198.00	114		75				323
	17		428		2199.00 b	115		132				324
	17		428		2199.00 a	115		76				325
	17		428	2201.00	2201.00 c	116		136				326
	17		428	2201.00	2201.00 b	116		133				327
	17		428	2201.00	2201.00 a	116		227				328
	17		429		2182.00 b	117		77				329
	17		429		2182.00 a	117		308				330
	17		429		2186.00 b	118		309				331
	17		429		2186.00 a	118		228				332
	17		429		2187.00 c	119		312				333
	17		429		2187.00 d	119		314				334
	17		429		2187.00 a	119		79				335
	17		429		2187.00 b	119		310				336
	17		430		2197.00 b	120		317				337
	17		430		2197.00 a	120		229				338
	17		430		2200.00 c	121		316				339
	17		430		2200.00 d	121		315				340
	17		430		2200.00 a	121		80				341
	17		430		2200.00 b	121		82				342
	17		435		2181.00 c	122		320				343
	17		435		2181.00 b	122		319				344
	17		435		2181.00 a	122		84				345
	17		435		2188.00	123		234				346
	17		438		2195.00	124		88				347
	17		438		2362.01 b	125		237				348
	17		438		2362.01 a	125		321				349
	17		438		2362.02	126		89				350
	17		439		2189.00 b	127		322				351
	17		439		2189.00 a	127		238				352
	17		439		2190.00 b	128		91				353
	17		439		2190.00 a	128		90				354
	17		439		2193.00 b	129		323				355
	17		439		2193.00 a	129		92				356
	17		440		2340.00 b	130		98				357
	17		440		2340.00 a	130		96				358
	17		440		2342.00 b	131		324				359
	17		440		2342.00 a	131		239				360
	17		440		2343.00 b	132		325				361
	17		440		2343.00 a	132		97				362
	17		451	2363.00	2360.00 c	133		326				363
	17		451	2363.00	2360.00 d	133		332				364
	17		451	2363.00	2360.00 a	133		117				365
	17		451	2202.00	2360.00 b	133		250				366
L.A. COUNTY	17	17078	453	7030.01 c	2300.00	133		252				367
	17		455		2345.00 b	134		335				368
	17		455		2345.00 a	134		100				369
	17		455		2346.00 c	135		337				370
	17		455		2346.00 a	135		101				371
	17		455		2346.00 b	135		336				372
	17		455		2347.00 c	136		338				373
	17		455		2347.00 a	136		339				374
	17		455		2347.00 b	136		254				375
	17		461		2348.00 b	137		340				376
	17		461		2348.00 a	137		103				377
	17		461		2349.00 b	138		104				378
	17		461		2349.00 a	138		81				379

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	17		461		2352.01	139		105				380
	17		461		2352.02 b	140		260				381
	17		461		2352.02 a	140		83				382
	17		473		2361.00 b	141		106				383
	17		473		2361.00 a	141		86				384
	17		473		2364.00	142		272				385
	17		475		2351.00	143		274				386
	17		436		2213.01	144						387
	17		436		2213.02	145						388
	17		437		2211.00	146						389
	17		437		2212.00	147						390
	17		441		2221.00	148						391
	17		441		2222.00	149						392
	17		442		2218.00	150						393
	17		442		2219.00	151						394
	17		443		2225.00	152						395
	17		443		2313.00	153						396
	17		443		2314.00	154						397
	17		444		2226.00	155						398
	17		444		2227.00	156						399
	17		444		2312.00	157						400
	17		456		2315.00	158						401
	17		456		2324.00	159						402
	17		457		2316.00	160						403
	17		457		2322.00	161						404
	17		458		2317.00	162						405
	17		458		2321.00	163						406
	17		459		2323.00	164						407
	17		459		2326.00	165						408
	17		462		2325.00	166						409
	17		462		2372.00	167						410
	17		463		2327.00	168						411
	17		463		2371.00	169						412
	17		464		2373.00	170						413
	17		464		2379.00	171						414
	17		465		2374.00	172						415
	17		465		2378.00	173						416
	17		465		2382.00	174						417
	17		466		2375.00	175						418
	17		466		2376.00	176						419
	17		467		2377.00	177						420
	17		467		2383.00	178						421
	17		468		2381.00	179						422
	17		468		2384.00	180						423
	17		469		2380.00	181						424
	17		470		2403.00	182						425
	17		470		2404.00	183						426
	17		471		2412.00	184						427
	17		471		2413.00	185						428
	23		791		2244.00	186						429
	23		791		2247.00	187						430
	17		383		1945.00	188						431
	17		403		2146.00	189						432
	17		403		2147.00	190						433
	17		403		2148.00	191						434
	17		403		2149.00	192						435
	17		404		2144.00	193						436
	17		405		2140.00	194						437
	17		405		2141.00	195						438
	17		406		2145.00	196						439
	17		406		2151.00	197						440
	17		407		1923.00	198						441
	17		408		1924.00	199						442
	17		408		2115.00	200						443
	17		409		1925.00	201						444
	17		409		1926.00	202						445
	17		409		1927.00	203						446

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	17		410		2118.01	204						447
	17		410		2118.02	205						448
	17		410		2119.00	206						449
	17		410		2121.00	207						450
	17		411		2112.00	208						451
	17		411		2113.00	209						452
	17		411		2114.00	210						453
	17		412		2111.00	211						454
	17		421		2167.00	212						455
	17		421		2170.00	213						456
	17		423		2163.00	214						457
	17		423		2164.00	215						458
	17		423		2168.00	216						459
	17		424		2169.00	217						460
	17		424		2171.00	218						461
	17		425		2161.00	219						462
	17		425		2162.00	220						463
	17		425		2172.00	221						464
	17		431		2127.00	222						465
	17		431		2128.00	223						466
	17		431		2129.00	224						467
	17		432		2117.01	225						468
	17		432		2117.02	226						469
	17		432		2126.00	227						470
	17		433		2132.01	228						471
	17		433		2132.02	229						472
	17		433		2133.00	230						473
	17		433		2134.01	231						474
	17		433		2134.02	232						475
	17		434		2122.01	233						476
	17		434		2122.02	234						477
	17		434		2123.01	235						478
	17		434		2123.02	236						479
	17		434		2124.00	237						480
	17		434		2125.00	238						481
	17		436		2131.00	239						482
	17		378		1897.02	240						483
	17		378		1941.00	241						484
	17		379		1894.00	242						485
	17		379		1895.00	243						486
	17		379		1896.00	244						487
	17		379		1897.01	245						488
	17		380		1893.00	246						489
	17		380		1903.01	247						490
	17		380		1904.00	248						491
	17		381		1891.00	249						492
	17		381		1892.00	250						493
	17		382		1942.00	251						494
	17		382		1943.00	252						495
	17		383		1944.00	253						496
	17		386		1898.00	254						497
	17		387		1899.01	255						498
	17		387		1899.02	256						499
	17		387		1901.00	257						500
	17		388		1902.00	258						501
	17		388		1907.00	259						502
	17		389		1919.00	260						503
	17		390		1910.00	261						504
	17		391		1908.00	262						505
	17		391		1918.00	263						506
	17		392		1909.01	264						507
	17		392		1909.02	265						508
	17		392		1917.00	266						509
	17		393		1905.00	267						510
	17		393		1911.00	268						511
	17		394		1912.01	269						512
	17		394		1912.02	270						513

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	17		394		1913.00	271						514
	17		395		1914.00	272						515
	17		395		1915.00	273						516
	17		404		1920.00	274						517
	24		819		1952.00	275						518
	24		819		1953.00	276						519
	24		821		1951.00	277						520
	24		821		1954.00	278						521
	24		822		1873.00	279						522
	24		823		1958.01	280						523
	24		823		1958.02	281						524
	24		823		1959.00	282						525
	24		824		1956.00	283						526
	24		824		1957.00	284						527
	24		825		1955.00	285						528
	24		825		1974.00	286						529
	24		826		1971.00	287						530
	24		826		1973.00	288						531
	24		827		1975.00	289						532
	24		827		1976.00	290						533
	24		834		1872.00	291						534
	24		834		1972.00	292						535
	23		768		2086.00	293						536
	23		768		2087.00	294						537
	23		769		2088.00	295						538
	23		769		2089.01	296						539
	23		769		2089.02	297						540
	23		770		2084.00	298						541
	23		770		2085.00	299						542
	23		771		2094.01	300						543
	23		771		2094.02	301						544
	23		771		2094.03	302						545
	23		771		2095.00	303						546
	23		772		2091.01	304						547
	23		772		2091.02	305						548
	23		774		2083.00	306						549
	23		775		2080.00	307						550
	23		780		2098.00	308						551
	23		780		2243.00	309						552
	23		781		2242.00	310						553
	21		615		2062.00	311						554
	21		617		2063.00	312						555
	23		788		2077.00	313						556
	23		794		2079.00	314						557
	24		827		1977.00	315						558
	24		828		2071.00	316						559
	12		274		1413.01	317						560
	12		274		1413.02	318						561
	12		275		1411.00	319						562
	12		275		1412.00	320						563
	12		276		1416.00	321						564
	12		276		1417.00	322						565
	13		299		1434.01	323						566
	13		299		1434.02	324						567
	13		299		1435.00	325						568
	13		300		1433.00	326						569
	13		300		1436.02	327						570
	13		302		1432.00	328						571
	13		302		1436.01	329						572
	13		303		1431.00	330						573
	13		306		1439.01	331						574
	13		306		1439.02	332						575
	13		307		1438.00	333						576
	13		308		1437.00	334						577
	12		269		1234.00	335						578
	13		282		1233.01	336						579
	13		282		1233.02	337						580

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	13		284		1232.01	338						581
	13		284		1232.02	339						582
	13		285		1237.00	340						583
	13		285		1238.00	341						584
	13		285		1244.00	342						585
	13		286		1239.00	343						586
	13		286		1241.01	344						587
	13		286		1242.01	345						588
	13		287		1231.02	346						589
	13		291		1240.00	347						590
	13		291		1249.01	348						591
	13		292		1251.00	349						592
	13		292		1252.00	350						593
	13		293		1241.02	351						594
	13		293		1242.02	352						595
	13		293		1243.00	353						596
	13		293		1253.00	354						597
	13		301		1254.00	355						598
	13		301		1255.00	356						599
	13		301		1256.00	357						600
	14		326		1044.01	358						601
	14		326		1044.02	359						602
	14		326		1095.00	360						603
	14		327		1042.01	361						604
	14		327		1042.02	362						605
	14		327		1043.00	363						606
	14		328		1191.00	364						607
	14		328		1192.00	365						608
	14		329		1045.00	366						609
	14		329		1046.00	367						610
	14		329		1048.00	368						611
	14		330		1047.01	369						612
	14		330		1047.02	370						613
	14		331		1041.02	371						614
	14		339		1194.00	372						615
	14		339		1198.00	373						616
	12		256		1274.00	374						617
	12		256		1276.01	375						618
	12		256		1276.02	376						619
	12		263		1272.00	377						620
	12		263		1273.00	378						621
	12		264		1277.00	379						622
	12		264		1278.01	380						623
	12		264		1278.02	381						624
	12		265		1271.01	382						625
	12		265		1271.02	383						626
	12		265		1279.00	384						627
	12		267		1283.01	385						628
	12		267		1284.00	386						629
	12		268		1281.00	387						630
	12		268		1282.00	388						631
	12		269		1235.00	389						632
	12		270		1285.00	390						633
	12		270		1286.00	391						634
	12		270		1287.01	392						635
	12		271		1236.01	393						636
	12		271		1236.02	394						637
	12		271		1245.00	395						638
	12		272		1288.00	396						639
	12		272		1289.00	397						640
	12		273		1246.00	398						641
	12		273		1287.02	399						642
	13		291		1247.00	400						643
	12		253		1172.00	401						644
	12		253		1173.01	402						645
	12		254		1173.03	403						646
	12		254		1174.01	404						647

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	12		254		1174.04	405						648
	12		260		1171.00	406						649
	12		260		1193.00	407						650
	12		261		1175.00	408						651
	12		261		1200.00	409						652
	12		261		1201.02	410						653
	12		262		1199.00	411						654
	12		262		1201.01	412						655
	12		262		1203.00	413						656
	12		266		1204.00	414						657
	13		277		1197.00	415						658
	14		312		1091.00	416						659
	14		325		1094.00	417						660
	14		325		1096.01	418						661
	14		325		1096.02	419						662
	13		278		1212.00	420						663
	13		279		1210.00	421						664
	13		279		1216.00	422						665
	13		280		1218.00	423						666
	13		280		1219.00	424						667
	13		281		1221.00	425						668
	13		281		1222.00	426						669
	13		283		1224.00	427						670
	13		283		1230.00	428						671
	14		332		1211.00	429						672
	14		334		1021.01	430						673
	14		340		1021.02	431						674
	14		312		1066.01	432						675
	14		313		1064.01	433						676
	14		313		1064.02	434						677
	14		313		1065.00	435						678
	14		314		1060.00	436						679
	14		315		1070.00	437						680
	14		316		1061.02	438						681
	14		316		1061.11	439						682
	14		316		1061.12	440						683
	14		310		1066.03	441						684
	14		310		1066.41	442						685
	14		310		1066.42	443						686
	14		310		1066.43	444						687
	14		311		1066.02	445						688
	14		320		1113.01	446						689
	14		321		1112.01	447						690
	14		321		1112.02	448						691
	14		322		1111.00	449						692
	14		322		1114.00	450						693
	14		323		1092.00	451						694
	14		323		1093.00	452						695
	14		324		1097.00	453						696
	14		324		1098.00	454						697
	12		221		1344.01	455						698
	12		221		1344.21	456						699
	12		221		1344.22	457						700
	12		222		1352.02	458						701
	12		222		1352.03	459						702
	12		222		1373.02	460						703
	12		223		1343.01	461						704
	12		223		1343.02	462						705
	12		223		1343.03	463						706
	12		224		1340.00	464						707
	12		224		1342.01	465						708
	12		224		1345.00	466						709
	12		225		1351.02	467						710
	12		225		1351.11	468						711
	12		225		1351.12	469						712
	12		225		1352.01	470						713
	12		226		1370.00	471						714

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	12		226		1372.01	472						715
	12		226		1373.01	473						716
	12		227		1374.01	474						717
	12		227		1374.02	475						718
	12		228		1349.02	476						719
	12		228		1371.02	477						720
	12		229		1375.02	478						721
	12		229		1380.00	479						722
	12		230		1349.01	480						723
	12		230		1371.01	481						724
	12		231		1375.01	482						725
	12		231		1375.04	483						726
	12		236		1347.00	484						727
	12		236		1348.00	485						728
	12		237		1341.01	486						729
	12		237		1341.02	487						730
	12		217		1082.00	488						731
	12		218		1132.11	489						732
	12		218		1132.12	490						733
	12		218		1132.13	491						734
	12		219		1131.00	492						735
	12		220		1132.02	493						736
	12		220		1132.31	494						737
	12		220		1132.32	495						738
	12		220		1132.33	496						739
	12		220		1132.34	497						740
	12		232		1133.03	498						741
	12		232		1133.21	499						742
	12		232		1133.22	500						743
	12		233		1133.01	501						744
	12		234		1134.01	502						745
	12		234		1134.21	503						746
	12		234		1134.22	504						747
	14		309		1081.01	505						748
	14		309		1081.02	506						749
	14		309		1081.03	507						750
	14		309		1081.04	508						751
	12		233		1153.01	509						752
	12		235		1153.02	510						753
	12		235		1154.02	511						754
	12		243		1152.01	512						755
	12		243		1152.02	513						756
	12		244		1151.01	514						757
	12		244		1151.02	515						758
	12		244		1173.02	516						759
	12		245		1154.01	517						760
	14		319		1112.03	518						761
	14		319		1112.04	519						762
	14		320		1113.02	520						763
	12		238		1316.00	521						764
	12		238		1317.00	522						765
	12		239		1325.00	523						766
	12		240		1331.01	524						767
	12		246		1313.00	525						768
	12		246		1314.00	526						769
	12		246		1318.00	527						770
	12		247		1311.00	528						771
	12		247		1312.00	529						772
	12		247		1319.00	530						773
	12		248		1323.00	531						774
	12		248		1327.00	532						775
	12		249		1320.00	533						776
	12		249		1321.00	534						777
	12		250		1329.00	535						778
	12		255		1275.00	536						779
	12		240		1393.01	537						780
	12		240		1393.02	538						781

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	12		240		1393.03	539						782
	12		241		1394.00	540						783
	12		242		1398.01	541						784
	12		242		1398.02	542						785
	12		250		1392.00	543						786
	12		251		1395.01	544						787
	12		251		1395.02	545						788
	12		251		1396.00	546						789
	12		252		1397.01	547						790
	12		252		1397.02	548						791
	12		252		1397.03	549						792
	12		258		1414.00	550						793
	12		259		1415.00	551						794
	14		331		1041.01	552						795
	14		335		1034.00	553						796
	14		336		1031.01	554						797
	14		336		1031.02	555						798
	14		337		1011.00	556						799
	14		338		1012.00	557						800
	14		338		1013.00	558						801
	14		338		1014.00	559						802
	17		396		2654.00	560						803
	17		397		2653.01	561						804
	17		397		2653.02	562						805
	17		398		2651.00	563						806
	17		398		2652.00	564						807
	17		413		2655.00	565						808
	17		413		2656.00	566						809
	17		413		2657.00	567						810
	16		353		2674.01	568						811
	16		353		2674.02	569						812
	16		356		2673.00	570						813
	16		356		2675.01	571				42		814
	16		356		2675.01	571				43		815
	16		356		2675.02	572				41		816
	16		356		2676.00	573				44		817
	16		356		2676.00	573				45		818
	16		356		2676.00	573				46		819
	16		356		2676.00	573				47		820
	16		356		2677.00	574				48		821
	16		356		2677.00	574				49		822
	16		356		2677.00	574				50		823
	16		356		2677.00	574				51		824
	16		361		2711.00	575				58		825
	16		361		2711.00	575				59		826
	16		361		2711.00	575				73		827
	17		414		2672.00	576				52		828
	17		414		2672.00	576				53		829
	17		414		2678.00	577				54		830
	17		414		2678.00	577				55		831
	17		414		2678.00	577				56		832
	17		414		2678.00	577				57		833
	17		415		2671.00	578				63		834
	17		415		2671.00	578				64		835
	17		415		2671.00	578				94		836
	17		415		2671.00	578				95		837
	17		416		2679.00	579				65		838
	17		416		2679.00	579				66		839
	17		416		2679.00	579				96		840
	17		416		2679.00	579				97		841
	17		417		2693.00	580				67		842
	17		417		2693.00	580				68		843
	17		417		2693.00	580				69		844
	17		419		2691.00	581				88		845
	17		419		2695.00	582				89		846
	17		448		2698.00	583						847
	16		360		2712.00	584				62		848

