

Appendix  
LAX Master Plan Final EIS/EIR

**F-D. LADOT Traffic Impact Assessment - LAX  
Master Plan Alternative D Project**



# CITY OF LOS ANGELES

CALIFORNIA

WAYNE K. TANDA  
GENERAL MANAGER



James K. Hahn  
MAYOR

## DEPARTMENT OF TRANSPORTATION

221 N. FIGUEROA ST., SUITE 500  
LOS ANGELES, CA 90012  
(213) 580-1177  
FAX (213) 580-1188

April 15, 2004

Jim Ritchie, Deputy Executive Director  
Los Angeles World Airports  
1 World Way  
Los Angeles, CA 90045

### **Re. TRAFFIC IMPACT ASSESSMENT - LAX MASTER PLAN ALTERNATIVE D PROJECT(EIR CLEARINGHOUSE NO. 199 706 1047)**

Dear Mr. Ritchie,

The City of Los Angeles Department of Transportation (LADOT) has completed an initial traffic assessment of the proposed LAX Master Plan Alternative D project. The project, located within the boundaries of the Coastal Transportation Corridor Specific Plan (Ordinance No. 168,999), proposes to modernize the Los Angeles International Airport and includes the following key features, which are also illustrated in Attachment A:

- Off-site parking and first level security screening at a new Ground Transportation Center (GTC)
- Off-site parking at a new Inter-Modal Transportation Center (ITC) that includes a connection to a Green Line Station
- Consolidated Rental Car Facility
- Prohibition of private and commercial vehicles in the Central Terminal Area (CTA)
- Commercial Vehicle Holding Area
- Internal Airport Roadway System
- Automated People Mover System that connects the CTA with the GTC, ITC, and the Rental Car Facility
- Direct Freeway Access (I-405 Freeway / Lennox Boulevard Interchange, and I-105 Connector ramps)

Alternative D, the Los Angeles World Airport (LAWA) preferred alternative, is the subject of the Supplement to the Draft Environmental Impact Statement / Environmental Impact Report (DEIS/DEIR) for the LAX Master Plan project that was released last July 2003. Under this alternative, the airport is expected to accommodate 78.9 million-annual-passengers (MAP) and 3.12 million annual tons of cargo.

## DISCUSSION AND FINDINGS

The traffic impact analysis, prepared by Parson's Transportation Group, with input and subsequent revisions from LADOT, identifies 85 intersections for detailed analysis. The study describes a comprehensive set of transportation mitigation measures deemed necessary to fully or partially mitigate the Project's significant traffic impacts at these intersections. The key elements of the traffic impact analysis are summarized below:

### Trip Generation (Attachment B)

The complete build-out of the Alternative D project is expected to generate approximately 20,159 vehicle trips during the a.m. peak hour, 21,208 vehicle trips during the p.m. peak hour, and 27,506 vehicle trips during the airport peak hour. These trips represent the total traffic expected to be generated by airport-related land uses. When compared to the trip generation for existing conditions of 13,554, 14,328, and 19,607 in the a.m., p.m. and airport peak hours, respectively, this represents a net increase in project-related traffic of **6,605** in the a.m. peak hour, **6,880** in the p.m. peak hour and **7,899** in the and airport peak hour. The estimated trip generation expected of the project is summarized in Attachment B.

### Traffic Impacts (Attachment C)

In order to evaluate the effects of the project on the transportation system and to determine the project-related traffic impacts, the significance of the traffic impacts is measured in terms of change to the volume-to-capacity (V/C) ratio between the "future baseline" (without project) and the "future with project" scenarios. This change in the V/C ratio is compared to LADOT's established threshold standards to assess the project-related traffic impacts. Of the 85 intersections studied, the project is expected to result in significant traffic impacts at 57 intersections.

Since the existing roadway infrastructure is not expected to effectively accommodate the Project trips, an appropriate mix of transportation improvements is necessary to fully or partially mitigate these anticipated impacts. The results of the proposed Alternative D transportation mitigation measures are also shown on Attachment C, which summarizes the benefit of the improvements on the study intersections in terms of V/C ratio. Of the 57 significantly impacted intersections within the entire study area, **three intersections will remain significantly impacted after mitigation**. The remaining unmitigated locations include the intersections of La Cienega Boulevard / Century Boulevard, La Cienega Boulevard / Imperial Highway, and Lincoln Boulevard / Jefferson Boulevard.