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	*LAX TAZ*
	16		360		2712.00	584				93		849
	16		360		2713.00	585				60		850
	16		360		2713.00	585				61		851
	16		360		2713.00	585				90		852
	16		360		2713.00	585				91		853
	16		360		2713.00	585				92		854
	16		366		2714.00	586						855
	16		366		2721.00	587						856
	16		366		2722.00	588						857
	16		367		2715.00	589				70		858
	16		367		2716.00	590				71		859
	16		367		2719.00	591				72		860
	16		368		2717.01	592				78		861
	16		368		2717.01	592				79		862
	16		368		2717.02	593				74		863
	16		368		2717.02	593				75		864
	16		368		2718.01	594				76		865
	16		368		2718.01	594				77		866
	16		368		2718.02	595						867
	16		371		2723.01	596						868
	16		371		2723.02	597						869
	16		373	7029.00 a	2753.02 a	598	67					870
	16		373	2753.02 b	2753.02 b	598	0					871
	16		373	2753.01 b	2753.11	599						872
	16		373	2753.01 a	2753.11 aa	599						873
	16		375	7029.00 b	2753.12 a	600						874
	16		375	2753.01 c	2753.12 b	600						875
	16		373		2754.00	601						876
	16		374	a	2751.00 a	602						877
	16		374		2752.00	603						878
	16		374		2755.00	604						879
	16		375	7029.00 a	2756.00	605						880
	16		374	2756.00 b	2756.00 c	605						881
	16		374	2756.00 a	2756.00 b	605						882
	17		448		2699.01	606				82		883
	17		448		2699.02	607				80		884
	17		448		2699.02	607				81		885
	17		448		2701.00	608				84		886
	16		364		2732.00	609						887
	16		364		2733.00	610						888
	16		364		2734.00	611						889
	16		365		2731.00	612						890
	16		365		2736.00	613						891
	16		365		2737.00	614						892
	16		369		2735.00	615	73					893
	16		369		2739.00	616	72					894
	16		369		2742.00	617	71					895
	16		370		2738.00 a	618						896
	16		370		2741.00	619						897
	18		477		2761.00	620	26					898
	18		477		2771.00 b	621	25					899
	18		477		2771.00 a	621	24					900
63	18		480	7029.00 b	2781.00 a	622	68					901
	18		480	7029.00 a	2766.01 b	622	68					902
	18		480	2766.01	2766.01 a	622	65					903
	18		480		2766.02	623	64					904
	18		481		2764.00 b	624	18					905
	18		481		2764.00 a	624	17					906
	18		481		2765.00 b	625	16					907
	18		481		2765.00 a	625	15					908
	18		483	2781.00	2781.00 a	626	63					909
	18		483	2781.00	2780.00 b	626	63					910
	18		486		2772.00 a	627	10					911
	18		486		2772.00 b	627	11					912
	18		490		2774.00	628	34					913
	16		345		2626.01	629						914
	16		345		2626.02	630						915

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	16		345		2627.01	631						916
	16		346		2624.00	632						917
	16		346		2625.00	633						918
	16		347		2627.02	634						919
	16		347		2628.00	635						920
	16		349		2623.01	636						921
	16		349		2623.02	637						922
	16		349		2623.03	638						923
	16		352		2640.00	639						924
	16		352		2641.01	640						925
	16		353		2643.01	641						926
	16		353		2643.02	642						927
	16		350		2621.00	643						928
	16		350		2622.00	644						929
	17		376		2611.02	645						930
	17		376		2612.00	646						931
	17		377		2611.01	647						932
	19		547		2933.01	648						933
	19		547		2933.02	649						934
	19		547		2933.03	650						935
	19		547		2944.00	651						936
	19		549		2942.00	652						937
	19		549		2943.00	653						938
	19		549		2945.00	654						939
	19		549		2948.00	655						940
	19		550		2941.00	656						941
	19		550		2946.00	657						942
	19		557		2951.00	658						943
	19		558		2949.00	659						944
	19		559		2947.00	660						945
	19		562		2963.00	661						946
	19		562		2964.00	662						947
	19		563		2962.00	663						948
	19		563		2965.00	664						949
	19		563		2966.00	665						950
	19		564		2961.00	666						951
	19		565		2970.00	667						952
	19		565		2973.00	668						953
	19		565		2974.00	669						954
	19		566		2969.00	670						955
	19		566		2971.00	671						956
	19		566		2972.00	672						957
	19		567		2975.00	673						958
	19		567		2976.00	674						959
	18		508		2911.00	675						960
	18		518		2912.00	676						961
	18		524		2913.00	677						962
	19		531		2920.00	678						963
	19		536		2932.01	679						964
	19		536		2932.02	680						965
	24		816		1810.00	681						966
	21		621		2045.00	682						967
	21		629		2260.00	683						968
	21		664		2393.00	684						969
	17		441		2214.00	685						970
	17		441		2215.00	686						971
	17		437		2216.00	687						972
	17		437		2217.00	688						973
	17		441		2220.00	689						974
	17		407		2110.00	690						975
	24		805		1882.00	691						976
	17		409		1916.00	692						977
	23		772		2092.00	693						978
	23		786		2093.00	694						979
	23		783		2100.00	695						980
	23		790		2073.00	696						981
	23		790		2074.00	697						982

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	*LAX TAZ*
	23		778		2075.00	698						983
	23		792		2240.00	699						984
	21		620		2060.00	700						985
	21		708		2060.00	700						986
	14		339		1190.00	701						987
	12		266		1220.00	702						988
	12		246		1310.00	703						989
	12		239		1330.00	704						990
	12		257		1390.00	705						991
	14		333		1032.00	706						992
	14		333		1033.00	707						993
	17		419		2690.00	708				85		994
	17		419		2690.00	708				86		995
	17		419		2690.00	708				87		996
	18		482	2762.00	2760.00 c2	729	23					997
	18		482	2768.00	2770.00	710	20					998
	18		490		2780.00 b	711	79					999
	18		490		2780.00 c	711	40					1000
	18		490		2780.00 a	711	3					1001
	12		248		1310.00	712						1002
	12		240		1330.00	713						1003
	12		250		1390.00	714						1004
	14		335		1032.00	715						1005
	14		335		1033.00	716						1006
	13		277		1190.00	717						1007
	13		277		1220.00	718						1008
	24		815		1810.00	719						1009
	24		819		1882.00	720						1010
	17		395		1916.00	721						1011
	17		426		2110.00	722						1012
	17		436		2214.00	723						1013
	17		436		2215.00	724						1014
	17		437		2216.00	725						1015
	17		437		2217.00	726						1016
	17		443		2220.00	727						1017
	17		417		2690.00	728				83		1018
	18		476	2769.00 a	2760.00 a	709	21					1019
	18		476	2769.00 b	2760.00 b	709	22					1020
	18		476	2763.00	2770.00	730	19					1021
	18		486		2780.00 b	731	9					1022
	18		486		2780.00 a	731	4					1023
	18		486		2780.00 d	731	74					1024
	18		486		2780.00 c2	731	12					1025
	18		481		2780.00 a2	732	13					1026
	18		481		2780.00 b	732	14					1027
	18		485		2780.00 f	733	0					1028
	18		485		2780.00 c	733	6					1029
	18		485		2780.00 d	733	7					1030
	18		485		2780.00 b	733	5					1031
	18		485		2780.00 e	733	78					1032
	18		485		2780.00 a	733	1					1033
	18		484		2780.00 k	734	0					1034
	18		484		2780.00 h	734	8					1035
	18		484		2780.00 g	734	2					1036
	18		484		2780.00 i	734	76					1037
	18		484		2780.00 j	734	77					1038
	21		660		2392.00	735						1039
	21		663		2393.00	736						1040
	21		610		2060.00	737						1041
	21		609		2060.00	738						1042
	23		785		2100.00	739						1043
	21		618		2260.00	740						1044
	21		619		2260.00	741						1045
	21		627		2260.00	742						1046
	21		628		2260.00	743						1047
	21		630		2260.00	744						1048
	21		633		2260.00	745						1049

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
	23		793		2240.00	746						1050
	23		779		2075.00	747						1051
	23		789		2073.00	748						1052
	23		776		2074.00	749						1053
	23		777		2071.00	750						1054
	21		634		2045.00	751						1055
	23		784		2100.00	752						1056
	23		782		2100.00	753						1057
	21		616		2260.00	754						1058
	23		787		2077.00	755						1059
	23		773		2077.00	756						1060
	16		373	2753.01 a	2753.11	599						1061
Bev. Hills	17	17024	399	7007.00		1000						1100 X
Bev. Hills	17	17025	400	7006.00		1001						1101
Bev. Hills	17	17027	402	7008.00		1002						1102
Bev. Hills	17	17043	418	7010.00		1003						1103
Bev. Hills	17	17043	418	7009.02		1004						1104
Bev. Hills	17	17045	420	7009.01		1005						1105
L.A. COUNTY	16	16007	351	7011.00		1006						1106
L.A. COUNTY	17	17078	453	7030.01 b	7030.01 b	1007		252				1107
L.A. COUNTY	17	17079	454	7032.00		1008		253				1108
L.A. COUNTY	17	17079	454	7031.00	b	1009		333				1109
L.A. COUNTY	17	17079	454	7031.00	a	1009		99				1110
L.A. COUNTY	17	17097	472	7030.02 a	a	1010		85				1111
L.A. COUNTY	17	17097	472	7030.02 a	b	1010		271				1112
L.A. COUNTY	19	19034	562	6099.00		1011						1113
L.A. COUNTY	12	12001	216	9203.03		1012						1114
L.A. COUNTY	13	13028	304	3200.00		1013						1115
L.A. COUNTY	16	16028	372	7029.00 da	7029.00 a	1014	69					1116
L.A. COUNTY	16	16028	372	7029.00 ea	7029.00 b	1014	70					1117
CULVER CITY	17	17072	447	7028.02 a		1015						1118
CULVER CITY	17	17071	446	7028.03 a		1016						1119
CULVER CITY	17	17072	447	7028.01 a		1017						1120
CULVER CITY	17	17074	449	7024.00 a		1018						1121
CULVER CITY	17	17075	450	7027.00 a		1019						1122
CULVER CITY	17	17075	450	7025.00 a		1020						1123
CULVER CITY	17	17077	452	7026.00 a		1021						1124
San Fern.	14	14009	317	3201.00		1022						1125
San Fern.	14	14009	317	3202.00		1023						1126
San Fern.	14	14010	318	3203.00		1024						1127
Snta Mnca	16	16004	348	7013.02		1025						1128
Snta Mnca	16	16004	348	7014.00		1026						1129
Snta Mnca	16	16004	348	7013.01		1027						1130
Snta Mnca	16	16010	354	7012.02		1028						1131
Snta Mnca	16	16010	354	7012.01		1029						1132
Snta Mnca	16	16011	355	7016.02		1030					11	1133
Snta Mnca	16	16011	355	7016.02		1030					12	1134
Snta Mnca	16	16011	355	7016.01		1031					9	1135
Snta Mnca	16	16011	355	7016.01		1031					10	1136
Snta Mnca	16	16011	355	7017.01		1032					13	1137
Snta Mnca	16	16011	355	7017.01		1032					14	1138
Snta Mnca	16	16013	357	7019.00 a		1033						1139
Snta Mnca	16	16014	358	7015.01		1034					1	1140
Snta Mnca	16	16014	358	7015.01		1034					2	1141
Snta Mnca	16	16014	358	7015.02		1035					3	1142
Snta Mnca	16	16014	358	7015.02		1035					4	1143
Snta Mnca	16	16014	358	7018.02		1036					7	1144
Snta Mnca	16	16014	358	7018.02		1036					8	1145
Snta Mnca	16	16014	358	7018.02		1036					17	1146
Snta Mnca	16	16014	358	7017.02		1037					5	1147
Snta Mnca	16	16014	358	7017.02		1037					6	1148
Snta Mnca	16	16015	359	7023.00		1038					19	1149
Snta Mnca	16	16015	359	7023.00		1038					20	1150
Snta Mnca	16	16015	359	7018.01		1039					15	1151
Snta Mnca	16	16015	359	7018.01		1039					16	1152
Snta Mnca	16	16015	359	7018.01		1039					18	1153
Snta Mnca	16	16018	362	7021.00 a		1040						1154

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT		1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
Snta Mnca	16	16018	362	7020.00	a		1041						1155
Snta Mnca	16	16019	363	7022.02			1042						1156
Snta Mnca	16	16019	363	7022.01			1043						1157
West Hwd	17	17009	384	7003.00			1044						1158
West Hwd	17	17009	384	7002.00			1045						1159
West Hwd	17	17010	385	7001.00			1046						1160
West Hwd	17	17026	401	7005.00			1047						1161
West Hwd	17	17026	401	7004.00			1048						1162
L.A.	20	20025	594	5729.00			1049						1163
L.A.	20	20025	594	5755.00			1050						1164
L.A.	20	20025	594	5728.00			1051						1165
L.A.	20	20034	603	5757.00			1052						1166
L.A.	20	20034	603	5756.00			1053						1167
L.A.	21	21006	614	5308.00			1054						1168
L.A.	21	21006	614	5307.00			1055						1169
L.A.	21	21006	614	5306.00			1056						1170
L.A.	21	21017	625	5309.00			1057						1171
L.A.	21	21017	625	5310.00			1058						1172
L.A.	21	21017	625	5311.00			1059						1173
L.A.	21	21028	636	5313.00			1060						1174
L.A.	21	21028	636	5312.00			1061						1175
L.A.	21	21029	637	5323.02			1062						1176
L.A.	21	21030	638	5314.00			1063						1177
L.A.	21	21030	638	5315.00			1064						1178
L.A.	21	21042	650	5324.00	C		1065						1179
L.A.	21	21040	648	5324.00	A		1065						1180
L.A.	21	21041	649	5324.00	B		1065						1181
L.A.	21	21043	651	5324.00	D		1065						1182
L.A.	21	21051	659	5333.00			1066						1183
L.A.	21	21051	659	5337.00			1067						1184
L.A.	21	21051	659	5334.00			1068						1185
L.A.	21	21054	662	5326.02			1069						1186
L.A.	21	21054	662	5325.00			1070						1187
L.A.	21	21054	662	5326.01			1071						1188
L.A.	21	21057	665	5328.00			1072						1189
L.A.	21	21057	665	5327.00			1073						1190
L.A.	21	21057	665	5329.00			1074						1191
L.A.	21	21057	665	5330.00			1075						1192
L.A.	21	21058	666	5331.02			1076						1193
L.A.	21	21058	666	5332.00			1077						1194
L.A.	21	21058	666	5331.01			1078						1195
L.A.	21	21059	667	5336.00			1079						1196
L.A.	21	21060	668	5335.00			1080						1197
L.A.	21	21061	669	5338.01			1081						1198
L.A.	21	21061	669	5338.02			1082						1199
L.A.	21	21064	672	5351.01			1083						1200
L.A.	21	21064	672	5352.00			1084						1201
L.A.	21	21064	672	5351.02			1085						1202
L.A.	21	21064	672	5350.00			1086						1203
L.A.	21	21065	673	5348.00			1087						1204
L.A.	21	21065	673	5349.00			1088						1205
L.A.	21	21065	673	5353.00			1089						1206
L.A.	21	21066	674	5356.01			1090						1207
L.A.	21	21066	674	5355.00			1091						1208
L.A.	21	21066	674	5356.02			1092						1209
L.A.	21	21067	675	5347.00			1093						1210
L.A.	21	21067	675	5345.00			1094						1211
L.A.	21	21068	676	5343.00			1095						1212
L.A.	21	21068	676	5344.02			1096						1213
L.A.	21	21068	676	5344.01			1097						1214
L.A.	21	21069	677	5357.00			1098						1215
L.A.	21	21069	677	5360.00			1099						1216
L.A.	21	21073	681	5354.00			1100						1217
L.A.	21	21075	683	5358.02			1101						1218
L.A.	21	21075	683	5359.00			1102						1219
L.A.	21	21075	683	5358.01			1103						1220
L.A.	21	21076	684	5361.00			1104						1221

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
L.A.	21	21081	689	5403.00		1105						1222
L.A.	21	21081	689	5404.00		1106						1223
L.A.	21	21081	689	5402.00		1107						1224
L.A.	18	18003	478	6009.02		1108						1225
L.A.	18	18003	478	6009.01	6009.12	1109						1226
L.A.	18	18003	478	6009.01	6009.11	1109						1227
L.A.	18	18004	479	6013.01		1110	27					1228
L.A.	18	18004	479	6013.03		1111	28					1229
L.A.	18	18004	479	6013.02		1112	29					1230
L.A.	18	18012	487	6014.01 x		1113	32					1231
L.A.	18	18012	487	6014.01 y		1113	33					1232
L.A.	18	18012	487	6014.02		1114	35					1233
L.A.	18	18013	488	6012.01	6012.12 a	1115	31					1234
L.A.	18	18013	488	6010.00	6010.02 a	1116	30					1235
L.A.	18	18014	489	6008.02		1117						1236
L.A.	18	18014	489	6008.01		1118						1237
L.A.	18	18014	489	6007.01		1119						1238
L.A.	18	18016	491	6016.00		1120	41					1239
L.A.	18	18016	491	6015.00		1121	39					1240
L.A.	18	18017	492	6012.02		1122	36					1241
L.A.	18	18017	492	6011.00		1123	37					1242
L.A.	18	18018	493	6017.00 a		1124	42					1243
L.A.	18	18018	493	6018.00 a		1125	38					1244
L.A.	18	18019	494	6019.00		1126						1245
L.A.	18	18019	494	6006.00	6006.02	1127						1246
L.A.	18	18019	494	6006.00	6006.01	1127						1247
L.A.	18	18019	494	6007.02		1128						1248
L.A.	18	18020	495	6001.00		1129						1249
L.A.	18	18020	495	6002.01		1130						1250
L.A.	18	18022	497	6005.01		1131						1251
L.A.	18	18022	497	6005.02		1132						1252
L.A.	18	18022	497	6020.01		1133						1253
L.A.	18	18024	499	6002.02		1134						1254
L.A.	18	18024	499	6003.01		1135						1255
L.A.	18	18024	499	6003.02		1136						1256
L.A.	18	18024	499	6004.00		1137						1257
L.A.	13	13012	288	3105.00		1138						1258
L.A.	13	13013	289	3103.00		1139						1259
L.A.	13	13013	289	3106.00		1140						1260
L.A.	13	13013	289	3104.00		1141						1261
L.A.	13	13014	290	3101.00		1142						1262
L.A.	13	13018	294	3114.00		1143						1263
L.A.	13	13018	294	3113.00		1144						1264
L.A.	13	13018	294	3115.00		1145						1265
L.A.	13	13018	294	3112.00		1146						1266
L.A.	13	13019	295	3109.00		1147						1267
L.A.	13	13019	295	3108.00		1148						1268
L.A.	13	13020	296	3110.00		1149						1269
L.A.	13	13020	296	3111.00		1150						1270
L.A.	13	13021	297	3107.00		1151						1271
L.A.	13	13021	297	3102.00		1152						1272
L.A.	13	13022	298	3118.00		1153						1273
L.A.	13	13022	298	3117.00		1154						1274
L.A.	13	13029	305	3116.00		1155						1275
L.A.	24	24001	795	3003.00		1156						1276
L.A.	24	24001	795	3004.00		1157						1277
L.A.	24	24002	796	3001.00		1158						1278
L.A.	24	24002	796	3002.00		1159						1279
L.A.	24	24003	797	3007.01		1160						1280
L.A.	24	24003	797	3006.00		1161						1281
L.A.	24	24004	798	3007.02		1162						1282
L.A.	24	24005	799	3005.00		1163						1283
L.A.	24	24006	800	3008.00		1164						1284
L.A.	24	24007	801	3015.00		1165						1285
L.A.	24	24007	801	3014.00		1166						1286
L.A.	24	24008	802	3012.01		1167						1287
L.A.	24	24008	802	3012.02		1168						1288

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
L.A.	24	24008	802	3013.00		1169						1289
L.A.	24	24009	803	3016.00		1170						1290
L.A.	24	24010	804	3018.00		1171						1291
L.A.	24	24010	804	3017.00		1172						1292
L.A.	24	24013	807	3024.00		1173						1293
L.A.	24	24013	807	3023.00		1174						1294
L.A.	24	24014	808	3011.00		1175						1295
L.A.	24	24015	809	3010.00		1176						1296
L.A.	24	24016	810	3009.00		1177						1297
L.A.	24	24017	811	3020.00		1178						1298
L.A.	24	24017	811	3019.00		1179						1299
L.A.	24	24018	812	3021.01		1180						1300
L.A.	24	24018	812	3025.01		1181						1301
L.A.	24	24018	812	3022.00		1182						1302
L.A.	24	24019	813	3021.02		1183						1303
L.A.	24	24019	813	3025.02		1184						1304
L.A.	25	25006	849	4607.00		1185						1305
L.A.	25	25010	853	4608.00		1186						1306
L.A.	25	25018	861	4638.00		1187						1307
CULVER CITY	17	17099	474	7030.01 aa	7030.01 a	1190						1308
L.A.	18	18021	496	6021.02 a		1200	47					1309
L.A.	18	18021	496	6021.01 a		1200	44					1310
L.A.	18	18021	496	6020.02		1200	43					1311
L.A.	18	18023	498	6027.00		1201			30			1312
L.A.	18	18025	500	6029.00		1202			31			1313
L.A.	18	18025	500	6028.00		1202			32			1314
L.A.	18	18026	501	6200.00 A	c	1203	59					1315
L.A.	18	18026	501	6200.00 A	e	1203	52					1316
L.A.	18	18026	501	6200.00 A	d	1203	60					1317
L.A.	18	18026	501	6200.00 A	b	1203	58					1318
L.A.	18	18026	501	6200.00 A	a	1203	57					1319
L.A.	18	18027	502	6200.00 B	c	1204	54					1320
L.A.	18	18027	502	6200.00 B	d	1204	55					1321
L.A.	18	18027	502	6200.00 B	e	1204	56					1322
L.A.	18	18027	502	6200.00 B	b	1204	53					1323
L.A.	18	18027	502	6200.00 B	a	1204	51					1324
L.A.	18	18028	503	6023.01		1205	50					1325
L.A.	18	18028	503	6022.00	a	1205	45					1326
L.A.	18	18028	503	6022.00	b	1205	46					1327
L.A.	18	18029	504	6023.02		1206	75					1328
L.A.	18	18030	505	6024.02		1207	49					1329
L.A.	18	18030	505	6024.01		1207	48					1330
L.A.	18	18031	506	6025.03		1208			3			1331
L.A.	18	18031	506	6025.02		1208			2			1332
L.A.	18	18031	506	6025.01		1208			1			1333
L.A.	18	18032	507	6026.00		1209			4			1334
L.A.	18	18034	509	6203.03		1210			8			1335
L.A.	18	18034	509	6203.02		1210			7			1336
L.A.	18	18034	509	6203.01		1210			6			1337
L.A.	18	18034	509	6202.00		1210			5			1338
L.A.	18	18035	510	6208.00		1211			10			1339
L.A.	18	18035	510	6204.00 a		1211			9			1340
L.A.	18	18036	511	6205.02	a	1212			12			1341
L.A.	18	18036	511	6205.02	b	1212			13			1342
L.A.	18	18036	511	6205.01		1212			11			1343
L.A.	18	18037	512	6039.00		1213			15			1344
L.A.	18	18037	512	6038.00		1213			14			1345
L.A.	18	18038	513	6037.02		1214			18			1346
L.A.	18	18038	513	6037.01		1214			17			1347
L.A.	18	18038	513	6036.00		1214			16			1348
L.A.	18	18039	514	6035.00		1215			22			1349
L.A.	18	18039	514	6034.00		1215			21			1350
L.A.	18	18039	514	6030.02		1215			20			1351
L.A.	18	18039	514	6030.01		1215			19			1352
L.A.	18	18040	515	6041.00		1216			24			1353
L.A.	18	18040	515	6040.00		1216			23			1354
L.A.	18	18041	516	6500.02		1217			26			1355

	SCAG	SCAG	SCAG	1980	1990	CWF	Grnd	West	Split	Westwoo	Santa	LAX
County	RSA	"AZ"	TAZ	CT	CT	PAZ	Access	Adams	CTs		Monica	TAZ
L.A.	18	18041	516	6500.01		1217			25			1356
L.A.	18	18042	517	6033.00		1218			29			1357
L.A.	18	18042	517	6032.00		1218			28			1358
L.A.	18	18042	517	6031.00		1218			27			1359
L.A.	18	18053	528	6201.00	b	1227	62					1360
L.A.	18	18053	528	6201.00	a	1227	61					1361
L.A.	18	18013	488	6012.01	6012.11 b	1115	31					1362
L.A.	18	18013	488	6010.00	6010.01 b	1116	30					1363
L.A.	18	18044	519	6210.02		1219						1400 X
L.A.	18	18044	519	6210.01		1219						1400 X
L.A.	18	18044	519	6209.02		1219						1400 X
L.A.	18	18044	519	6209.01		1219						1400 X
L.A.	18	18045	520	6207.02		1220						1401
L.A.	18	18045	520	6207.01		1220						1401 X
L.A.	18	18046	521	6206.02		1221						1402
L.A.	18	18046	521	6206.01		1221						1402 X
L.A.	18	18047	522	6503.00		1222						1403
L.A.	18	18048	523	6502.00		1223						1404
L.A.	18	18048	523	6501.02		1223						1404 X
L.A.	18	18048	523	6501.01		1223						1404 X
L.A.	18	18050	525	6211.00		1224						1405
L.A.	18	18051	526	6212.00		1225						1406
L.A.	18	18052	527	6214.00		1226						1407
L.A.	18	18052	527	6213.02		1226						1407 X
L.A.	18	18052	527	6213.01		1226						1407 X
L.A.	18	18053	528	6201.00	b	1227	62					1408
L.A.	18	18053	528	6201.00	a	1227	61					1408 X
L.A.	18	18053	528	6201.00	b	1227	62					1408 X
L.A.	18	18053	528	6201.00	a	1227	61					1408 X
L.A.	19	19001	529	6506.03		1228						1409
L.A.	19	19001	529	6506.02		1228						1409 X
L.A.	19	19001	529	6506.01		1228						1409 X
L.A.	19	19001	529	6505.02		1228						1409 X
L.A.	19	19001	529	6505.01		1228						1409 X
L.A.	19	19002	530	6509.01		1229						1410
L.A.	19	19002	530	6504.00		1229						1410 X
L.A.	19	19006	534	6512.22		1230						1411
L.A.	19	19006	534	6512.21		1230						1411 X
L.A.	19	19006	534	6512.01		1230						1411 X
L.A.	19	19006	534	6507.02		1230						1411 X
L.A.	19	19006	534	6507.01		1230						1411 X
L.A.	19	19007	535	6509.02		1231						1412
L.A.	19	19007	535	6508.00		1231						1412 X
L.A.	19	19012	540	6514.00		1232						1413
L.A.	19	19012	540	6511.02		1232						1413 X
L.A.	19	19012	540	6511.01		1232						1413 X
L.A.	19	19013	541	6510.02		1233						1414
L.A.	19	19013	541	6510.01		1233						1414 X
L.A.	19	19016	544	6513.02		1234						1415
L.A.	19	19016	544	6513.01		1234						1415 X
L.A.	19	19017	545	6703.01		1235						1416
L.A.	19	19018	546	6701.00		1236						1417
L.A.	19	19018	546	6700.03		1236						1417 X
L.A.	19	19018	546	6700.02		1236						1417 X
L.A.	19	19018	546	6700.01		1236						1417 X
L.A.	19	19023	551	6703.02		1237						1418
L.A.	19	19024	552	6704.02		1238						1419
L.A.	19	19025	553	6702.02		1239						1420
L.A.	19	19025	553	6702.01		1239						1420 X
L.A.	19	19026	554	6705.00		1240						1421
L.A.	19	19027	555	6707.02		1241						1422
L.A.	19	19028	556	6707.01		1242						1423
L.A.	19	19032	560	6706.00 A		1243						1424
L.A.	19	19033	561	6706.00 B		1244						1425
L.A.	19	19040	568	6704.01 A		1245						1426
L.A.	19	19041	569	6704.01 B		1246						1427
L.A.	19	19004	532	5434.00		1247						1428

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
L.A.	19	19004	532	5433.22		1247						1428	X
L.A.	19	19004	532	5433.21		1247						1428	X
L.A.	19	19005	533	5433.01		1248						1429	
L.A.	19	19009	537	5435.03		1249						1430	
L.A.	19	19009	537	5435.02		1249						1430	X
L.A.-	19	19010	538	5438.02		1250						1431	
L.A.	19	19010	538	5438.01		1250						1431	X
L.A.	19	19010	538	5435.01		1250						1431	X
L.A.	19	19011	539	5440.00		1251						1432	
L.A.	19	19011	539	5433.03		1251						1432	X
L.A.	19	19014	542	5437.03		1252						1433	
L.A.	19	19014	542	5437.02		1252						1433	X
L.A.	19	19014	542	5437.01		1252						1433	X
L.A.	19	19014	542	5436.04		1252						1433	X
L.A.	19	19014	542	5436.01		1252						1433	X
L.A.	19	19015	543	5439.02		1253						1434	
L.A.	19	19015	543	5439.01		1253						1434	X
L.A.	19	19020	548	5436.03		1254						1435	
L.A.	19	19020	548	5436.02		1254						1435	X
L.A.	20	20001	570	5704.00		1255						1436	
L.A.	20	20001	570	5703.01		1255						1436	X
L.A.	20	20002	571	5705.00		1256						1437	
L.A.	20	20002	571	5702.02		1256						1437	X
L.A.	20	20002	571	5702.01		1256						1437	X
L.A.	20	20002	571	5701.00		1256						1437	X
L.A.	20	20003	572	5708.00		1257						1438	
L.A.	20	20003	572	5700.03		1257						1438	X
L.A.	20	20003	572	5700.02		1257						1438	X
L.A.	20	20004	573	5717.00		1258						1439	
L.A.	20	20004	573	5716.00		1258						1439	X
L.A.	20	20004	573	5706.00		1258						1439	X
L.A.	20	20004	573	5703.02		1258						1439	X
L.A.	20	20005	574	5715.02		1259						1440	
L.A.	20	20005	574	5715.01		1259						1440	X
L.A.	20	20006	575	5714.00		1260						1441	
L.A.	20	20006	575	5713.00		1260						1441	X
L.A.	20	20006	575	5707.02		1260						1441	X
L.A.	20	20006	575	5707.01		1260						1441	X
L.A.	20	20007	576	5712.00		1261						1442	
L.A.	20	20008	577	5709.02		1262						1443	
L.A.	20	20008	577	5709.01		1262						1443	X
L.A.	20	20008	577	5700.01		1262						1443	X
L.A.	20	20009	578	5711.02		1263						1444	
L.A.	20	20009	578	5711.01		1263						1444	X
L.A.	20	20009	578	5710.00		1263						1444	X
L.A.	20	20010	579	5721.00		1264						1445	
L.A.	20	20010	579	5720.02		1264						1445	X
L.A.	20	20010	579	5718.00		1264						1445	X
L.A.	20	20011	580	5720.01		1265						1446	
L.A.	20	20011	580	5719.00		1265						1446	X
L.A.	20	20012	581	5725.00		1266						1447	
L.A.	20	20012	581	5724.00		1266						1447	X
L.A.	20	20012	581	5723.00		1266						1447	X
L.A.	20	20013	582	5722.02		1267						1448	
L.A.	20	20013	582	5722.01		1267						1448	X
L.A.	20	20014	583	5735.00		1268						1449	
L.A.	20	20015	584	5741.00		1269						1450	
L.A.	20	20015	584	5737.00		1269						1450	X
L.A.	20	20015	584	5736.00		1269						1450	X
L.A.	20	20017	586	5739.02		1270						1451	
L.A.	20	20017	586	5739.01		1270						1451	X
L.A.	20	20017	586	5552.02		1270						1451	X
L.A.	20	20016	585	5740.00		1271						1452	
L.A.	20	20016	585	5738.00		1271						1452	X
L.A.	20	20018	587	5727.00		1272						1453	
L.A.	20	20018	587	5726.00		1272						1453	X
L.A.	20	20019	588	5731.00		1273						1454	

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
L.A.	20	20019	588	5730.00		1273						1454	X
L.A.	20	20020	589	5733.00		1274						1455	
L.A.	20	20020	589	5732.02		1274						1455	X
L.A.	20	20020	589	5732.01		1274						1455	X
L.A.	20	20021	590	5734.00		1275						1456	
L.A.	20	20022	591	5750.01		1276						1457	
L.A.	20	20022	591	5749.02		1276						1457	X
L.A.	20	20022	591	5742.02		1276						1457	X
L.A.	20	20023	592	5743.00		1277						1458	
L.A.	20	20023	592	5742.01		1277						1458	X
L.A.	20	20024	593	5744.00		1278						1459	
L.A.	20	20026	595	5758.00		1279						1460	
L.A.	20	20026	595	5754.00		1279						1460	X
L.A.	20	20027	596	5763.00		1280						1461	
L.A.	20	20027	596	5753.00		1280						1461	X
L.A.	20	20028	597	5764.00		1281						1462	
L.A.	20	20028	597	5752.00		1281						1462	X
L.A.	20	20029	598	5769.00		1282						1463	
L.A.	20	20029	598	5751.00		1282						1463	X
L.A.	20	20030	599	5770.00		1283						1464	
L.A.	20	20030	599	5750.02		1283						1464	X
L.A.	20	20031	600	5749.01		1284						1465	
L.A.	20	20031	600	5748.00		1284						1465	X
L.A.	20	20032	601	5776.02		1285						1466	
L.A.	20	20032	601	5747.00		1285						1466	X
L.A.	20	20032	601	5746.02		1285						1466	X
L.A.	20	20032	601	5746.01		1285						1466	X
L.A.	20	20033	602	5745.00		1286						1467	
L.A.	20	20035	604	5762.00		1287						1468	
L.A.	20	20035	604	5761.00		1287						1468	X
L.A.	20	20035	604	5760.00		1287						1468	X
L.A.	20	20035	604	5759.00		1287						1468	X
L.A.	20	20036	605	5766.00		1288						1469	
L.A.	20	20036	605	5765.00		1288						1469	X
L.A.	20	20037	606	5772.00		1289						1470	
L.A.	20	20037	606	5771.00		1289						1470	X
L.A.	20	20037	606	5768.00		1289						1470	X
L.A.	20	20037	606	5767.00		1289						1470	X
L.A.	20	20038	607	5776.03		1290						1471	
L.A.	20	20038	607	5774.00		1290						1471	X
L.A.	20	20038	607	5773.00		1290						1471	X
L.A.	20	20039	608	5776.01		1291						1472	
L.A.	20	20039	608	5775.02		1291						1472	X
L.A.	20	20039	608	5775.01		1291						1472	X
L.A.	21	21018	626	5305.00		1292						1473	
L.A.	21	21018	626	5304.00		1292						1473	X
L.A.	21	21031	639	5317.02		1293						1474	
L.A.	21	21031	639	5316.02		1293						1474	X
L.A.	21	21032	640	5317.01		1294						1475	
L.A.	21	21032	640	5316.01		1294						1475	X
L.A.	21	21032	640	5303.00		1294						1475	X
L.A.	21	21033	641	5302.02		1295						1476	
L.A.	21	21033	641	5302.01		1295						1476	X
L.A.	21	21034	642	5319.00		1296						1477	
L.A.	21	21034	642	5318.00		1296						1477	X
L.A.	21	21035	643	5300.02		1297						1478	
L.A.	21	21035	643	5300.01		1297						1478	X
L.A.	21	21036	644	5301.02		1298						1479	
L.A.	21	21036	644	5301.01		1298						1479	X
L.A.	21	21037	645	5321.00		1299						1480	
L.A.	21	21037	645	5320.00		1299						1480	X
L.A.	21	21044	652	5323.01 A		1300						1481	
L.A.	21	21045	653	5323.01 B		1301						1482	
L.A.	21	21046	654	5323.01 C		1302						1483	
L.A.	21	21047	655	5322.00		1303						1484	
L.A.	21	21062	670	5341.00		1304						1485	
L.A.	21	21062	670	5340.00		1304						1485	X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
L.A.	21	21062	670	5339.00		1304						1485	X
L.A.	21	21070	678	5342.00		1305						1486	
L.A.	21	21082	690	5401.02		1306						1487	
L.A.	21	21082	690	5401.01		1306						1487	X
L.A.	21	21082	690	5400.00		1306						1487	X
L.A.	21	21083	691	5362.00		1307						1488	
L.A.	21	21084	692	5407.00		1308						1489	
L.A.	21	21084	692	5406.00		1308						1489	X
L.A.	21	21085	693	5417.00		1309						1490	
L.A.	21	21085	693	5405.00		1309						1490	X
L.A.	21	21086	694	5418.00		1310						1491	
L.A.	21	21087	695	5420.00		1311						1492	
L.A.	21	21087	695	5416.02		1311						1492	X
L.A.	21	21087	695	5416.01		1311						1492	X
L.A.	21	21088	696	5421.02		1312						1493	
L.A.	21	21088	696	5421.01		1312						1493	X
L.A.	21	21089	697	5409.02		1313						1494	
L.A.	21	21089	697	5409.01		1313						1494	X
L.A.	21	21090	698	5408.00		1314						1495	
L.A.	21	21091	699	5413.00		1315						1496	
L.A.	21	21091	699	5412.00		1315						1496	X
L.A.	21	21092	700	5415.00		1316						1497	
L.A.	21	21092	700	5414.00		1316						1497	X
L.A.	21	21093	701	5411.00		1317						1498	
L.A.	21	21093	701	5410.01		1317						1498	X
L.A.	21	21094	702	5430.00		1318						1499	
L.A.	21	21094	702	5429.00		1318						1499	X
L.A.	21	21094	702	5428.00		1318						1499	X
L.A.	21	21095	703	5427.00		1319						1500	
L.A.	21	21095	703	5426.00		1319						1500	X
L.A.	21	21095	703	5425.00		1319						1500	X
L.A.	21	21096	704	5431.00		1320						1501	
L.A.	21	21096	704	5410.02		1320						1501	X
L.A.	21	21097	705	5432.00		1321						1502	
L.A.	21	21098	706	5424.02		1322						1503	
L.A.	21	21098	706	5424.01		1322						1503	X
L.A.	21	21099	707	5422.00		1323						1504	
L.A.	22	22001	709	5006.00		1324						1505	
L.A.	22	22001	709	5005.00		1324						1505	X
L.A.	22	22002	710	5004.02		1325						1506	
L.A.	22	22002	710	5004.01		1325						1506	X
L.A.	22	22003	711	5003.00		1326						1507	
L.A.	22	22004	712	5009.00		1327						1508	
L.A.	22	22004	712	5008.00		1327						1508	X
L.A.	22	22004	712	5007.00		1327						1508	X
L.A.	22	22005	713	5013.00		1328						1509	
L.A.	22	22005	713	5012.00		1328						1509	X
L.A.	22	22006	714	5015.02		1329						1510	
L.A.	22	22006	714	5015.01		1329						1510	X
L.A.	22	22006	714	5014.00		1329						1510	X
L.A.	22	22007	715	5018.00		1330						1511	
L.A.	22	22007	715	5017.00		1330						1511	X
L.A.	22	22007	715	5016.00		1330						1511	X
L.A.	22	22008	716	5025.00		1331						1512	
L.A.	22	22009	717	5026.02		1332						1513	
L.A.	22	22009	717	5026.01		1332						1513	X
L.A.	22	22009	717	5024.00		1332						1513	X
L.A.	22	22010	718	5023.00		1333						1514	
L.A.	22	22011	719	5022.00		1334						1515	
L.A.	22	22011	719	5021.00		1334						1515	X
L.A.	22	22011	719	5010.00		1334						1515	X
L.A.	22	22012	720	5033.01		1335						1516	
L.A.	22	22012	720	5002.02		1335						1516	X
L.A.	22	22013	721	5507.00		1336						1517	
L.A.	22	22013	721	5506.00		1336						1517	X
L.A.	22	22014	722	5505.00		1337						1518	
L.A.	22	22015	723	5027.00		1338						1519	