### Playa Vista Phase 2

The Draft EIR for the second phase of the Playa Vista project, known as the Village at Playa Vista, was released in August 2003. The proposed land use for this project was significantly reduced from an earlier project description. The future scenarios for the LAX Master Plan traffic impact analysis assume the earlier, larger Playa Vista Phase 2 land use definition. In doing so, the LAX Master Plan traffic analysis may have overstated future

traffic volumes along some segments of the I-405 Freeway, Jefferson Boulevard, Lincoln Boulevard, Centinela Avenue, and Sepulveda Boulevard near the Playa Vista site. Therefore, the results of the traffic impact analysis for the LAX Master Plan Alternative D are conservative and represent a worst case scenario.

## **ALTERNATIVE D - TRANSPORTATION MITIGATION PROGRAM**

A comprehensive mitigation program has been developed for the project that includes the following six major components: Transit System Enhancements, Freeway Access Upgrades, Roadway Improvements, Intersection Improvements, Traffic Signal Upgrades, and a Mitigation Phasing Plan. The proposed transportation mitigation measures are described in more detail in Attachment D. In the event the originally proposed mitigation measures become infeasible, substitute mitigation measures may be provided subject to approval by LADOT or other governing agency with jurisdiction over the mitigation location, upon demonstration that the substitute measure is equivalent or superior to the original measure in mitigating the project's significant impact.

Fourteen of the study intersections that are significantly impacted by the project can be fully or partially mitigated through enhancements to the regional transit system. For these locations, the mitigation program requires LAWA to provide a fair-share contribution toward MTA's Metro Rapid Bus Program or to other regionally significant transit enhancements. Many of these significant traffic impacts are expected along Lincoln and Sepulveda Boulevards, which are two corridors included in MTA's 5-year plan for deployment of the Metro Rapid Bus Program. Expansion of the existing transit system, through additional buses and improved signal operations providing priority treatment for buses, can serve as an effective vehicle trip-reduction measure.

A key aspect of the proposed Alternative D project is the expansion of the LAX Fly-Away program. New remote locations are being evaluated in Downtown Los Angeles, Norwalk, and in the Cities of Long Beach and Inglewood. Also, a second Fly-Away terminal is being considered in the San Fernando Valley area. Since Alternative D would restrict CTA access to all vehicles other than the Fly-Away buses, there is a clear incentive for airport-bound travelers to travel to LAX via the Fly-Away buses. Therefore, should the proposed fair-share transit enhancements not be implemented, expansion of the Fly-Away program, beyond the proposed remote terminals described above, can potentially serve as a reasonable substitute mitigation measure to provide an attractive alternative for airport-bound passengers through limited-stop service using buses equipped with luggage racks that travel along the Lincoln and Sepulveda corridors.

It should be noted that the project assumed a conservatively low future transit mode-split in the preparation of the traffic impact analysis for Alternative D. With the door-to-door convenience afforded to the passengers of the Fly-Away buses, the true trip-reduction benefit of the program may be higher than assumed in the traffic impact analysis.

It is recommended that LAWA, in consultation with LADOT and Caltrans, investigate potential regional solutions to freeway mainline congestion. In the event that freeway system improvements

above and beyond what have already been explored or programmed (like the I-405 High-Occupancy-Vehicle Lane project) cannot be identified, it may be necessary to explore improvements to key regionally-significant roadways to provide airport-bound motorists with additional and enhanced arterial route choices. One example may be grade-separating key intersections along the La Cienega corridor, which may help to relieve the delays that are expected to increase along the I-10-to-I-405 route to the airport.