	County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
L.A.		22	22016	724	5020.02		1339						1520
L.A.		22	22016	724	5020.01		1339						1520 X
L.A.		22	22016	724	5019.00		1339						1520 X
L.A.		22	22017	725	5002.01		1340						1521
L.A.		22	22018	726	5514.00		1341						1522
L.A.		22	22018	726	5508.00		1341						1522 X
L.A.		22	22019	727	5513.00		1342						1523
L.A.		22	22019	727	5509.00		1342						1523 X
L.A.		22	22020	728	5510.00		1343						1524
L.A.		22	22020	728	5504.00		1343						1524 X
L.A.		22	22021	729	5028.00		1344						1525
L.A.		22	22022	730	5032.02		1345						1526
L.A.		22	22022	730	5029.01		1345						1526 X
L.A.		22	22023	731	5029.02		1346						1527
L.A.		22	22024	732	5516.00		1347						1528
L.A.		22	22024	732	5515.00		1347						1528 X
L.A.		22	22025	733	5534.00		1348						1529
L.A.		22	22025	733	5517.00		1348						1529 X
L.A.		22	22025	733	5512.00		1348						1529 X
L.A.		22	22026	734	5511.00		1349						1530
L.A.		22	22027	735	5503.00		1350						1531
L.A.		22	22028	736	5502.00		1351						1532
L.A.		22	22029	737	5501.00		1352						1533
L.A.		22	22029	737	5500.00		1352						1533 X
L.A.		22	22030	738	5031.02		1353						1534
L.A.		22	22030	738	5030.00		1353						1534 X
L.A.		22	22031	739	5032.01		1354						1535
L.A.		22	22031	739	5031.01		1354						1535 X
L.A.		22	22032	740	5035.02		1355						1536
L.A.		22	22032	740	5035.01		1355						1536 X
L.A.		22	22032	740	5033.02		1355						1536 X
L.A.		22	22033	741	5034.02		1356						1537
L.A.		22	22033	741	5034.01		1356						1537 X
L.A.		22	22034	742	5537.00		1357						1538
L.A.		22	22034	742	5536.00		1357						1538 X
L.A.		22	22034	742	5535.00		1357						1538 X
L.A.		22	22035	743	5533.00		1358						1539
L.A.		22	22035	743	5532.00		1358						1539 X
L.A.		22	22036	744	5518.00		1359						1540
L.A.		22	22037	745	5520.00		1360						1541
L.A.		22	22037	745	5519.00		1360						1541 X
L.A.		22	22038	746	5528.00		1361						1542
L.A.		22	22038	746	5521.00		1361						1542 X
L.A.		22	22039	747	5527.00		1362						1543
L.A.		22	22039	747	5522.00		1362						1543 X
L.A.		22	22040	748	5524.00		1363						1544
L.A.		22	22040	748	5523.00		1363						1544 X
L.A.		22	22041	749	5041.02		1364						1545
L.A.		22	22042	750	5041.01		1365						1546
L.A.		22	22042	750	5040.02		1365						1546 X
L.A.		22	22042	750	5040.01		1365						1546 X
L.A.		22	22043	751	5037.03		1366						1547
L.A.		22	22043	751	5036.02		1366						1547 X
L.A.		22	22043	751	5036.01		1366						1547 X
L.A.		22	22044	752	5037.02		1367						1548
L.A.		22	22044	752	5037.01		1367						1548 X
L.A.		22	22045	753	5539.00		1368						1549
L.A.		22	22045	753	5538.00		1368						1549 X
L.A.		22	22046	754	5542.00		1369						1550
L.A.		22	22046	754	5540.00		1369						1550 X
L.A.		22	22047	755	5541.00		1370						1551
L.A.		22	22047	755	5531.00		1370						1551 X
L.A.		22	22048	756	5546.00		1371						1552
L.A.		22	22048	756	5530.00		1371						1552 X
L.A.		22	22048	756	5529.00		1371						1552 X
L.A.		22	22049	757	5547.00		1372						1553
L.A.		22	22049	757	5526.00		1372						1553 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
L.A.	22	22050	758	5039.02		1373						1554
L.A.	22	22050	758	5039.01		1373						1554 X
L.A.	22	22051	759	5038.02		1374						1555
L.A.	22	22051	759	5038.01		1374						1555 X
L.A.	22	22052	760	5544.02		1375						1556
L.A.	22	22052	760	5544.01		1375						1556 X
L.A.	22	22052	760	5543.00		1375						1556 X
L.A.	22	22053	761	5549.00		1376						1557
L.A.	22	22053	761	5548.02		1376						1557 X
L.A.	22	22053	761	5548.01		1376						1557 X
L.A.	22	22054	762	5545.18		1377						1558
L.A.	22	22054	762	5545.11		1377						1558 X
L.A.	22	22055	763	5552.01		1378						1559
L.A.	22	22055	763	5551.02		1378						1559 X
L.A.	22	22055	763	5551.01		1378						1559 X
L.A.	22	22055	763	5550.00		1378						1559 X
L.A.	22	22056	764	5001.00		1379						1560
L.A.	22	22057	765	5545.19		1380						1561
L.A.	22	22057	765	5545.17		1380						1561 X
L.A.	22	22057	765	5545.16		1380						1561 X
L.A.	22	22057	765	5545.15		1380						1561 X
L.A.	22	22058	766	5545.22		1381						1562
L.A.	22	22058	766	5545.21		1381						1562 X
L.A.	22	22059	767	5545.14		1382						1563
L.A.	22	22059	767	5545.13		1382						1563 X
L.A.	22	22059	767	5545.12		1382						1563 X
L.A.	25	25001	844	4606.00		1383						1564
L.A.	25	25002	845	4605.02		1384						1565
L.A.	25	25002	845	4605.01		1384						1565 X
L.A.	25	25003	846	4604.00		1385						1566
L.A.	25	25004	847	4611.00		1386						1567
L.A.	25	25004	847	4602.00		1386						1567 X
L.A.	25	25005	848	4613.00		1387						1568
L.A.	25	25005	848	4612.00		1387						1568 X
L.A.	25	25005	848	4601.00		1387						1568 X
L.A.	25	25007	850	4610.00		1388						1569
L.A.	25	25007	850	4603.00		1388						1569 X
L.A.	25	25008	851	4621.00		1389						1570
L.A.	25	25008	851	4620.00		1389						1570 X
L.A.	25	25008	851	4615.00		1389						1570 X
L.A.	25	25009	852	4624.00		1390						1571
L.A.	25	25009	852	4614.00		1390						1571 X
L.A.	25	25011	854	4617.00		1391						1572
L.A.	25	25011	854	4616.00		1391						1572 X
L.A.	25	25011	854	4609.00		1391						1572 X
L.A.	25	25012	855	4639.00		1392						1573
L.A.	25	25012	855	4637.00		1392						1573 X
L.A.	25	25013	856	4622.00		1393						1574
L.A.	25	25013	856	4619.00		1393						1574 X
L.A.	25	25014	857	4626.00		1394						1575
L.A.	25	25014	857	4625.00		1394						1575 X
L.A.	25	25015	858	4628.00		1395						1576
L.A.	25	25015	858	4627.00		1395						1576 X
L.A.	25	25015	858	4623.00		1395						1576 X
L.A.	25	25016	859	4636.00		1396						1577
L.A.	25	25016	859	4635.00		1396						1577 X
L.A.	25	25017	860	4634.00		1397						1578
L.A.	25	25017	860	4633.00		1397						1578 X
L.A.	25	25017	860	4632.00		1397						1578 X
L.A.	25	25019	862	4640.00		1398						1579
L.A.	25	25020	863	4641.00		1399						1580
L.A.	25	25021	864	4642.00		1400						1581
L.A.	25	25022	865	4600.00		1401						1582
L.A.	25	25023	866	4305.02		1402						1583
L.A.	25	25023	866	4305.01		1402						1583 X
L.A.	25	25024	867	4306.00		1403						1584
L.A.	25	25024	867	4304.00		1403						1584 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
L.A.	25	25025	868	4630.00		1404						1585	
L.A.	25	25026	869	4631.02		1405						1586	
L.A.	25	25026	869	4631.01		1405						1586	X
L.A.	25	25027	870	4800.02		1406						1587	
L.A.	25	25027	870	4800.01		1406						1587	X
L.A.-	25	25028	871	4307.22		1407						1588	
L.A.	25	25028	871	4307.01		1407						1588	X
L.A.	25	25025	868	4629.00		1408						1589	
L.A.	25	25029	872	4307.21		1409						1590	
L.A.	25	25030	873	4317.00		1410						1591	
L.A.	25	25030	873	4316.00		1410						1591	X
L.A.	25	25030	873	4308.03		1410						1591	X
L.A.	25	25031	874	4308.02		1411						1592	
L.A.	25	25031	874	4308.01		1411						1592	X
L.A.	25	25032	875	4302.00		1412						1593	
L.A.	25	25033	876	4310.00		1413						1594	
L.A.	25	25033	876	4303.00		1413						1594	X
L.A.	25	25034	877	4300.01		1414						1595	
L.A.	25	25035	878	4311.00		1415						1596	
L.A.	25	25035	878	4309.00		1415						1596	X
L.A.	25	25036	879	4301.02		1416						1597	
L.A.	25	25036	879	4301.01		1416						1597	X
L.A.	25	25037	880	4300.02		1417						1598	
L.A.	25	25038	881	4806.00		1418						1599	
L.A.	25	25039	882	4807.02		1419						1600	
L.A.	25	25039	882	4807.01		1419						1600	X
L.A.	25	25040	883	4805.00		1420						1601	
L.A.	25	25041	884	4809.00		1421						1602	
L.A.	25	25041	884	4808.02		1421						1602	X
L.A.	25	25041	884	4808.01		1421						1602	X
L.A.	25	25042	885	4810.00		1422						1603	
L.A.	25	25042	885	4804.00		1422						1603	X
L.A.	25	25042	885	4803.00		1422						1603	X
L.A.	25	25043	886	4811.00		1423						1604	
L.A.	25	25043	886	4802.00		1423						1604	X
L.A.	25	25044	887	4812.01		1424						1605	
L.A.	25	25044	887	4801.01		1424						1605	X
L.A.	25	25045	888	4812.02		1425						1606	
L.A.	25	25045	888	4801.02		1425						1606	X
L.A.	25	25046	889	4320.00		1426						1607	
L.A.	25	25046	889	4319.00		1426						1607	X
L.A.	25	25046	889	4318.00		1426						1607	X
L.A.	25	25047	890	4321.02		1427						1608	
L.A.	25	25047	890	4321.01		1427						1608	X
L.A.	25	25048	891	4315.00		1428						1609	
L.A.	25	25049	892	4314.00		1429						1610	
L.A.	25	25049	892	4313.00		1429						1610	X
L.A.	25	25049	892	4312.00		1429						1610	X
L.A.	25	25050	893	4325.00		1430						1611	
L.A.	25	25051	894	4816.02		1431						1612	
L.A.	25	25051	894	4816.01		1431						1612	X
L.A.	25	25051	894	4815.00		1431						1612	X
L.A.	25	25052	895	4823.01		1432						1613	
L.A.	25	25052	895	4814.00		1432						1613	X
L.A.	25	25053	896	4813.00		1433						1614	
L.A.	25	25053	896	4329.00		1433						1614	X
L.A.	25	25053	896	4322.00		1433						1614	X
L.A.	25	25054	897	4328.00		1434						1615	
L.A.	25	25054	897	4323.00		1434						1615	X
L.A.	25	25055	898	4327.00		1435						1616	
L.A.	25	25055	898	4324.00		1435						1616	X
L.A.	25	25056	899	4333.00		1436						1617	
L.A.	25	25056	899	4326.00		1436						1617	X
L.A.	25	25057	900	4819.02		1437						1618	
L.A.	25	25057	900	4819.01		1437						1618	X
L.A.	25	25057	900	4818.00		1437						1618	X
L.A.	25	25058	901	4821.01		1438						1619	

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
L.A.	25	25058	901	4817.02		1438						1619 X
L.A.	25	25059	902	4822.00		1439						1620
L.A.	25	25059	902	4817.01		1439						1620 X
L.A.	25	25060	903	4825.01		1440						1621
L.A.	25	25060	903	4823.02		1440						1621 X
L.A.	25	25061	904	4824.01		1441						1622
L.A.	25	25061	904	4336.01		1441						1622 X
L.A.	25	25062	905	4334.00		1442						1623
L.A.	25	25062	905	4332.00		1442						1623 X
L.A.	25	25063	906	4820.02		1443						1624
L.A.	25	25063	906	4820.01		1443						1624 X
L.A.	25	25064	907	4827.00		1444						1625
L.A.	25	25064	907	4821.02		1444						1625 X
L.A.	25	25065	908	4828.00		1445						1626
L.A.	25	25065	908	4826.00		1445						1626 X
L.A.	25	25066	909	4825.02		1446						1627
L.A.	25	25067	910	4824.02		1447						1628
L.A.	25	25067	910	4336.02		1447						1628 X
L.A.	25	25068	911	4337.00		1448						1629
L.A.	25	25068	911	4335.00		1448						1629 X
L.A.	25	25069	912	4338.00		1449						1630
L.A.	25	25070	913	4340.00		1450						1631
L.A.	25	25070	913	4339.00		1450						1631 X
L.A.	25	25071	914	4331.00		1451						1632
VEN	4	4001	79	76.00 A		1452						1633
VEN	4	4002	80	76.00 B		1453						1634
VEN	4	4003	81	76.00 C		1454						1635
VEN	4	4004	82	76.00 D		1455						1636
VEN	4	4005	83	76.00 E		1456						1637
VEN	4	4006	84	76.00 F		1457						1638
VEN	4	4007	85	85.00 A		1458						1639
VEN	4	4008	86	85.00 B		1459						1640
VEN	4	4009	87	85.00 C		1460						1641
VEN	4	4010	88	78.00		1461						1642
VEN	4	4010	88	77.00		1461						1642 X
VEN	4	4011	89	79.00		1462						1643
VEN	4	4012	90	75.02 A		1463						1644
VEN	4	4013	91	75.02 B		1464						1645
VEN	4	4014	92	75.02 C		1465						1646
VEN	4	4015	93	80.03		1466						1647
VEN	4	4015	93	80.01		1466						1647 X
VEN	4	4016	94	84.02 A		1467						1648
VEN	4	4017	95	84.02 B		1468						1649
VEN	4	4017	95	84.01		1468						1649 X
VEN	4	4018	96	82.00		1469						1650
VEN	4	4018	96	81.00		1469						1650 X
VEN	4	4018	96	80.02		1469						1650 X
VEN	4	4019	97	83.01		1470						1651
VEN	4	4020	98	83.02 A		1471						1652
VEN	4	4021	99	83.02 B		1472						1653
VEN	4	4022	100	75.03 A		1473						1654
VEN	4	4023	101	75.03 B		1474						1655
VEN	4	4024	102	75.03 C		1475						1656
VEN	4	4025	103	75.01		1476						1657
VEN	5	5001	104	58.00 A		1477						1658
VEN	5	5002	105	58.00 B		1478						1659
VEN	5	5003	106	60.00		1479						1660
VEN	5	5004	107	59.01		1480						1661
VEN	5	5005	108	61.00		1481						1662
VEN	5	5006	109	59.02 A		1482						1663
VEN	5	5007	110	59.02 B		1483						1664
VEN	5	5008	111	63.00		1484						1665
VEN	5	5008	111	62.00		1484						1665 X
VEN	5	5009	112	69.00		1485						1666
VEN	5	5009	112	67.00		1485						1666 X
VEN	5	5009	112	66.00		1485						1666 X
VEN	5	5010	113	64.00 A		1486						1667

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
VEN	5	5011	114	64.00 B		1487						1668
VEN	5	5012	115	70.00		1488						1669
VEN	5	5012	115	68.00		1488						1669 X
VEN	5	5012	115	65.00		1488						1669 X
VEN	5	5013	116	72.01		1489						1670
VEN	5	5013	116	71.00		1489						1670 X
VEN	5	5014	117	72.02		1490						1671
VEN	5	5015	118	74.02 A		1491						1672
VEN	5	5016	119	74.02 B		1492						1673
VEN	5	5017	120	74.01 A		1493						1674
VEN	5	5018	121	74.01 B		1494						1675
VEN	5	5019	122	59.03 A		1495						1676
VEN	5	5020	123	59.03 B		1496						1677
VEN	5	5021	124	73.00 A		1497						1678
VEN	5	5022	125	73.00 B		1498						1679
VEN	5	5023	126	73.00 C		1499						1680
L.A.	7	7001	135	8003.21 A		1500						1681
L.A.	7	7002	136	8003.21 B		1501						1682
L.A.	7	7003	137	8003.22 A		1502						1683
L.A.	7	7004	138	8003.22 B		1503						1684
L.A.	7	7005	139	8003.01 A		1504						1685
L.A.	7	7006	140	8003.01 B		1505						1686
L.A.	7	7007	141	8002.00 A		1506						1687
L.A.	7	7008	142	8002.00 B		1507						1688
L.A.	7	7009	143	8001.00 A		1508						1689
L.A.	7	7010	144	8001.00 B		1509						1690
L.A.	15	15001	341	8004.00 A		1510						1691
L.A.	15	15002	342	8004.00 B		1511						1692
L.A.	15	15003	343	8005.00 A		1512						1693
L.A.	15	15004	344	8005.00 B		1513						1694
L.A.	8	8013	157	9203.23 B		1600						1700 X
L.A.	8	8013	157	9203.22		1600						1700 X
L.A.	8	8014	158	9203.21		1600						1700 X
L.A.	8	8006	150	9202.00		1600						1700 X
L.A.	8	8002	146	9201.00 B		1600						1700 X
L.A.	8	8005	149	9201.00 E		1600						1700 X
L.A.	8	8004	148	9201.00 D		1600						1700 X
L.A.	8	8001	145	9201.00 A		1600						1700 X
L.A.	8	8003	147	9201.00 C		1600						1700 X
L.A.	8	8015	159	9203.11		1601						1701
L.A.	8	8010	154	9200.25		1601						1701 X
L.A.	8	8010	154	9200.24		1601						1701 X
L.A.	8	8011	155	9200.23		1601						1701 X
L.A.	8	8011	155	9200.22		1601						1701 X
L.A.	8	8010	154	9200.21 A		1601						1701 X
L.A.	8	8009	153	9200.21 B		1601						1701 X
L.A.	8	8016	160	9200.03		1601						1701 X
L.A.	8	8008	152	9200.01 B		1601						1701 X
L.A.	8	8007	151	9200.01 A		1601						1701 X
L.A.	8	8018	162	9108.01 A		1601						1701 X
L.A.	8	8019	163	9108.01 B		1601						1701 X
L.A.	8	8017	161	9203.13		1602						1702
L.A.	8	8017	161	9203.12		1602						1702 X
L.A.	8	8012	156	9203.23 A		1603						1703
L.A.	9	9002	165	9012.02 B		1604						1704
L.A.	9	9001	164	9012.02 A		1604						1704 X
L.A.	9	9003	166	9012.02 C		1605						1705
L.A.	9	9004	167	9012.02 D		1605						1705 X
L.A.	9	9005	168	9012.01 A		1605						1705 X
L.A.	9	9006	169	9012.01 B		1605						1705 X
L.A.	9	9007	170	9012.01 C		1605						1705 X
L.A.	9	9008	171	9012.01 D		1605						1705 X
L.A.	9	9014	177	9011.00		1605						1705 X
L.A.	9	9013	176	9010.00		1605						1705 X
L.A.	9	9010	173	9009.00 B		1605						1705 X
L.A.	9	9009	172	9009.00 A		1605						1705 X
L.A.	9	9011	174	9009.00 C		1605						1705 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
L.A.	9	9012	175	9008.02		1605						1705	X
L.A.	9	9012	175	9008.01		1605						1705	X
L.A.	9	9015	178	9007.02		1605						1705	X
L.A.	9	9015	178	9007.01		1605						1705	X
L.A.	9	9017	180	9006.03		1605						1705	X
L.A.	9	9017	180	9006.02		1605						1705	X
L.A.	9	9017	180	9006.01		1605						1705	X
L.A.	9	9016	179	9005.00		1605						1705	X
L.A.	9	9021	184	9004.00		1605						1705	X
L.A.	9	9019	182	9003.00 B		1605						1705	X
L.A.	9	9018	181	9003.00 A		1605						1705	X
L.A.	9	9020	183	9002.00 A		1605						1705	X
L.A.	9	9022	185	9002.00 B		1605						1705	X
L.A.	9	9023	186	9002.00 C		1605						1705	X
L.A.	9	9024	187	9002.00 D		1605						1705	X
L.A.	9	9027	190	9110.00 A		1606						1706	
L.A.	9	9025	188	9001.00 A		1606						1706	X
L.A.	9	9026	189	9001.00 B		1606						1706	X
L.A.	9	9028	191	9110.00 B		1607						1707	
L.A.	11	11001	211	9302.00 A		1608						1708	
L.A.	11	11002	212	9302.00 B		1608						1708	X
L.A.	11	11005	215	9301.00		1608						1708	X
L.A.	11	11004	214	9300.00 B		1609						1709	
L.A.	11	11003	213	9300.00 A		1609						1709	X
L.A.	26	26012	926	4059.00		1610						1710	
L.A.	26	26011	925	4058.00		1610						1710	X
L.A.	26	26010	924	4051.00		1610						1710	X
L.A.	26	26010	924	4050.00		1610						1710	X
L.A.	26	26010	924	4049.00		1610						1710	X
L.A.	26	26004	918	4046.00		1610						1710	X
L.A.	26	26011	925	4045.00		1610						1710	X
L.A.	26	26005	919	4044.00		1610						1710	X
L.A.	26	26006	920	4043.00		1610						1710	X
L.A.	26	26006	920	4042.00		1610						1710	X
L.A.	26	26012	926	4041.00		1610						1710	X
L.A.	26	26012	926	4040.00		1610						1710	X
L.A.	26	26013	927	4039.02		1610						1710	X
L.A.	26	26013	927	4039.01		1610						1710	X
L.A.	26	26008	922	4012.03		1610						1710	X
L.A.	26	26009	923	4012.02		1610						1710	X
L.A.	26	26009	923	4012.01		1610						1710	X
L.A.	26	26008	922	4011.02		1610						1710	X
L.A.	26	26008	922	4011.01		1610						1710	X
L.A.	26	26002	916	4010.02		1610						1710	X
L.A.	26	26002	916	4010.01		1610						1710	X
L.A.	26	26007	921	4009.00		1610						1710	X
L.A.	26	26007	921	4008.00		1610						1710	X
L.A.	26	26001	915	4006.00		1610						1710	X
L.A.	26	26002	916	4005.00		1610						1710	X
L.A.	26	26003	917	4004.02		1610						1710	X
L.A.	26	26003	917	4004.01		1610						1710	X
L.A.	26	26028	942	4083.01		1611						1711	
L.A.	26	26032	946	4080.02		1611						1711	X
L.A.	26	26032	946	4080.01		1611						1711	X
L.A.	26	26031	945	4079.00		1611						1711	X
L.A.	26	26031	945	4078.00		1611						1711	X
L.A.	26	26031	945	4075.00		1611						1711	X
L.A.	26	26022	936	4074.00		1611						1711	X
L.A.	26	26021	935	4073.00		1611						1711	X
L.A.	26	26029	943	4072.00		1611						1711	X
L.A.	26	26029	943	4071.02		1611						1711	X
L.A.	26	26029	943	4071.01		1611						1711	X
L.A.	26	26028	942	4070.00		1611						1711	X
L.A.	26	26021	935	4069.00		1611						1711	X
L.A.	26	26022	936	4068.00		1611						1711	X
L.A.	26	26022	936	4067.00		1611						1711	X
L.A.	26	26023	937	4066.02		1611						1711	X