All transportation improvements and associated traffic signal work within the City of Los Angeles must be guaranteed through the B-Permit process of the Bureau of Engineering, prior to the issuance of any building permit and completed prior to the issuance of any certificate of occupancy in accordance with the Mitigation Phasing Plan (see Attachment E), to the satisfaction of LADOT and the Bureau of Engineering. Temporary certificates of occupancy may be granted in the event of any delay through no fault of the applicant, provided that, in each case, the applicant has demonstrated reasonable efforts and due diligence to the satisfaction of LADOT. All improvements along state highways and at freeway ramps require approval from the State of California Department of Transportation (Caltrans). An encroachment permit must be obtained from Caltrans for each of these improvements before the issuance of any building permits, to the satisfaction of Caltrans, LADOT, and the Bureau of Engineering.

## **PROJECT DESIGN / QUEUING ANALYSIS**

LADOT should be consulted early in the advanced planning and design process of the key infrastructure features of Alternative D. It is recommended that queuing analyses, subject to review and approval by LADOT, be conducted before the final designs of the new internal airport roadways that provide access to/from the ITC, the GTC, the consolidated Rental-Car facility, and the Commercial Vehicle Holding Area. The queuing analyses will assist in determining the need for future traffic signals, intersection turn lanes, acceleration and deceleration lanes, and necessary transition lengths. The private airport roadways shall be designed in a manner to provide adequate merge/weave distances, lane storage capacities and turn radii to avoid queuing and spill-over problems onto the public roadway system.

The automated people mover (APM) system should be optimally designed and constructed to minimize disruption and vehicle delay on the public roadway and transit system. The APM system should be elevated above street level and there should be no at-grade crossing of public roadways. Furthermore, to avoid unnecessary passenger delays due to temporary APM service disruptions, backup service plans should be developed. The parking and driveway plans for the consolidated Rental-Car (RAC) facility should be designed to comply with LADOT standards and to minimize any possible conflicts between users of the RAC facility and users of the abutting street system. The site plans for the RAC facility are subject to review and approval by both LADOT and the Bureau of Engineering.

## **INTELLIGENT TRANSPORTATION SYSTEMS**

To enhance the transportation infrastructure improvements associated with the proposed project, Intelligent Transportation Systems (ITS) should play a key role in the overall modernization of the airport. ITS strategies (including computerized signal and surveillance systems, changeable message signs, and highway advisory radio) can provide improved incident management and route guidance for airport-bound motorists. Also, an effective ITS program can help to appropriately direct airport-bound traffic on the principal roadways designed to carry heavy volumes of traffic and off of the local residential streets.

## **LINCOLN CORRIDOR TASK FORCE**

The Lincoln Corridor Task Force (LCTF) was formed to join several agencies in an effort to address the increasing congestion along a five-mile stretch of Lincoln Boulevard between Manchester Avenue and the Santa Monica (I-10) Freeway and to determine the long-term transportation needs of the corridor. The LCTF includes representatives from Caltrans, the County of Los Angeles, the Cities of Los Angeles, Culver City and Santa Monica, the Los Angeles County Metropolitan Transportation Authority, the Southern California Association of Governments, and the California Coastal Commission. Ultimately, the LCTF's goal would be, with consensus from the participating agencies and input from the public, to develop a mutually agreeable transportation improvement plan for Lincoln Boulevard which may include an array of capacity enhancing measures, transit enhancement strategies, and improved corridor aesthetics.

If and when the agencies of the LCTF are successful in adopting a mutually agreeable set of transportation improvements for the Lincoln Boulevard corridor, the proposed Alternative D transportation improvements along the same corridor should be re-examined to explore the option of constructing some or all of LCTF improvements in lieu of the Alternative D improvements if it is determined by LADOT that (1) the LCTF improvements are regionally superior and (2) they fully or partially mitigate the project-related traffic impact of the Alternative D project. If it is determined by LADOT and LAWA that the LCTF improvements should supercede the Alternative D improvements, the Applicant shall make a fair-share contribution towards the implementation of the LCTF improvements in an amount not greater than the Alternative D improvements thus superceded. The cost of the fair-share contribution by the Applicant should be determined at a later date when and if it is determined that the LCTF improvements are more appropriate to implement.

## **COASTAL TRANSPORTATION CORRIDOR SPECIFIC PLAN**

The proposed Project is located within the boundaries of the Coastal Transportation Corridor Specific Plan Ordinance No. 168,999. The Applicant must comply with all provisions of the Specific Plan including, if applicable, the payment of Transportation Impact Assessment (TIA) fees, highway dedication and improvements, and guarantee of mitigation measures before the

issuance of building permits.

## CONCLUSION

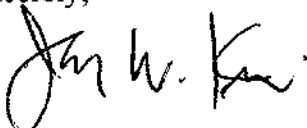
Since this is a supplement to a Program DEIS/DEIR, several detailed design matters have not been addressed. It is during the development of the engineering plans that the feasibility of several of the key infrastructure improvement proposals can be determined. For instance, based on the conceptual drawings provided in the report, it is unclear how pedestrian traffic will be impacted by the proposed changes to the street system surrounding the airport. For these reasons, LADOT and the Department of Public Works should be consulted in the preparation and evaluation of the final designs of the key transportation elements of the preferred LAX Master Plan alternative, including the proposed:

- Automated People Mover System
- Internal Airport Roadway System
- I-405 Freeway / Lennox Boulevard Interchange
- Inter-Modal Transportation Center
- Ground Transportation Center
- Commercial Vehicle Holding Area
- Consolidated Rental Car Facility

If Alternative D is approved, it is recommended that LAWA staff, in consultation with LADOT, develop "trip monitoring and management" strategies to reduce the airport-bound vehicle trips. These strategies can include additional Fly-Away Shuttle locations, Intelligent Transportation Systems improvements, and/or Transportation Demand Management (TDM) strategies promoting ride-sharing for airport employees. To efficiently and accurately monitor airport traffic levels, pavement embedded detector loops or equivalent should be installed to electronically record vehicle entry/exit rates at key entry/exit points to airport facilities including, but not limited to, the Ground Transportation Center (GTC), Intermodal Transportation Center (ITC), Rental Car Facility, etc.

If you have any questions, please call me or Tomas Carranza at (213) 485-1062.

Sincerely,



Jay W. Kim,  
Senior Transportation Engineer



Enclosures

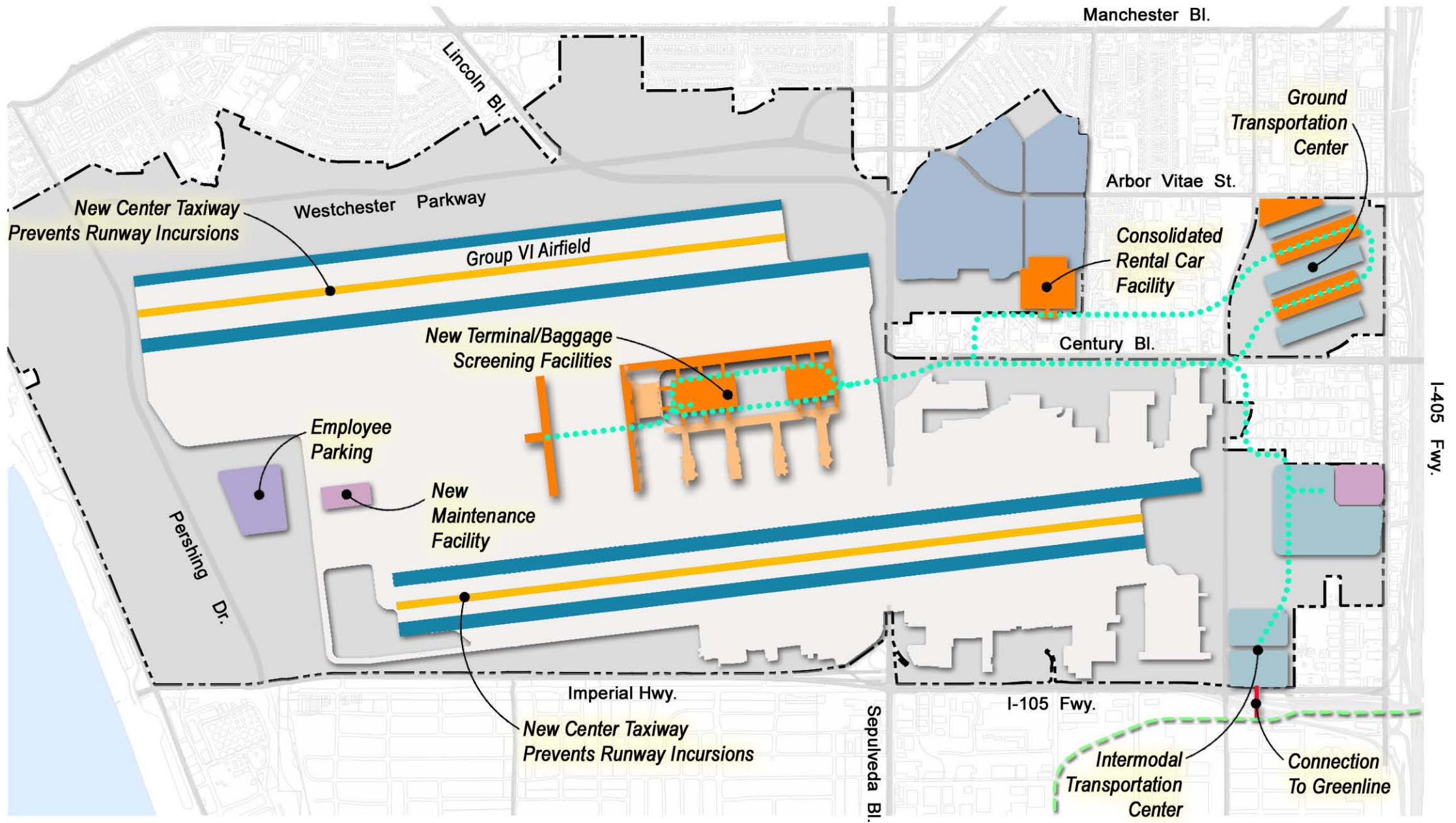
- Attachment A: Project Boundary Map
- Attachment B: Project Trip Generation Summary
- Attachment C: Project Impact Summary - Level of Service
- Attachment D: Transportation Mitigation Program
- Attachment E: Transportation Improvement Phasing Plan