	County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
L.A.		26	26023	937	4066.01		1611						1711 X
L.A.		26	26023	937	4065.00		1611						1711 X
L.A.		26	26032	946	4064.02		1611						1711 X
L.A.		26	26024	938	4064.01		1611						1711 X
L.A.		26	26026	940	4063.00		1611						1711 X
L.A.		26	26024	938	4062.00		1611						1711 X
L.A.		26	26018	932	4061.02		1611						1711 X
L.A.		26	26018	932	4061.01		1611						1711 X
L.A.		26	26018	932	4060.00		1611						1711 X
L.A.		26	26017	931	4057.00		1611						1711 X
L.A.		26	26016	930	4056.00		1611						1711 X
L.A.		26	26016	930	4055.00		1611						1711 X
L.A.		26	26017	931	4054.00		1611						1711 X
L.A.		26	26016	930	4053.00		1611						1711 X
L.A.		26	26015	929	4052.00		1611						1711 X
L.A.		26	26015	929	4048.00		1611						1711 X
L.A.		26	26020	934	4047.00		1611						1711 X
L.A.		26	26019	933	4038.00		1611						1711 X
L.A.		26	26014	928	4037.22		1611						1711 X
L.A.		26	26014	928	4037.21		1611						1711 X
L.A.		26	26019	933	4037.01		1611						1711 X
L.A.		26	26025	939	4036.00		1611						1711 X
L.A.		26	26030	944	4035.00		1611						1711 X
L.A.		26	26033	947	4034.00		1611						1711 X
L.A.		26	26027	941	4024.04		1611						1711 X
L.A.		26	26046	960	4087.02		1612						1712
L.A.		26	26046	960	4087.01		1612						1712 X
L.A.		26	26041	955	4086.25		1612						1712 X
L.A.		26	26041	955	4086.24		1612						1712 X
L.A.		26	26041	955	4086.23		1612						1712 X
L.A.		26	26047	961	4086.22		1612						1712 X
L.A.		26	26046	960	4086.21		1612						1712 X
L.A.		26	26039	953	4086.01		1612						1712 X
L.A.		26	26040	954	4085.03		1612						1712 X
L.A.		26	26039	953	4085.02		1612						1712 X
L.A.		26	26039	953	4085.01		1612						1712 X
L.A.		26	26034	948	4084.02		1612						1712 X
L.A.		26	26034	948	4084.01		1612						1712 X
L.A.		26	26048	962	4083.03		1612						1712 X
L.A.		26	26048	962	4083.02		1612						1712 X
L.A.		26	26035	949	4082.02		1612						1712 X
L.A.		26	26042	956	4082.01		1612						1712 X
L.A.		26	26049	963	4081.32		1612						1712 X
L.A.		26	26038	952	4081.31		1612						1712 X
L.A.		26	26038	952	4081.02		1612						1712 X
L.A.		26	26038	952	4081.01		1612						1712 X
L.A.		26	26036	950	4077.00		1612						1712 X
L.A.		26	26036	950	4076.00		1612						1712 X
L.A.		26	26045	959	4033.15		1612						1712 X
L.A.		26	26050	964	4033.14		1612						1712 X
L.A.		26	26037	951	4033.13		1612						1712 X
L.A.		26	26050	964	4033.12		1612						1712 X
L.A.		26	26044	958	4033.11		1612						1712 X
L.A.		26	26043	957	4033.02		1612						1712 X
VEN		3	3005	44	50.00 A		1613						1713
VEN		3	3006	45	50.00 B		1613						1713 X
VEN		3	3010	49	49.00		1613						1713 X
VEN		3	3011	50	48.00		1613						1713 X
VEN		3	3020	59	47.03		1613						1713 X
VEN		3	3021	60	47.02 A		1613						1713 X
VEN		3	3018	57	47.01 C		1613						1713 X
VEN		3	3016	55	47.01 A		1613						1713 X
VEN		3	3017	56	47.01 B		1613						1713 X
VEN		3	3023	62	45.00		1613						1713 X
VEN		3	3023	62	44.00		1613						1713 X
VEN		3	3014	53	43.02		1613						1713 X
VEN		3	3014	53	43.01		1613						1713 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
VEN	3	3019	58	42.00		1613						1713	X
VEN	3	3019	58	41.00		1613						1713	X
VEN	3	3019	58	40.00		1613						1713	X
VEN	3	3015	54	39.00		1613						1713	X
VEN	3	3015	54	38.00		1613						1713	X
VEN	3	3015	54	37.00		1613						1713	X
VEN	3	3013	52	36.06		1613						1713	X
VEN	3	3013	52	36.05		1613						1713	X
VEN	3	3012	51	36.04		1613						1713	X
VEN	3	3012	51	36.03		1613						1713	X
VEN	3	3008	47	35.00		1613						1713	X
VEN	3	3008	47	34.00		1613						1713	X
VEN	3	3007	46	33.00		1613						1713	X
VEN	3	3009	48	32.00		1613						1713	X
VEN	3	3009	48	31.00		1613						1713	X
VEN	3	3007	46	30.00		1613						1713	X
VEN	3	3004	43	29.00 D		1613						1713	X
VEN	3	3003	42	29.00 C		1613						1713	X
VEN	3	3002	41	29.00 B		1613						1713	X
VEN	3	3001	40	29.00 A		1613						1713	X
VEN	3	3036	75	57.00		1614						1714	
VEN	3	3035	74	56.00 D		1614						1714	X
VEN	3	3034	73	56.00 C		1614						1714	X
VEN	3	3033	72	56.00 B		1614						1714	X
VEN	3	3032	71	56.00 A		1614						1714	X
VEN	3	3029	68	55.02		1614						1714	X
VEN	3	3029	68	55.01		1614						1714	X
VEN	3	3030	69	54.02		1614						1714	X
VEN	3	3030	69	54.01		1614						1714	X
VEN	3	3039	78	53.02 B		1614						1714	X
VEN	3	3038	77	53.02 A		1614						1714	X
VEN	3	3031	70	53.01		1614						1714	X
VEN	3	3028	67	52.02		1614						1714	X
VEN	3	3027	66	52.01		1614						1714	X
VEN	3	3025	64	51.00 B		1614						1714	X
VEN	3	3026	65	51.00 C		1614						1714	X
VEN	3	3024	63	51.00 A		1614						1714	X
VEN	3	3022	61	47.02 B		1614						1714	X
VEN	3	3037	76	46.00		1614						1714	X
VEN	1	1001	1	1.00		1615						1715	
VEN	2	2029	30	28.02 A		1616						1716	
VEN	2	2030	31	28.02 B		1616						1716	X
VEN	2	2020	21	28.01		1616						1716	X
VEN	2	2021	22	27.00		1616						1716	X
VEN	2	2017	18	26.00		1616						1716	X
VEN	2	2018	19	25.00		1616						1716	X
VEN	2	2015	16	24.00		1616						1716	X
VEN	2	2014	15	23.00		1616						1716	X
VEN	2	2014	15	22.00		1616						1716	X
VEN	2	2016	17	21.02		1616						1716	X
VEN	2	2016	17	21.01		1616						1716	X
VEN	2	2017	18	20.00		1616						1716	X
VEN	2	2019	20	19.00		1616						1716	X
VEN	2	2019	20	18.00		1616						1716	X
VEN	2	2022	23	17.00		1616						1716	X
VEN	2	2031	32	16.02		1616						1716	X
VEN	2	2032	33	16.01		1616						1716	X
VEN	2	2031	32	15.02		1616						1716	X
VEN	2	2033	34	15.01 B		1616						1716	X
VEN	2	2032	33	15.01 A		1616						1716	X
VEN	2	2034	35	14.00		1616						1716	X
VEN	2	2035	36	13.00		1616						1716	X
VEN	2	2009	10	12.05		1616						1716	X
VEN	2	2013	14	12.04 D		1616						1716	X
VEN	2	2012	13	12.04 C		1616						1716	X
VEN	2	2010	11	12.04 A		1616						1716	X
VEN	2	2011	12	12.04 B		1616						1716	X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
VEN	2	2011	12	12.03		1616						1716 X
VEN	2	2022	23	12.02		1616						1716 X
VEN	2	2023	24	12.01 A		1616						1716 X
VEN	2	2024	25	12.01 B		1616						1716 X
VEN	2	2006	7	11.00 A		1616						1716 X
VEN	2	2007	8	11.00 B		1616						1716 X
VEN	2	2008	9	11.00 C		1616						1716 X
VEN	2	2001	2	10.00 A		1616						1716 X
VEN	2	2002	3	10.00 B		1616						1716 X
VEN	2	2038	39	9.00 D		1616						1716 X
VEN	2	2003	4	9.00 C		1616						1716 X
VEN	2	2004	5	9.00 B		1616						1716 X
VEN	2	2005	6	9.00 A		1616						1716 X
VEN	2	2026	27	8.00 B		1616						1716 X
VEN	2	2027	28	8.00 C		1616						1716 X
VEN	2	2025	26	8.00 A		1616						1716 X
VEN	2	2027	28	7.00		1616						1716 X
VEN	2	2027	28	6.00		1616						1716 X
VEN	2	2036	37	5.00 A		1616						1716 X
VEN	2	2037	38	5.00 B		1616						1716 X
VEN	2	2027	28	4.00 A		1616						1716 X
VEN	2	2028	29	4.00 B		1616						1716 X
VEN	6	6003	129	3.00 C		1617						1717
VEN	6	6001	127	3.00 A		1617						1717 X
VEN	6	6004	130	3.00 D		1617						1717 X
VEN	6	6005	131	3.00 E		1617						1717 X
VEN	6	6002	128	3.00 B		1617						1717 X
VEN	6	6006	132	2.00 A		1617						1717 X
VEN	6	6007	133	2.00 B		1617						1717 X
VEN	6	6008	134	2.00 C		1617						1717 X
L.A.	10	10018	209	9109.00 A		1618						1718
L.A.	10	10019	210	9109.00 B		1618						1718 X
L.A.	10	10016	207	9108.02 B		1618						1718 X
L.A.	10	10015	206	9108.02 A		1618						1718 X
L.A.	10	10017	208	9108.02 C		1618						1718 X
L.A.	10	10011	202	9107.00 B		1618						1718 X
L.A.	10	10010	201	9107.00 A		1618						1718 X
L.A.	10	10007	198	9106.00		1618						1718 X
L.A.	10	10006	197	9105.00		1618						1718 X
L.A.	10	10005	196	9104.00		1618						1718 X
L.A.	10	10001	192	9103.00		1618						1718 X
L.A.	10	10004	195	9102.00 C		1618						1718 X
L.A.	10	10003	194	9102.00 B		1618						1718 X
L.A.	10	10002	193	9102.00 A		1618						1718 X
L.A.	10	10008	199	9101.00 A		1618						1718 X
L.A.	10	10009	200	9101.00 B		1618						1718 X
L.A.	10	10012	203	9100.00 A		1618						1718 X
L.A.	10	10013	204	9100.00 B		1618						1718 X
L.A.	10	10014	205	9100.00 C		1618						1718 X
L.A.	27	27012	976	4088.00		1619						1719
L.A.	27	27011	975	4032.00		1619						1719 X
L.A.	27	27015	979	4030.00		1619						1719 X
L.A.	27	27017	981	4029.02		1619						1719 X
L.A.	27	27017	981	4029.01		1619						1719 X
L.A.	27	27016	980	4028.00		1619						1719 X
L.A.	27	27014	978	4027.02		1619						1719 X
L.A.	27	27014	978	4027.01		1619						1719 X
L.A.	27	27013	977	4026.00		1619						1719 X
L.A.	27	27015	979	4025.02		1619						1719 X
L.A.	27	27012	976	4025.01		1619						1719 X
L.A.	27	27011	975	4024.03		1619						1719 X
L.A.	27	27011	975	4024.02		1619						1719 X
L.A.	27	27010	974	4024.01		1619						1719 X
L.A.	27	27012	976	4023.02		1619						1719 X
L.A.	27	27010	974	4023.01		1619						1719 X
L.A.	27	27008	972	4022.00		1619						1719 X
L.A.	27	27009	973	4021.02		1619						1719 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
L.A.	27	27009	973	4021.01		1619						1719	X
L.A.	27	27006	970	4020.00		1619						1719	X
L.A.	27	27006	970	4019.02		1619						1719	X
L.A.	27	27006	970	4019.01		1619						1719	X
L.A.	27	27005	969	4018.00		1619						1719	X
L.A.	27	27009	973	4017.02		1619						1719	X
L.A.	27	27005	969	4017.01		1619						1719	X
L.A.	27	27003	967	4016.00		1619						1719	X
L.A.	27	27003	967	4015.00		1619						1719	X
L.A.	27	27004	968	4013.12		1619						1719	X
L.A.	27	27004	968	4013.11		1619						1719	X
L.A.	27	27007	971	4013.02		1619						1719	X
L.A.	27	27001	965	4003.00		1619						1719	X
L.A.	27	27018	982	4002.02		1619						1719	X
L.A.	27	27002	966	4002.01		1619						1719	X
SAN	28	28050	1032	34.00		1620						1720	
SAN	28	28038	1020	33.00		1620						1720	X
SAN	28	28037	1019	32.00		1620						1720	X
SAN	28	28037	1019	31.00		1620						1720	X
SAN	28	28017	999	30.00		1620						1720	X
SAN	28	28018	1000	29.00		1620						1720	X
SAN	28	28017	999	28.00		1620						1720	X
SAN	28	28035	1017	26.00 A		1620						1720	X
SAN	28	28036	1018	26.00 B		1620						1720	X
SAN	28	28034	1016	25.00		1620						1720	X
SAN	28	28016	998	24.00		1620						1720	X
SAN	28	28009	991	23.00 A		1620						1720	X
SAN	28	28010	992	23.00 B		1620						1720	X
SAN	28	28014	996	22.00 B		1620						1720	X
SAN	28	28013	995	22.00 A		1620						1720	X
SAN	28	28015	997	22.00 C		1620						1720	X
SAN	28	28012	994	21.00 B		1620						1720	X
SAN	28	28011	993	21.00 A		1620						1720	X
SAN	28	28053	1035	21.00 C		1620						1720	X
SAN	28	28006	988	20.00 D		1620						1720	X
SAN	28	28003	985	20.00 A		1620						1720	X
SAN	28	28007	989	20.00 E		1620						1720	X
SAN	28	28005	987	20.00 C		1620						1720	X
SAN	28	28004	986	20.00 B		1620						1720	X
SAN	28	28041	1023	19.00 A		1620						1720	X
SAN	28	28042	1024	19.00 B		1620						1720	X
SAN	28	28043	1025	19.00 C		1620						1720	X
SAN	28	28032	1014	18.00 A		1620						1720	X
SAN	28	28033	1015	18.00 B		1620						1720	X
SAN	28	28056	1038	18.00 C		1620						1720	X
SAN	28	28054	1036	17.00 B		1620						1720	X
SAN	28	28049	1031	17.00 A		1620						1720	X
SAN	28	28024	1006	16.00 A		1620						1720	X
SAN	28	28025	1007	16.00 B		1620						1720	X
SAN	28	28027	1009	15.00		1620						1720	X
SAN	28	28026	1008	14.00		1620						1720	X
SAN	28	28022	1004	13.00 A		1620						1720	X
SAN	28	28055	1037	13.00 B		1620						1720	X
SAN	28	28021	1003	12.00		1620						1720	X
SAN	28	28020	1002	11.00		1620						1720	X
SAN	28	28020	1002	10.00		1620						1720	X
SAN	28	28048	1030	9.00		1620						1720	X
SAN	28	28046	1028	8.03 A		1620						1720	X
SAN	28	28047	1029	8.03 B		1620						1720	X
SAN	28	28002	984	8.02		1620						1720	X
SAN	28	28001	983	8.01		1620						1720	X
SAN	28	28040	1022	7.00		1620						1720	X
SAN	28	28031	1013	6.02		1620						1720	X
SAN	28	28031	1013	6.01		1620						1720	X
SAN	28	28029	1011	5.00 A		1620						1720	X
SAN	28	28030	1012	5.00 B		1620						1720	X
SAN	28	28028	1010	4.00 A		1620						1720	X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
SAN	28	28039	1021	4.00 B		1620						1720 X
SAN	28	28023	1005	3.00		1620						1720 X
SAN	28	28019	1001	2.00		1620						1720 X
SAN	28	28052	1034	1.00 D		1620						1720 X
SAN	28	28044	1026	1.00 A		1620						1720 X
SAN	28	28045	1027	1.00 B		1620						1720 X
SAN	28	28051	1033	1.00 C		1620						1720 X
SAN	28	28008	990	1.00 E		1620						1720 X
SAN	29	29071	1109	88.00		1621						1721
SAN	29	29067	1105	87.00 B		1621						1721 X
SAN	29	29070	1108	87.00 E		1621						1721 X
SAN	29	29066	1104	87.00 A		1621						1721 X
SAN	29	29069	1107	87.00 D		1621						1721 X
SAN	29	29068	1106	87.00 C		1621						1721 X
SAN	29	29051	1089	86.00 B		1621						1721 X
SAN	29	29050	1088	86.00 A		1621						1721 X
SAN	29	29065	1103	85.00 B		1621						1721 X
SAN	29	29064	1102	85.00 A		1621						1721 X
SAN	29	29048	1086	84.00 A		1621						1721 X
SAN	29	29049	1087	84.00 B		1621						1721 X
SAN	29	29061	1099	83.00 A		1621						1721 X
SAN	29	29062	1100	83.00 B		1621						1721 X
SAN	29	29063	1101	82.00		1621						1721 X
SAN	29	29045	1083	81.00		1621						1721 X
SAN	29	29046	1084	80.00 A		1621						1721 X
SAN	29	29047	1085	80.00 B		1621						1721 X
SAN	29	29016	1054	79.00		1621						1721 X
SAN	29	29044	1082	78.00 B		1621						1721 X
SAN	29	29043	1081	78.00 A		1621						1721 X
SAN	29	29036	1074	78.00 C		1621						1721 X
SAN	29	29027	1065	77.00		1621						1721 X
SAN	29	29029	1067	76.00 B		1621						1721 X
SAN	29	29028	1066	76.00 A		1621						1721 X
SAN	29	29014	1052	75.00		1621						1721 X
SAN	29	29015	1053	74.02		1621						1721 X
SAN	29	29014	1052	74.01		1621						1721 X
SAN	29	29060	1098	73.00 B		1621						1721 X
SAN	29	29059	1097	73.00 A		1621						1721 X
SAN	29	29041	1079	72.00 A		1621						1721 X
SAN	29	29042	1080	72.00 B		1621						1721 X
SAN	29	29056	1094	71.00 A		1621						1721 X
SAN	29	29058	1096	71.00 C		1621						1721 X
SAN	29	29057	1095	71.00 B		1621						1721 X
SAN	29	29038	1076	70.00		1621						1721 X
SAN	29	29055	1093	69.00		1621						1721 X
SAN	29	29074	1112	68.00		1621						1721 X
SAN	29	29037	1075	67.00		1621						1721 X
SAN	29	29035	1073	66.00		1621						1721 X
SAN	29	29026	1064	65.00		1621						1721 X
SAN	29	29025	1063	64.00		1621						1721 X
SAN	29	29013	1051	63.00		1621						1721 X
SAN	29	29011	1049	62.00		1621						1721 X
SAN	29	29009	1047	61.00		1621						1721 X
SAN	29	29039	1077	60.00 A		1621						1721 X
SAN	29	29040	1078	60.00 B		1621						1721 X
SAN	29	29032	1070	59.00		1621						1721 X
SAN	29	29073	1111	58.00		1621						1721 X
SAN	29	29023	1061	57.00		1621						1721 X
SAN	29	29024	1062	56.00		1621						1721 X
SAN	29	29012	1050	55.00		1621						1721 X
SAN	29	29012	1050	54.00		1621						1721 X
SAN	29	29010	1048	53.00		1621						1721 X
SAN	29	29010	1048	52.00		1621						1721 X
SAN	29	29008	1046	51.00		1621						1721 X
SAN	29	29072	1110	50.00		1621						1721 X
SAN	29	29031	1069	49.00		1621						1721 X
SAN	29	29020	1058	48.00		1621						1721 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
SAN	29	29022	1060	47.00		1621						1721	X
SAN	29	29006	1044	46.00		1621						1721	X
SAN	29	29005	1043	45.00 C		1621						1721	X
SAN	29	29003	1041	45.00 A		1621						1721	X
SAN	29	29004	1042	45.00 B		1621						1721	X
SAN	29	29030	1068	44.00		1621						1721	X
SAN	29	29020	1058	43.00		1621						1721	X
SAN	29	29022	1060	42.00		1621						1721	X
SAN	29	29007	1045	41.00		1621						1721	X
SAN	29	29053	1091	40.00 B		1621						1721	X
SAN	29	29052	1090	40.00 A		1621						1721	X
SAN	29	29054	1092	40.00 C		1621						1721	X
SAN	29	29019	1057	39.00		1621						1721	X
SAN	29	29021	1059	38.00		1621						1721	X
SAN	29	29019	1057	37.00		1621						1721	X
SAN	29	29034	1072	36.00 B		1621						1721	X
SAN	29	29033	1071	36.00 A		1621						1721	X
SAN	29	29018	1056	35.00 B		1621						1721	X
SAN	29	29017	1055	35.00 A		1621						1721	X
SAN	29	29075	1113	35.00 C		1621						1721	X
SAN	29	29002	1040	27.00 B		1621						1721	X
SAN	29	29001	1039	27.00 A		1621						1721	X
SAN	30	30018	1131	102.02 D		1622						1722	
SAN	30	30017	1130	102.02 C		1622						1722	X
SAN	30	30016	1129	102.02 B		1622						1722	X
SAN	30	30015	1128	102.02 A		1622						1722	X
SAN	30	30014	1127	102.01 E		1622						1722	X
SAN	30	30013	1126	102.01 D		1622						1722	X
SAN	30	30012	1125	102.01 C		1622						1722	X
SAN	30	30011	1124	102.01 B		1622						1722	X
SAN	30	30010	1123	102.01 A		1622						1722	X
SAN	30	30009	1122	101.00 F		1622						1722	X
SAN	30	30008	1121	101.00 E		1622						1722	X
SAN	30	30007	1120	101.00 D		1622						1722	X
SAN	30	30006	1119	101.00 C		1622						1722	X
SAN	30	30005	1118	101.00 B		1622						1722	X
SAN	30	30004	1117	101.00 A		1622						1722	X
SAN	30	30003	1116	92.00 C		1622						1722	X
SAN	30	30002	1115	92.00 B		1622						1722	X
SAN	30	30001	1114	92.00 A		1622						1722	X
ORNG	35	35012	1143	1106.04		1623						1723	
ORNG	35	35001	1132	1106.03		1623						1723	X
ORNG	35	35001	1132	1106.01		1623						1723	X
ORNG	35	35015	1146	1105.00		1623						1723	X
ORNG	35	35004	1135	1104.02		1623						1723	X
ORNG	35	35004	1135	1104.01		1623						1723	X
ORNG	35	35014	1145	1103.04		1623						1723	X
ORNG	35	35003	1134	1103.03		1623						1723	X
ORNG	35	35003	1134	1103.02		1623						1723	X
ORNG	35	35014	1145	1103.01		1623						1723	X
ORNG	35	35006	1137	1102.03		1623						1723	X
ORNG	35	35006	1137	1102.02		1623						1723	X
ORNG	35	35006	1137	1102.01		1623						1723	X
ORNG	35	35008	1139	1101.14		1623						1723	X
ORNG	35	35016	1147	1101.13		1623						1723	X
ORNG	35	35005	1136	1101.12		1623						1723	X
ORNG	35	35005	1136	1101.11		1623						1723	X
ORNG	35	35007	1138	1101.10		1623						1723	X
ORNG	35	35007	1138	1101.09		1623						1723	X
ORNG	35	35009	1140	1101.08		1623						1723	X
ORNG	35	35008	1139	1101.06		1623						1723	X
ORNG	35	35005	1136	1101.04		1623						1723	X
ORNG	35	35002	1133	1101.02		1623						1723	X
ORNG	35	35002	1133	1101.01		1623						1723	X
ORNG	35	35009	1140	1100.13		1623						1723	X
ORNG	35	35013	1144	1100.12		1623						1723	X
ORNG	35	35011	1142	1100.11		1623						1723	X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
ORNG	35	35011	1142	1100.10		1623						1723 X
ORNG	35	35010	1141	1100.08		1623						1723 X
ORNG	35	35010	1141	1100.07		1623						1723 X
ORNG	35	35010	1141	1100.06		1623						1723 X
ORNG	36	36007	1154	1106.05		1624						1724
ORNG	36	36012	1159	117.08		1624						1724 X
ORNG	36	36012	1159	117.07		1624						1724 X
ORNG	36	36019	1166	116.02		1624						1724 X
ORNG	36	36019	1166	116.01		1624						1724 X
ORNG	36	36017	1164	115.02		1624						1724 X
ORNG	36	36017	1164	115.01		1624						1724 X
ORNG	36	36016	1163	114.02		1624						1724 X
ORNG	36	36016	1163	114.01		1624						1724 X
ORNG	36	36016	1163	113.00		1624						1724 X
ORNG	36	36014	1161	112.00		1624						1724 X
ORNG	36	36018	1165	111.02		1624						1724 X
ORNG	36	36018	1165	111.01		1624						1724 X
ORNG	36	36014	1161	110.00		1624						1724 X
ORNG	36	36015	1162	19.03		1624						1724 X
ORNG	36	36015	1162	19.02		1624						1724 X
ORNG	36	36015	1162	19.01		1624						1724 X
ORNG	36	36013	1160	18.02		1624						1724 X
ORNG	36	36013	1160	18.01		1624						1724 X
ORNG	36	36008	1155	17.02		1624						1724 X
ORNG	36	36007	1154	17.01		1624						1724 X
ORNG	36	36011	1158	16.02		1624						1724 X
ORNG	36	36010	1157	16.01		1624						1724 X
ORNG	36	36011	1158	15.05		1624						1724 X
ORNG	36	36009	1156	15.04		1624						1724 X
ORNG	36	36009	1156	15.03		1624						1724 X
ORNG	36	36006	1153	15.02		1624						1724 X
ORNG	36	36005	1152	15.01		1624						1724 X
ORNG	36	36004	1151	14.04		1624						1724 X
ORNG	36	36005	1152	14.03		1624						1724 X
ORNG	36	36004	1151	14.02		1624						1724 X
ORNG	36	36002	1149	14.01		1624						1724 X
ORNG	36	36003	1150	13.02		1624						1724 X
ORNG	36	36003	1150	13.01		1624						1724 X
ORNG	36	36002	1149	12.00		1624						1724 X
ORNG	36	36001	1148	11.03		1624						1724 X
ORNG	36	36001	1148	11.02		1624						1724 X
ORNG	36	36001	1148	11.01		1624						1724 X
ORNG	37	37033	1199	1100.05		1625						1725
ORNG	37	37032	1198	1100.04		1625						1725 X
ORNG	37	37032	1198	1100.03		1625						1725 X
ORNG	37	37033	1199	1100.01		1625						1725 X
ORNG	37	37030	1196	891.02		1625						1725 X
ORNG	37	37027	1193	891.01		1625						1725 X
ORNG	37	37030	1196	890.02 A		1625						1725 X
ORNG	37	37029	1195	889.03		1625						1725 X
ORNG	37	37029	1195	889.02		1625						1725 X
ORNG	37	37029	1195	889.01		1625						1725 X
ORNG	37	37024	1190	888.00		1625						1725 X
ORNG	37	37025	1191	887.02		1625						1725 X
ORNG	37	37025	1191	887.01		1625						1725 X
ORNG	37	37026	1192	886.02		1625						1725 X
ORNG	37	37026	1192	886.01		1625						1725 X
ORNG	37	37027	1193	885.02		1625						1725 X
ORNG	37	37027	1193	885.01		1625						1725 X
ORNG	37	37023	1189	884.03		1625						1725 X
ORNG	37	37023	1189	884.02		1625						1725 X
ORNG	37	37022	1188	884.01		1625						1725 X
ORNG	37	37022	1188	883.02		1625						1725 X
ORNG	37	37021	1187	883.01		1625						1725 X
ORNG	37	37025	1191	882.03		1625						1725 X
ORNG	37	37021	1187	882.02		1625						1725 X
ORNG	37	37020	1186	882.01		1625						1725 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
ORNG	37	37024	1190	881.03		1625						1725	X
ORNG	37	37024	1190	881.02		1625						1725	X
ORNG	37	37031	1197	881.01		1625						1725	X
ORNG	37	37020	1186	880.02		1625						1725	X
ORNG	37	37020	1186	880.01		1625						1725	X
ORNG	37	37019	1185	879.02		1625						1725	X
ORNG	37	37019	1185	879.01		1625						1725	X
ORNG	37	37014	1180	878.06		1625						1725	X
ORNG	37	37014	1180	878.05		1625						1725	X
ORNG	37	37014	1180	878.03		1625						1725	X
ORNG	37	37028	1194	878.02		1625						1725	X
ORNG	37	37028	1194	878.01		1625						1725	X
ORNG	37	37015	1181	877.04		1625						1725	X
ORNG	37	37015	1181	877.03		1625						1725	X
ORNG	37	37009	1175	877.01		1625						1725	X
ORNG	37	37016	1182	876.02		1625						1725	X
ORNG	37	37016	1182	876.01		1625						1725	X
ORNG	37	37017	1183	875.04		1625						1725	X
ORNG	37	37017	1183	875.03		1625						1725	X
ORNG	37	37017	1183	875.01		1625						1725	X
ORNG	37	37012	1178	874.03		1625						1725	X
ORNG	37	37012	1178	874.02		1625						1725	X
ORNG	37	37011	1177	874.01		1625						1725	X
ORNG	37	37011	1177	873.00		1625						1725	X
ORNG	37	37003	1169	872.00		1625						1725	X
ORNG	37	37010	1176	871.04		1625						1725	X
ORNG	37	37010	1176	871.03		1625						1725	X
ORNG	37	37010	1176	871.02		1625						1725	X
ORNG	37	37009	1175	871.01		1625						1725	X
ORNG	37	37009	1175	870.02		1625						1725	X
ORNG	37	37008	1174	870.01		1625						1725	X
ORNG	37	37008	1174	869.03		1625						1725	X
ORNG	37	37007	1173	869.02		1625						1725	X
ORNG	37	37007	1173	869.01		1625						1725	X
ORNG	37	37001	1167	868.03		1625						1725	X
ORNG	37	37001	1167	868.02		1625						1725	X
ORNG	37	37001	1167	868.01		1625						1725	X
ORNG	37	37002	1168	867.02		1625						1725	X
ORNG	37	37002	1168	867.01		1625						1725	X
ORNG	37	37003	1169	866.02		1625						1725	X
ORNG	37	37003	1169	866.01		1625						1725	X
ORNG	37	37004	1170	865.02		1625						1725	X
ORNG	37	37004	1170	865.01		1625						1725	X
ORNG	37	37006	1172	864.07		1625						1725	X
ORNG	37	37006	1172	864.06		1625						1725	X
ORNG	37	37005	1171	864.05		1625						1725	X
ORNG	37	37005	1171	864.04		1625						1725	X
ORNG	37	37005	1171	864.02		1625						1725	X
ORNG	37	37034	1200	863.06		1625						1725	X
ORNG	37	37034	1200	863.05		1625						1725	X
ORNG	37	37006	1172	863.04		1625						1725	X
ORNG	37	37018	1184	863.03		1625						1725	X
ORNG	37	37013	1179	863.01		1625						1725	X
ORNG	37	37023	1189	761.03		1625						1725	X
ORNG	38	38006	1206	999.04		1626						1726	
ORNG	38	38006	1206	999.03		1626						1726	X
ORNG	38	38013	1213	999.02		1626						1726	X
ORNG	38	38013	1213	999.01		1626						1726	X
ORNG	38	38007	1207	998.03		1626						1726	X
ORNG	38	38007	1207	998.02		1626						1726	X
ORNG	38	38007	1207	998.01		1626						1726	X
ORNG	38	38011	1211	997.03		1626						1726	X
ORNG	38	38011	1211	997.02		1626						1726	X
ORNG	38	38011	1211	997.01		1626						1726	X
ORNG	38	38009	1209	996.05		1626						1726	X
ORNG	38	38009	1209	996.04		1626						1726	X
ORNG	38	38005	1205	996.03		1626						1726	X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
ORNG	38	38005	1205	996.02		1626						1726 X
ORNG	38	38006	1206	996.01		1626						1726 X
ORNG	38	38004	1204	995.08		1626						1726 X
ORNG	38	38004	1204	995.07		1626						1726 X
ORNG	38	38004	1204	995.06		1626						1726 X
ORNG	38	38002	1202	995.05		1626						1726 X
ORNG	38	38002	1202	995.04		1626						1726 X
ORNG	38	38001	1201	995.03		1626						1726 X
ORNG	38	38003	1203	995.02		1626						1726 X
ORNG	38	38014	1214	994.15		1626						1726 X
ORNG	38	38014	1214	994.14		1626						1726 X
ORNG	38	38015	1215	994.13		1626						1726 X
ORNG	38	38015	1215	994.12		1626						1726 X
ORNG	38	38010	1210	994.11		1626						1726 X
ORNG	38	38010	1210	994.10		1626						1726 X
ORNG	38	38008	1208	994.08		1626						1726 X
ORNG	38	38008	1208	994.07		1626						1726 X
ORNG	38	38032	1232	994.06		1626						1726 X
ORNG	38	38032	1232	994.05		1626						1726 X
ORNG	38	38032	1232	994.04		1626						1726 X
ORNG	38	38031	1231	994.02		1626						1726 X
ORNG	38	38019	1219	993.05		1626						1726 X
ORNG	38	38019	1219	993.04		1626						1726 X
ORNG	38	38030	1230	993.03		1626						1726 X
ORNG	38	38030	1230	993.02		1626						1726 X
ORNG	38	38024	1224	992.40		1626						1726 X
ORNG	38	38024	1224	992.39		1626						1726 X
ORNG	38	38023	1223	992.38		1626						1726 X
ORNG	38	38028	1228	992.37		1626						1726 X
ORNG	38	38020	1220	992.36		1626						1726 X
ORNG	38	38020	1220	992.35		1626						1726 X
ORNG	38	38016	1216	992.34		1626						1726 X
ORNG	38	38016	1216	992.33		1626						1726 X
ORNG	38	38027	1227	992.32		1626						1726 X
ORNG	38	38027	1227	992.31		1626						1726 X
ORNG	38	38022	1222	992.30		1626						1726 X
ORNG	38	38026	1226	992.29		1626						1726 X
ORNG	38	38022	1222	992.28		1626						1726 X
ORNG	38	38018	1218	992.27		1626						1726 X
ORNG	38	38018	1218	992.26		1626						1726 X
ORNG	38	38017	1217	992.25		1626						1726 X
ORNG	38	38017	1217	992.24		1626						1726 X
ORNG	38	38012	1212	992.23		1626						1726 X
ORNG	38	38012	1212	992.22		1626						1726 X
ORNG	38	38029	1229	992.20		1626						1726 X
ORNG	38	38028	1228	992.19		1626						1726 X
ORNG	38	38023	1223	992.17		1626						1726 X
ORNG	38	38021	1221	992.16		1626						1726 X
ORNG	38	38021	1221	992.15		1626						1726 X
ORNG	38	38021	1221	992.14		1626						1726 X
ORNG	38	38031	1231	992.12		1626						1726 X
ORNG	38	38010	1210	992.11		1626						1726 X
ORNG	38	38012	1212	992.04		1626						1726 X
ORNG	38	38025	1225	889.05		1626						1726 X
ORNG	38	38025	1225	889.04		1626						1726 X
ORNG	39	39028	1260	639.08		1627						1727
ORNG	39	39002	1234	639.07		1627						1727 X
ORNG	39	39004	1236	639.06		1627						1727 X
ORNG	39	39003	1235	639.05		1627						1727 X
ORNG	39	39006	1238	639.04		1627						1727 X
ORNG	39	39028	1260	639.03		1627						1727 X
ORNG	39	39028	1260	639.02		1627						1727 X
ORNG	39	39003	1235	638.08		1627						1727 X
ORNG	39	39003	1235	638.07		1627						1727 X
ORNG	39	39001	1233	638.06		1627						1727 X
ORNG	39	39001	1233	638.05		1627						1727 X
ORNG	39	39003	1235	638.03		1627						1727 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
ORNG	39	39001	1233	638.02		1627						1727 X
ORNG	39	39004	1236	637.00		1627						1727 X
ORNG	39	39027	1259	636.03		1627						1727 X
ORNG	39	39008	1240	636.02		1627						1727 X
ORNG	39	39008	1240	636.01		1627						1727 X
ORNG	39	39027	1259	635.00		1627						1727 X
ORNG	39	39020	1252	634.00		1627						1727 X
ORNG	39	39009	1241	633.00		1627						1727 X
ORNG	39	39009	1241	632.02		1627						1727 X
ORNG	39	39010	1242	632.01		1627						1727 X
ORNG	39	39010	1242	631.03		1627						1727 X
ORNG	39	39010	1242	631.02		1627						1727 X
ORNG	39	39005	1237	631.01		1627						1727 X
ORNG	39	39026	1258	630.08		1627						1727 X
ORNG	39	39029	1261	630.07		1627						1727 X
ORNG	39	39022	1254	630.06		1627						1727 X
ORNG	39	39022	1254	630.05		1627						1727 X
ORNG	39	39013	1245	630.04		1627						1727 X
ORNG	39	39030	1262	630.01		1627						1727 X
ORNG	39	39027	1259	629.00		1627						1727 X
ORNG	39	39021	1253	628.00		1627						1727 X
ORNG	39	39023	1255	627.00		1627						1727 X
ORNG	39	39032	1264	626.21 A		1627						1727 X
ORNG	39	39016	1248	626.18		1627						1727 X
ORNG	39	39023	1255	626.17 C		1627						1727 X
ORNG	39	39024	1256	626.17 A		1627						1727 X
ORNG	39	39025	1257	626.17 B		1627						1727 X
ORNG	39	39015	1247	626.16		1627						1727 X
ORNG	39	39014	1246	626.15		1627						1727 X
ORNG	39	39014	1246	626.14		1627						1727 X
ORNG	39	39031	1263	626.13		1627						1727 X
ORNG	39	39007	1239	626.12		1627						1727 X
ORNG	39	39007	1239	626.11		1627						1727 X
ORNG	39	39012	1244	626.10 B		1627						1727 X
ORNG	39	39011	1243	626.10 A		1627						1727 X
ORNG	39	39033	1265	626.10 C		1627						1727 X
ORNG	39	39019	1251	626.04 G		1627						1727 X
ORNG	39	39018	1250	626.04 F		1627						1727 X
ORNG	39	39017	1249	626.04 E		1627						1727 X
ORNG	40	40014	1279	626.23		1628						1728
ORNG	40	40016	1281	626.22		1628						1728 X
ORNG	40	40015	1280	626.21 B		1628						1728 X
ORNG	40	40009	1274	626.20		1628						1728 X
ORNG	40	40009	1274	626.19		1628						1728 X
ORNG	40	40035	1300	626.08 C		1628						1728 X
ORNG	40	40017	1282	626.08 A		1628						1728 X
ORNG	40	40034	1299	626.08 B		1628						1728 X
ORNG	40	40012	1277	626.07 C		1628						1728 X
ORNG	40	40009	1274	626.07 A		1628						1728 X
ORNG	40	40013	1278	626.07 E		1628						1728 X
ORNG	40	40011	1276	626.07 B		1628						1728 X
ORNG	40	40010	1275	626.07 D		1628						1728 X
ORNG	40	40008	1273	626.05		1628						1728 X
ORNG	40	40005	1270	626.04 A		1628						1728 X
ORNG	40	40008	1273	626.04 D		1628						1728 X
ORNG	40	40007	1272	626.04 C		1628						1728 X
ORNG	40	40006	1271	626.04 B		1628						1728 X
ORNG	40	40024	1289	423.14 B		1628						1728 X
ORNG	40	40023	1288	423.14 A		1628						1728 X
ORNG	40	40036	1301	423.14 C		1628						1728 X
ORNG	40	40025	1290	423.13		1628						1728 X
ORNG	40	40029	1294	423.12		1628						1728 X
ORNG	40	40028	1293	423.11		1628						1728 X
ORNG	40	40027	1292	423.10		1628						1728 X
ORNG	40	40001	1266	423.09 A		1628						1728 X
ORNG	40	40002	1267	423.09 B		1628						1728 X
ORNG	40	40003	1268	423.09 C		1628						1728 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT		1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
ORNG	40	40004	1269	423.09	D		1628						1728	X
ORNG	40	40018	1283	423.08	A		1628						1728	X
ORNG	40	40019	1284	423.08	B		1628						1728	X
ORNG	40	40018	1283	423.07			1628						1728	X
ORNG	40	40022	1287	423.06			1628						1728	X
ORNG	40	40013	1278	423.05	A		1628						1728	X
ORNG	40	40022	1287	423.05	B		1628						1728	X
ORNG	40	40020	1285	423.03	A		1628						1728	X
ORNG	40	40021	1286	423.03	B		1628						1728	X
ORNG	40	40030	1295	422.02			1628						1728	X
ORNG	40	40026	1291	422.01			1628						1728	X
ORNG	40	40032	1297	421.04			1628						1728	X
ORNG	40	40033	1298	421.03			1628						1728	X
ORNG	40	40033	1298	421.02			1628						1728	X
ORNG	40	40031	1296	421.01			1628						1728	X
ORNG	41	41020	1321	219.07	B		1629						1729	
ORNG	41	41018	1319	219.07	A		1629						1729	X
ORNG	41	41019	1320	219.06	A		1629						1729	X
ORNG	41	41021	1322	219.06	B		1629						1729	X
ORNG	41	41017	1318	219.05			1629						1729	X
ORNG	41	41016	1317	219.04			1629						1729	X
ORNG	41	41016	1317	219.03			1629						1729	X
ORNG	41	41015	1316	218.13			1629						1729	X
ORNG	41	41014	1315	218.12			1629						1729	X
ORNG	41	41014	1315	218.11			1629						1729	X
ORNG	41	41006	1307	218.10			1629						1729	X
ORNG	41	41006	1307	218.09			1629						1729	X
ORNG	41	41009	1310	218.08	B		1629						1729	X
ORNG	41	41010	1311	218.08	C		1629						1729	X
ORNG	41	41008	1309	218.08	A		1629						1729	X
ORNG	41	41011	1312	218.07			1629						1729	X
ORNG	41	41011	1312	218.06			1629						1729	X
ORNG	41	41001	1302	218.05			1629						1729	X
ORNG	41	41007	1308	218.02			1629						1729	X
ORNG	41	41003	1304	117.18			1629						1729	X
ORNG	41	41003	1304	117.17			1629						1729	X
ORNG	41	41005	1306	117.16			1629						1729	X
ORNG	41	41005	1306	117.15			1629						1729	X
ORNG	41	41013	1314	117.14			1629						1729	X
ORNG	41	41012	1313	117.13			1629						1729	X
ORNG	41	41004	1305	117.12			1629						1729	X
ORNG	41	41004	1305	117.11			1629						1729	X
ORNG	41	41002	1303	117.10			1629						1729	X
ORNG	41	41002	1303	117.09			1629						1729	X
ORNG	42	42035	1357	992.03			1630						1730	
ORNG	42	42035	1357	992.02			1630						1730	X
ORNG	42	42035	1357	992.01			1630						1730	X
ORNG	42	42034	1356	891.03			1630						1730	X
ORNG	42	42034	1356	890.02	B		1630						1730	X
ORNG	42	42034	1356	890.01			1630						1730	X
ORNG	42	42012	1334	762.08			1630						1730	X
ORNG	42	42004	1326	762.07			1630						1730	X
ORNG	42	42005	1327	762.06			1630						1730	X
ORNG	42	42005	1327	762.05			1630						1730	X
ORNG	42	42003	1325	762.04			1630						1730	X
ORNG	42	42013	1335	762.02			1630						1730	X
ORNG	42	42013	1335	762.01			1630						1730	X
ORNG	42	42001	1323	761.02			1630						1730	X
ORNG	42	42002	1324	761.01			1630						1730	X
ORNG	42	42002	1324	760.00			1630						1730	X
ORNG	42	42006	1328	759.02			1630						1730	X
ORNG	42	42006	1328	759.01			1630						1730	X
ORNG	42	42015	1337	758.10			1630						1730	X
ORNG	42	42015	1337	758.09			1630						1730	X
ORNG	42	42008	1330	758.08			1630						1730	X
ORNG	42	42008	1330	758.07			1630						1730	X
ORNG	42	42007	1329	758.06			1630						1730	X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
ORNG	42	42007	1329	758.05		1630						1730 X
ORNG	42	42008	1330	758.04		1630						1730 X
ORNG	42	42011	1333	758.03		1630						1730 X
ORNG	42	42014	1336	758.02		1630						1730 X
ORNG	42	42022	1344	757.03		1630						1730 X
ORNG	42	42022	1344	757.02		1630						1730 X
ORNG	42	42022	1344	757.01		1630						1730 X
ORNG	42	42018	1340	756.03		1630						1730 X
ORNG	42	42017	1339	756.02		1630						1730 X
ORNG	42	42016	1338	756.01		1630						1730 X
ORNG	42	42019	1341	755.09		1630						1730 X
ORNG	42	42019	1341	755.08		1630						1730 X
ORNG	42	42018	1340	755.07		1630						1730 X
ORNG	42	42018	1340	755.06		1630						1730 X
ORNG	42	42021	1343	755.05		1630						1730 X
ORNG	42	42021	1343	755.04		1630						1730 X
ORNG	42	42024	1346	754.05		1630						1730 X
ORNG	42	42024	1346	754.04		1630						1730 X
ORNG	42	42023	1345	754.03		1630						1730 X
ORNG	42	42024	1346	754.01		1630						1730 X
ORNG	42	42025	1347	753.03		1630						1730 X
ORNG	42	42025	1347	753.02		1630						1730 X
ORNG	42	42025	1347	753.01		1630						1730 X
ORNG	42	42026	1348	752.02		1630						1730 X
ORNG	42	42026	1348	752.01		1630						1730 X
ORNG	42	42027	1349	751.00		1630						1730 X
ORNG	42	42027	1349	750.02		1630						1730 X
ORNG	42	42027	1349	750.01		1630						1730 X
ORNG	42	42032	1354	749.02		1630						1730 X
ORNG	42	42032	1354	749.01		1630						1730 X
ORNG	42	42033	1355	748.04		1630						1730 X
ORNG	42	42033	1355	748.03		1630						1730 X
ORNG	42	42033	1355	748.02		1630						1730 X
ORNG	42	42032	1354	748.01		1630						1730 X
ORNG	42	42031	1353	747.02		1630						1730 X
ORNG	42	42031	1353	747.01		1630						1730 X
ORNG	42	42029	1351	746.02		1630						1730 X
ORNG	42	42029	1351	746.01		1630						1730 X
ORNG	42	42030	1352	745.02		1630						1730 X
ORNG	42	42029	1351	745.01		1630						1730 X
ORNG	42	42041	1363	744.04		1630						1730 X
ORNG	42	42041	1363	744.03		1630						1730 X
ORNG	42	42028	1350	744.01		1630						1730 X
ORNG	42	42030	1352	743.00		1630						1730 X
ORNG	42	42030	1352	742.00		1630						1730 X
ORNG	42	42038	1360	741.05		1630						1730 X
ORNG	42	42039	1361	741.04		1630						1730 X
ORNG	42	42037	1359	741.03		1630						1730 X
ORNG	42	42037	1359	741.02		1630						1730 X
ORNG	42	42036	1358	741.01		1630						1730 X
ORNG	42	42039	1361	740.06		1630						1730 X
ORNG	42	42039	1361	740.05		1630						1730 X
ORNG	42	42040	1362	740.04		1630						1730 X
ORNG	42	42040	1362	740.03		1630						1730 X
ORNG	42	42020	1342	525.02		1630						1730 X
ORNG	42	42010	1332	219.09		1630						1730 X
ORNG	42	42009	1331	219.08		1630						1730 X
ORNG	43	43006	1369	524.11		1631						1731
ORNG	43	43006	1369	524.10 A		1631						1731 X
ORNG	43	43005	1368	524.09		1631						1731 X
ORNG	43	43005	1368	524.08 A		1631						1731 X
ORNG	43	43004	1367	524.07 F		1631						1731 X
ORNG	43	43003	1366	524.07 E		1631						1731 X
ORNG	43	43002	1365	524.07 D		1631						1731 X
ORNG	43	43007	1370	320.15		1631						1731 X
ORNG	43	43007	1370	320.14		1631						1731 X
ORNG	43	43013	1376	320.13		1631						1731 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
ORNG	43	43013	1376	320.12		1631						1731 X
ORNG	43	43001	1364	320.11		1631						1731 X
ORNG	43	43016	1379	320.10 B		1631						1731 X
ORNG	43	43021	1384	320.10 G		1631						1731 X
ORNG	43	43018	1381	320.10 D		1631						1731 X
ORNG	43	43019	1382	320.10 E		1631						1731 X
ORNG	43	43015	1378	320.10 A		1631						1731 X
ORNG	43	43017	1380	320.10 C		1631						1731 X
ORNG	43	43020	1383	320.10 F		1631						1731 X
ORNG	43	43014	1377	320.09 B		1631						1731 X
ORNG	43	43012	1375	320.09 A		1631						1731 X
ORNG	43	43011	1374	320.08		1631						1731 X
ORNG	43	43009	1372	320.07		1631						1731 X
ORNG	43	43008	1371	320.06		1631						1731 X
ORNG	43	43010	1373	320.03		1631						1731 X
ORNG	43	43010	1373	320.02		1631						1731 X
ORNG	44	44010	1394	525.10 A		1632						1732
ORNG	44	44011	1395	525.10 B		1632						1732 X
ORNG	44	44019	1403	525.09 A		1632						1732 X
ORNG	44	44020	1404	525.09 B		1632						1732 X
ORNG	44	44017	1401	525.08 A		1632						1732 X
ORNG	44	44018	1402	525.08 B		1632						1732 X
ORNG	44	44015	1399	525.07		1632						1732 X
ORNG	44	44016	1400	525.06		1632						1732 X
ORNG	44	44016	1400	525.05		1632						1732 X
ORNG	44	44015	1399	525.04		1632						1732 X
ORNG	44	44014	1398	525.03		1632						1732 X
ORNG	44	44012	1396	525.01 A		1632						1732 X
ORNG	44	44013	1397	525.01 B		1632						1732 X
ORNG	44	44009	1393	524.10 B		1632						1732 X
ORNG	44	44008	1392	524.08 B		1632						1732 X
ORNG	44	44001	1385	524.07 A		1632						1732 X
ORNG	44	44002	1386	524.07 B		1632						1732 X
ORNG	44	44003	1387	524.07 C		1632						1732 X
ORNG	44	44005	1389	524.06 B		1632						1732 X
ORNG	44	44004	1388	524.06 A		1632						1732 X
ORNG	44	44006	1390	524.05		1632						1732 X
ORNG	44	44007	1391	524.04 A		1632						1732 X
ORNG	44	44009	1393	524.04 B		1632						1732 X
RIV	45	45001	1405	406.02 A		1633						1733
RIV	45	45002	1406	406.02 B		1633						1733 X
RIV	45	45003	1407	406.02 C		1633						1733 X
RIV	45	45005	1409	406.02 D		1633						1733 X
RIV	45	45006	1410	406.02 E		1633						1733 X
RIV	45	45004	1408	406.01		1633						1733 X
RIV	45	45007	1411	405.00		1633						1733 X
RIV	45	45009	1413	404.00 B		1633						1733 X
RIV	45	45008	1412	404.00 A		1633						1733 X
RIV	45	45013	1417	403.00 B		1633						1733 X
RIV	45	45012	1416	403.00 A		1633						1733 X
RIV	45	45014	1418	402.00 A		1633						1733 X
RIV	45	45015	1419	402.00 B		1633						1733 X
RIV	45	45011	1415	401.00 B		1633						1733 X
RIV	45	45010	1414	401.00 A		1633						1733 X
RIV	46	46053	1472	425.03 F		1634						1734
RIV	46	46030	1449	425.02 A		1634						1734 X
RIV	46	46029	1448	425.01 B		1634						1734 X
RIV	46	46050	1469	424.00 C		1634						1734 X
RIV	46	46019	1438	424.00 B		1634						1734 X
RIV	46	46018	1437	424.00 A		1634						1734 X
RIV	46	46014	1433	423.00 B		1634						1734 X
RIV	46	46017	1436	422.04 B		1634						1734 X
RIV	46	46015	1434	422.03 A		1634						1734 X
RIV	46	46016	1435	422.02 C		1634						1734 X
RIV	46	46028	1447	422.01 B		1634						1734 X
RIV	46	46037	1456	421.00 A		1634						1734 X
RIV	46	46038	1457	421.00 B		1634						1734 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ
RIV	46	46044	1463	420.02 B		1634						1734 X
RIV	46	46042	1461	420.02 A		1634						1734 X
RIV	46	46043	1462	420.01 B		1634						1734 X
RIV	46	46045	1464	419.02 A		1634						1734 X
RIV	46	46047	1466	419.02 B		1634						1734 X
RIV	46	46031	1450	419.01 B		1634						1734 X
RIV	46	46049	1468	418.02 C		1634						1734 X
RIV	46	46046	1465	418.01 B		1634						1734 X
RIV	46	46039	1458	417.02 A		1634						1734 X
RIV	46	46039	1458	417.01 A		1634						1734 X
RIV	46	46040	1459	416.00 B		1634						1734 X
RIV	46	46032	1451	415.00 C		1634						1734 X
RIV	46	46041	1460	414.02 C		1634						1734 X
RIV	46	46033	1452	414.01 C		1634						1734 X
RIV	46	46023	1442	413.00 B		1634						1734 X
RIV	46	46023	1442	412.00 C		1634						1734 X
RIV	46	46052	1471	411.00 A		1634						1734 X
RIV	46	46002	1421	410.00		1634						1734 X
RIV	46	46022	1441	409.00 B		1634						1734 X
RIV	46	46020	1439	408.05 C		1634						1734 X
RIV	46	46020	1439	408.04 A		1634						1734 X
RIV	46	46021	1440	408.03 A		1634						1734 X
RIV	46	46048	1467	408.02 A		1634						1734 X
RIV	46	46051	1470	408.02 B		1634						1734 X
RIV	46	46001	1420	407.00		1634						1734 X
RIV	46	46034	1453	317.00 A		1634						1734 X
RIV	46	46035	1454	317.00 B		1634						1734 X
RIV	46	46024	1443	316.00 A		1634						1734 X
RIV	46	46025	1444	315.02 B		1634						1734 X
RIV	46	46025	1444	315.01 C		1634						1734 X
RIV	46	46005	1424	314.02 A		1634						1734 X
RIV	46	46026	1445	314.01 D		1634						1734 X
RIV	46	46026	1445	313.00 A		1634						1734 X
RIV	46	46027	1446	312.00 A		1634						1734 X
RIV	46	46006	1425	311.00 A		1634						1734 X
RIV	46	46005	1424	310.00 B		1634						1734 X
RIV	46	46003	1422	309.00		1634						1734 X
RIV	46	46004	1423	308.00 A		1634						1734 X
RIV	46	46007	1426	307.00 B		1634						1734 X
RIV	46	46036	1455	306.00 B		1634						1734 X
RIV	46	46011	1430	306.00 A		1634						1734 X
RIV	46	46012	1431	305.00 B		1634						1734 X
RIV	46	46010	1429	304.00 B		1634						1734 X
RIV	46	46009	1428	303.00 A		1634						1734 X
RIV	46	46008	1427	302.00 B		1634						1734 X
RIV	46	46013	1432	301.00 A		1634						1734 X
RIV	47	47001	1473	429.00 A		1635						1735
RIV	47	47002	1474	429.00 B		1635						1735 X
RIV	47	47003	1475	429.00 C		1635						1735 X
RIV	47	47009	1481	428.00		1635						1735 X
RIV	47	47005	1477	427.04 A		1635						1735 X
RIV	47	47008	1480	427.04 C		1635						1735 X
RIV	47	47007	1479	427.04 B		1635						1735 X
RIV	47	47014	1486	427.04 D		1635						1735 X
RIV	47	47006	1478	427.03 B		1635						1735 X
RIV	47	47004	1476	427.03 A		1635						1735 X
RIV	47	47010	1482	427.02		1635						1735 X
RIV	47	47012	1484	426.00 B		1635						1735 X
RIV	47	47011	1483	426.00 A		1635						1735 X
RIV	47	47013	1485	426.00 C		1635						1735 X
RIV	48	48014	1500	437.00 B		1636						1736
RIV	48	48013	1499	437.00 A		1636						1736 X
RIV	48	48005	1491	436.00		1636						1736 X
RIV	48	48003	1489	435.02 B		1636						1736 X
RIV	48	48001	1487	435.02 A		1636						1736 X
RIV	48	48012	1498	435.02 C		1636						1736 X
RIV	48	48002	1488	435.01 A		1636						1736 X