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- c: Councilmember Cindy Miscikowski, Eleventh Council District  
Gordon Hamilton, Department of City Planning  
Pat Tomcheck, Los Angeles World Airports  
Allyn Rifkin, LADOT  
LADOT Western District Office  
Tony Skidmore, CDM





Los Angeles International Airport

**Alternative D**



## ATTACHMENT B - ALTERNATIVE D TRIP GENERATION

Location	AM Peak Hour			Airport Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
<b>Central Terminal Area</b>									
Fly-Away Buses	30	30	60	24	24	48	30	30	60
Delivery/Service Vehicles	572	572	1,144	0	0	0	635	635	1,270
Sub-Total - Vehicle Trips	602	602	1,204	24	24	48	665	665	1,330
<b>Ground Transportation Center</b>									
Private Vehicles/Other	1,574	1,546	3,120	3,892	3,978	7,870	1,667	1,751	3,418
GTC Parking/Passengers	879	619	1,498	1,700	1,769	3,469	710	926	1,636
Private Parking Shuttles	78	78	156	90	90	180	80	80	160
Hotel Shuttles	112	112	224	135	135	270	119	119	238
Delivery/Service Vehicles	132	132	264	0	0	0	148	148	296
Commercial Vehicle Holding Area	114	90	204	182	90	272	140	90	230
Sub-Total - Vehicle Trips	2,889	2,577	5,466	5,999	6,062	12,061	2,864	3,114	5,978
<b>Long Term Public Parking</b>									
Private Autos	44	21	65	84	82	166	28	44	72
Shuttles from South Lot	25	25	50	25	25	50	25	25	50
Sub-Total - Vehicle Trips	69	46	115	109	107	216	53	69	122
<b>Inter-Modal Transportation Center</b>									
Charter Buses	90	90	180	90	90	180	90	90	180
MTA Buses	30	30	60	30	30	60	30	30	60
Shuttles from South Lot	25	25	50	25	25	50	25	25	50
Private Autos (Short-Term Parking)	1,395	976	2,371	2,714	2,819	5,533	1,119	1,474	2,593
Employee Shuttles	11	11	22	7	7	14	16	16	32
Delivery/Service Vehicles	55	55	110	0	0	0	59	59	118
Sub-Total - Vehicle Trips	1,606	1,187	2,793	2,866	2,971	5,837	1,339	1,694	3,033
Sub-Total - PCE Trip Ends	1,726	1,307	3,033	2,986	3,091	6,077	1,459	1,814	3,273
<b>SUB-TOTAL (Vehicle Trips)</b>	5,166	4,412	9,578	8,998	9,164	18,162	4,921	5,542	10,463
<b>SUB-TOTAL (PCE Trip Ends)</b>	5,286	4,532	9,818	9,118	9,284	18,402	5,041	5,662	10,703
<b>Airport Miscellaneous</b>									
<u>Consolidated Rental-Car Facility</u>									
Private Vehicles/Other	438	208	646	831	806	1,637	278	434	712
Shuttles	35	35	70	30	30	60	32	32	64
Sub-Total - Vehicle Trips	473	243	716	861	836	1,697	310	466	776
<u>Employee Parking</u>									
Private Autos (West Lot)	980	708	1,688	705	536	1,241	641	898	1,539
Private Autos (East Lot)	422	409	831	243	210	453	433	560	993
Shuttles (East Lot)	11	11	22	7	7	14	16	16	32
Sub-Total - Vehicle Trips	1,413	1,128	2,541	955	753	1,708	1,090	1,474	2,564
<u>Private Parking</u>									
Long Term Parking	59	28	87	111	107	218	38	58	96
Shuttles	78	78	156	90	90	180	80	80	160
Sub-Total - Vehicle Trips	137	106	243	201	197	398	118	138	256
<u>Cargo</u>									
Private Vehicles/Other	929	743	1,672	773	763	1,536	977	730	1,707
Truck Trips	604	461	1,065	528	513	1,041	455	473	928
Sub-Total - Vehicle Trips	1,533	1,204	2,737	1,301	1,276	2,577	1,432	1,203	2,635
Sub-Total - PCE Trip Ends	2,136	1,664	3,800	1,830	1,789	3,619	1,888	1,675	3,563
<u>Ancillary</u>									
Private Vehicles/Other	190	106	296	117	49	166	25	161	186
Truck Trips	244	136	380	150	63	213	32	207	239
Sub-Total - Vehicle Trips	434	242	676	267	112	379	57	368	425
Sub-Total - PCE Trip Ends	678	378	1,056	417	175	592	89	575	664
<u>Collateral Development</u>									
LAX Northside	3,152	770	3,922	1,187	911	2,098	1,381	3,040	4,421
Continental City	0	0	0	0	0	0	0	0	0
Manchester Square	146	66	212	81	81	162	101	132	233
Sub-Total - Vehicle Trips	3,298	836	4,134	1,268	992	2,260	1,482	3,172	4,654
<b>SUB-TOTAL (Vehicle Trips)</b>	7,288	3,759	11,047	4,853	4,166	9,019	4,489	6,821	11,310
<b>SUB-TOTAL (PCE Trip Ends)</b>	8,135	4,355	12,490	5,532	4,742	10,274	4,977	7,500	12,477
<b>Total Airport Vehicle Trips</b>	12,454	8,171	20,625	13,851	13,330	27,181	9,410	12,363	21,773
<b>Total Airport PCE Trip Ends</b>	13,421	8,887	22,308	14,650	14,026	28,676	10,018	13,162	23,180
<b>Trips Eliminated Due to Land Acquisitions</b>	-1,905	-245	-2,150	-755	-415	-1,170	-728	-1,245	-1,973
<b>NET VEHICLE TRIP GENERATION</b>	10,549	7,926	18,475	13,096	12,915	26,011	8,682	11,118	19,800
<b>NET PCE TRIP GENERATION</b>	11,517	8,642	20,159	13,894	13,611	27,506	9,291	11,917	21,208

**Notes:**

1. Airport Trip Generation includes trips generated on airport property, as well as trips to off-airport parking and Rental-Car facilities.
2. Private Vehicles/Other includes automobiles, light duty trucks, recreational vehicles, taxis, limos, door-to-door shuttles, buses, and other vehicles not otherwise identified.
3. Vehicle Trips are the number of vehicles making a trip with no adjustment for passenger car equivalencies.
4. PCE Trip Ends are the number of origins plus destinations in passenger car equivalents (one truck is equivalent to two cars).