County	SCAG RSA	SCAG "AZ"	SCAG TAZ	1980 CT	1990 CT	CWF PAZ	Grnd Access	West Adams	Split CTs	Westwoo	Santa Monica	LAX TAZ	
RIV	48	48004	1490	435.01 B		1636						1736	X
RIV	48	48006	1492	434.02		1636						1736	X
RIV	48	48006	1492	434.01		1636						1736	X
RIV	48	48008	1494	433.03		1636						1736	X
RIV	48	48007	1493	433.02		1636						1736	X
RIV	48	48011	1497	433.01 C		1636						1736	X
RIV	48	48010	1496	433.01 B		1636						1736	X
RIV	48	48009	1495	433.01 A		1636						1736	X
RIV	49	49011	1511	432.00 F		1637						1737	
RIV	49	49009	1509	432.00		1637						1737	X
RIV	49	49008	1508	432.00 D		1637						1737	X
RIV	49	49007	1507	432.00 C		1637						1737	X
RIV	49	49005	1505	432.00 A		1637						1737	X
RIV	49	49006	1506	432.00 B		1637						1737	X
RIV	49	49003	1503	431.00 B		1637						1737	X
RIV	49	49002	1502	431.00 A		1637						1737	X
RIV	49	49004	1504	430.00 A		1637						1737	X
RIV	49	49001	1501	430.00 C		1637						1737	X
RIV	49	49010	1510	430.00 B		1637						1737	X
RIV	50	50012	1523	443.00		1638						1738	
RIV	50	50013	1524	442.00		1638						1738	X
RIV	50	50014	1525	441.00 A		1638						1738	X
RIV	50	50011	1522	441.00 B		1638						1738	X
RIV	50	50010	1521	440.00		1638						1738	X
RIV	50	50009	1520	439.00		1638						1738	X
RIV	50	50016	1527	438.04 G		1638						1738	X
RIV	50	50002	1513	438.04 A		1638						1738	X
RIV	50	50006	1517	438.04 C		1638						1738	X
RIV	50	50008	1519	438.04		1638						1738	X
RIV	50	50007	1518	438.04 D		1638						1738	X
RIV	50	50015	1526	438.04 F		1638						1738	X
RIV	50	50003	1514	438.04 B		1638						1738	X
RIV	50	50004	1515	438.03 A		1638						1738	X
RIV	50	50005	1516	438.03 B		1638						1738	X
RIV	50	50001	1512	438.02		1638						1738	X
IMP	31		1530			1639						1739	
IMP	31		1529			1639						1739	X
IMP	31		1528			1639						1739	X
IMP	32		1540			1640						1740	
IMP	32		1539			1640						1740	X
IMP	32		1538			1640						1740	X
IMP	32		1537			1640						1740	X
IMP	32		1536			1640						1740	X
IMP	32		1535			1640						1740	X
IMP	32		1534			1640						1740	X
IMP	32		1533			1640						1740	X
IMP	32		1532			1640						1740	X
IMP	32		1531			1640						1740	X
IMP	33		1550			1641						1741	
IMP	33		1549			1641						1741	X
IMP	33		1548			1641						1741	X
IMP	33		1547			1641						1741	X
IMP	33		1546			1641						1741	X
IMP	33		1545			1641						1741	X
IMP	33		1544			1641						1741	X
IMP	33		1543			1641						1741	X
IMP	33		1542			1641						1741	X
IMP	33		1541			1641						1741	X
IMP	34		1555			1642						1742	
IMP	34		1554			1642						1742	X
IMP	34		1553			1642						1742	X
IMP	34		1552			1642						1742	X
IMP	34		1551			1642						1742	X

APPENDIX C

VOLUME DELAY FUNCTIONS AND F-FACTORS

F-Factors used in LAX Master Plan model

Time Interval		Home-Work	Other-Work	Home-Shop	Home-Other	Other-Other
62	63	0.01800	0.01320	0.90000	0.00610	0.00800
63	64	0.01700	0.01270	0.80000	0.00590	0.00750
64	65	0.01600	0.01220	0.70000	0.00570	0.00700
65	66	0.01500	0.01170	0.60000	0.00550	0.00680
66	67	0.01400	0.01120	0.50000	0.00530	0.00660
67	68	0.01350	0.01070	0.45000	0.00510	0.00640
68	69	0.01300	0.01020	0.40000	0.00490	0.00620
69	70	0.01250	0.00970	0.35000	0.00470	0.00600
70	71	0.01200	0.00920	0.30000	0.00450	0.00580
71	72	0.01150	0.00870	0.25000	0.00430	0.00560
72	73	0.01100	0.00820	0.20000	0.00410	0.00540
73	74	0.01050	0.00770	0.18000	0.00390	0.00520
74	75	0.01000	0.00720	0.17000	0.00370	0.00500
75	76	0.00950	0.00680	0.16000	0.00350	0.00480
76	77	0.00900	0.00660	0.15000	0.00330	0.00460
77	78	0.00850	0.00640	0.14000	0.00310	0.00440
78	79	0.00800	0.00620	0.13000	0.00300	0.00420
79	80	0.00750	0.00600	0.12000	0.00290	0.00400
80	81	0.00700	0.00580	0.11000	0.00280	0.00380
81	82	0.00650	0.00560	0.10000	0.00270	0.00360
82	83	0.00600	0.00540	0.09000	0.00260	0.00340
83	84	0.00550	0.00520	0.08000	0.00250	0.00330
84	85	0.00500	0.00500	0.07000	0.00240	0.00320
85	86	0.00450	0.00480	0.06500	0.00230	0.00310
86	87	0.00400	0.00460	0.06000	0.00220	0.00300
87	88	0.00350	0.00440	0.05500	0.00210	0.00290
88	89	0.00300	0.00420	0.05000	0.00205	0.00280
89	90	0.00250	0.00400	0.04500	0.00200	0.00270
90	91	0.00240	0.00380	0.04000	0.00195	0.00260
91	92	0.00230	0.00360	0.03500	0.00190	0.00250
92	93	0.00220	0.00340	0.03000	0.00185	0.00240
93	94	0.00210	0.00320	0.02500	0.00180	0.00230
94	95	0.00207	0.00310	0.02000	0.00175	0.00220
95	96	0.00204	0.00300	0.01500	0.00170	0.00210
96	97	0.00201	0.00290	0.01000	0.00165	0.00200
97	98	0.00198	0.00280	0.00900	0.00160	0.00190
98	99	0.00195	0.00270	0.00800	0.00155	0.00180
99	100	0.00193	0.00260	0.00750	0.00150	0.00170
100	101	0.00191	0.00250	0.00700	0.00145	0.00160
101	102	0.00188	0.00240	0.00650	0.00140	0.00150
102	103	0.00185	0.00230	0.00600	0.00135	0.00145
103	104	0.00183	0.00225	0.00550	0.00130	0.00140
104	105	0.00180	0.00220	0.00500	0.00125	0.00135
105	106	0.00178	0.00215	0.00450	0.00120	0.00130
106	107	0.00176	0.00210	0.00400	0.00115	0.00125
107	108	0.00174	0.00205	0.00350	0.00110	0.00120
108	109	0.00172	0.00200	0.00300	0.00105	0.00115
109	110	0.00170	0.00195	0.00250	0.00100	0.00110
110	111	0.00168	0.00190	0.00210	0.00095	0.00105
111	112	0.00166	0.00185	0.00170	0.00090	0.00100
112	113	0.00164	0.00180	0.00130	0.00058	0.00095
113	114	0.00162	0.00175	0.00110	0.00080	0.00090
114	115	0.00160	0.00170	0.00090	0.00075	0.00087
115	116	0.00158	0.00165	0.00070	0.00070	0.00085
116	117	0.00156	0.00160	0.00050	0.00065	0.00083
117	118	0.00154	0.00155	0.00030	0.00060	0.00081
118	119	0.00152	0.00150	0.00010	0.00055	0.00079
119	120+	0.00035	0.00040	0.00002	0.00040	0.00050

F-Factors used in LAX Master Plan model

Time Interval		Home-Work	Other-Work	Home-Shop	Home-Other	Other-Other
0	1	12.00000	14.00000	150000.00000	23.00000	33.00000
1	2	10.50000	12.00000	125000.00000	20.00000	27.00000
2	3	9.25000	10.00000	100000.00000	17.00000	21.00000
3	4	8.10000	8.50000	82500.00000	14.50000	17.00000
4	5	7.10000	7.40000	66000.00000	12.25000	14.00000
5	6	6.10000	6.40000	55000.00000	10.50000	11.25000
6	7	5.35000	5.40000	44500.00000	8.75000	9.50000
7	8	4.60000	4.40000	34500.00000	7.10000	8.00000
8	9	3.95000	3.75000	25500.00000	5.60000	6.00000
9	10	3.45000	3.15000	18000.00000	4.55000	5.00000
10	11	2.95000	2.60000	13000.00000	3.55000	4.00000
11	12	2.45000	2.05000	10500.00000	2.90000	3.10000
12	13	2.00000	1.85000	8000.00000	2.30000	2.40000
13	14	1.70000	1.55000	5500.00000	1.85000	1.75000
14	15	1.50000	1.25000	4000.00000	1.45000	1.41000
15	16	1.30000	1.00000	2500.00000	1.10000	1.15000
16	17	1.10000	0.80000	2000.00000	0.81000	0.95000
17	18	0.90000	0.70000	1500.00000	0.61000	0.78000
18	19	0.80000	0.60000	1100.00000	0.44000	0.68000
19	20	0.70000	0.50000	850.00000	0.38000	0.58000
20	21	0.60000	0.45000	700.00000	0.33000	0.48000
21	22	0.55000	0.40000	600.00000	0.27500	0.39000
22	23	0.50000	0.35000	400.00000	0.22400	0.30000
23	24	0.45000	0.30000	300.00000	0.20300	0.22000
24	25	0.40000	0.25000	250.00000	0.18200	0.17000
25	26	0.35000	0.22000	200.00000	0.16100	0.15000
26	27	0.30000	0.20000	150.00000	0.14000	0.13000
27	28	0.25000	0.18000	105.00000	0.12000	0.11000
28	29	0.23000	0.16000	80.00000	0.10000	0.10000
29	30	0.21000	0.14000	60.00000	0.08000	0.09000
30	31	0.19000	0.12000	50.00000	0.07000	0.08000
31	32	0.17000	0.11000	42.00000	0.06000	0.07000
32	33	0.15000	0.10000	36.00000	0.05000	0.06000
33	34	0.13000	0.09000	30.00000	0.04500	0.05500
34	35	0.12000	0.08000	25.00000	0.04000	0.05000
35	36	0.11000	0.07500	20.00000	0.03500	0.04500
36	37	0.10000	0.07000	15.00000	0.03300	0.04000
37	38	0.09000	0.06500	14.00000	0.03100	0.03700
38	39	0.08500	0.06000	13.00000	0.02900	0.03500
39	40	0.08000	0.05500	12.00000	0.02700	0.03300
40	41	0.07500	0.05100	11.00000	0.02500	0.03100
41	42	0.07000	0.04800	10.00000	0.02300	0.02900
42	43	0.06500	0.04500	9.00000	0.02100	0.02700
43	44	0.06000	0.04200	8.00000	0.01900	0.02500
44	45	0.05500	0.03900	7.00000	0.01800	0.02300
45	46	0.05000	0.03600	6.50000	0.01700	0.02100
46	47	0.04500	0.03400	6.00000	0.01600	0.01900
47	48	0.04000	0.03200	5.50000	0.01500	0.01700
48	49	0.03800	0.03000	5.00000	0.01400	0.01600
49	50	0.03600	0.02800	4.50000	0.01300	0.01500
50	51	0.03400	0.02600	4.00000	0.01200	0.01400
51	52	0.03200	0.02400	3.50000	0.01100	0.01350
52	53	0.03000	0.02300	3.00000	0.01050	0.01300
53	54	0.02800	0.02200	2.50000	0.01000	0.01250
54	55	0.02600	0.02100	2.00000	0.00950	0.01200
55	56	0.02500	0.02000	1.80000	0.00900	0.01150
56	57	0.02400	0.01900	1.60000	0.00850	0.01100
57	58	0.02300	0.01800	1.40000	0.00800	0.01050
58	59	0.02200	0.01700	1.30000	0.00750	0.01000
59	60	0.02100	0.01600	1.20000	0.00700	0.00950
60	61	0.02000	0.01500	1.10000	0.00670	0.00900
61	62	0.01900	0.01400	1.00000	0.00640	0.00850

```
c EMME/2Volume Delay Functions
c Project: LAX Ground Access Model Improvement
t functions init
a fd11 =(length*60/50)*(1 +.15*(((volau + volad)/(  lanes*1530))^4))
a fd12 =(length*60/25)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd13 =(length*60/25)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd14 =(length*60/25)*(1 +.15*(((volau + volad)/(  lanes* 450))^4))
a fd17 =(length*60/25)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd18 =(length*60/50)*(1 +.15*(((volau + volad)/(  lanes*1200))^4))
a fd19 =(length*60/15)
a fd21 =(length*60/55)*(1 +.15*(((volau + volad)/(  lanes*1530))^4))
a fd22 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd23 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd24 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 450))^4))
a fd27 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd28 =(length*60/55)*(1 +.15*(((volau + volad)/(  lanes*1200))^4))
a fd29 =(length*60/15)
a fd31 =(length*60/55)*(1 +.15*(((volau + volad)/(  lanes*1530))^4))
a fd32 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd33 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd34 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 450))^4))
a fd37 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd38 =(length*60/55)*(1 +.15*(((volau + volad)/(  lanes*1200))^4))
a fd39 =(length*60/15)
a fd41 =(length*60/55)*(1 +.15*(((volau + volad)/(  lanes*1530))^4))
a fd42 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd43 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd44 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 450))^4))
a fd47 =(length*60/30)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd48 =(length*60/55)*(1 +.15*(((volau + volad)/(  lanes*1200))^4))
a fd49 =(length*60/15)
a fd51 =(length*60/55)*(1 +.15*(((volau + volad)/(  lanes*1530))^4))
a fd52 =(length*60/35)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd53 =(length*60/35)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd54 =(length*60/35)*(1 +.15*(((volau + volad)/(  lanes* 450))^4))
a fd57 =(length*60/35)*(1 +.15*(((volau + volad)/(  lanes* 540))^4))
a fd58 =(length*60/55)*(1 +.15*(((volau + volad)/(  lanes*1200))^4))
a fd59 =(length*60/45)
a fd61 =(length*60/55)*(1 +.15*(((volau + volad)/(3*lanes*1530))^4))
a fd62 =(length*60/30)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd63 =(length*60/30)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd64 =(length*60/30)*(1 +.15*(((volau + volad)/(3*lanes* 450))^4))
a fd67 =(length*60/30)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd68 =(length*60/55)*(1 +.15*(((volau + volad)/(3*lanes*1200))^4))
a fd69 =(length*60/15)
a fd71 =(length*60/55)*(1 +.15*(((volau + volad)/(3*lanes*1530))^4))
a fd72 =(length*60/30)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd73 =(length*60/30)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd74 =(length*60/30)*(1 +.15*(((volau + volad)/(3*lanes* 450))^4))
a fd77 =(length*60/30)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd78 =(length*60/55)*(1 +.15*(((volau + volad)/(3*lanes*1200))^4))
a fd79 =(length*60/15)
a fd81 =(length*60/55)*(1 +.15*(((volau + volad)/(3*lanes*1530))^4))
a fd82 =(length*60/35)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd83 =(length*60/35)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd84 =(length*60/35)*(1 +.15*(((volau + volad)/(3*lanes* 450))^4))
a fd87 =(length*60/35)*(1 +.15*(((volau + volad)/(3*lanes* 540))^4))
a fd88 =(length*60/55)*(1 +.15*(((volau + volad)/(3*lanes*1200))^4))
a fd89 =(length*60/45)
a fd90 =(length*60/35)*(1 +.15*(((volau + volad)/(  lanes* 650))^4))
a fd91 =(length*60/40)*(1 +.15*(((volau + volad)/(  lanes* 900))^4))
a fd92 =(length*60/50)*(1 +.15*(((volau + volad)/(  lanes*1530))^4))
a fd93 =(length*60/50)*(1 +.15*(((volau + volad)/(  lanes*1200))^4))
a fd94 =(length*60/60)*(1 +.15*(((volau + volad)/(  lanes*1700))^4))
a fd95 =(length*60/25)*(1 +.15*(((volau + volad)/(  lanes* 300))^4))
a fd96 =(length*60/45)*(1 +.15*(((volau + volad)/(  lanes*1000))^4))
a fd97 =(length*60/20)*(1 +.15*(((volau + volad)/(  lanes* 200))^4))
a fd98 =(length*60/50)*(1 +.15*(((volau + volad)/(  lanes* 960))^4))
c
a fp1 =1.0
```