**ATTACHMENT C**

LAX MASTER PLAN - ALTERNATIVE D

INTERSECTION LEVEL OF SERVICE - EXISTING AND FUTURE SCENARIOS

Intersection	Peak Hour	Existing		2015 Adj. Base		2015 With Project				2015 w/Project W/ Mitigation Program			
		V/C	LOS	V/C	LOS	V/C	LOS	V/C Increase	Significant Impact	V/C	LOS	V/C Increase	Comment
AIRPORT BOULEVARD @ ARBOR VITAE STREET	AM	0.361	A	0.587	A	0.700	B	0.113	N	0.635	B	0.048	
	PM	0.549	A	0.929	E	0.767	C	-0.162	N	0.743	C	-0.186	
	AP	0.634	B	0.959	E	0.822	D	-0.137	N	0.826	D	-0.133	
AIRPORT BOULEVARD @ CENTURY BOULEVARD	AM	0.441	A	0.456	A	0.494	A	0.038	N	0.387	A	-0.069	
	PM	0.509	A	0.656	B	0.660	B	0.004	N	0.668	B	0.012	
	AP	0.782	C	0.736	C	0.726	C	-0.010	N	0.428	A	-0.308	
AIRPORT BOULEVARD @ LA TIJERA BOULEVARD	AM	0.521	A	0.558	A	0.669	B	0.111	N	0.553	B	-0.005	
	PM	0.411	A	0.567	A	0.688	B	0.121	N	0.585	B	0.018	
	AP	0.573	A	0.699	B	0.709	C	0.010	N	0.725	C	0.026	
AIRPORT BOULEVARD @ MANCHESTER AVENUE	AM	0.579	A	0.695	B	0.745	C	0.050	Y	0.691	B	-0.004	
	PM	0.635	B	0.813	D	0.791	C	-0.022	N	0.730	C	-0.083	
	AP	0.737	C	0.944	E	0.898	D	-0.046	N	0.893	D	-0.051	
AVIATION BOULEVARD @ ROSECRANS AVENUE	AM	1.121	F	1.114	F	1.109	F	-0.005	N	1.107	F	-0.007	
	PM	1.304	F	1.194	F	1.210	F	0.016	Y	1.190	F	-0.004	
	AP	1.172	F	1.234	F	1.300	F	0.066	Y	1.183	F	-0.051	
AVIATION BOULEVARD @ 111TH STREET	AM	0.460	A	0.323	A	0.629	B	0.306	N	0.585	A	0.262	
	PM	0.432	A	0.418	A	0.761	C	0.343	Y	0.582	A	0.164	
	AP	0.889	D	0.821	D	0.830	D	0.009	N	0.742	C	-0.079	
AVIATION BOULEVARD @ ARBOR VITAE STREET	AM	0.454	A	0.651	B	0.709	C	0.058	Y	0.651	B	0.000	
	PM	0.684	B	0.915	E	0.811	D	-0.104	N	0.774	C	-0.141	
	AP	0.717	C	0.875	D	0.799	C	-0.076	N	0.781	C	-0.094	
AVIATION BOULEVARD @ CENTURY BOULEVARD	AM	0.689	B	0.803	D	0.893	D	0.090	Y	0.643	B	-0.160	
	PM	0.747	C	1.022	F	1.109	F	0.087	Y	0.739	C	-0.283	
	AP	1.502	F	1.630	F	1.078	F	-0.552	N	0.986	E	-0.644	
AVIATION BOULEVARD @ EL SEGUNDO BOULEVARD	AM	0.835	D	1.031	F	1.018	F	-0.013	N	0.923	E	-0.108	
	PM	0.917	E	1.025	F	1.134	F	0.109	Y	0.941	E	-0.084	
	AP	0.645	B	1.009	F	1.027	F	0.018	Y	0.959	E	-0.050	
AVIATION BOULEVARD @ MANCHESTER AVENUE	AM	0.712	C	1.052	F	1.112	F	0.060	Y	0.888	D	-0.164	
	PM	0.667	B	0.994	E	1.115	F	0.121	Y	0.893	D	-0.101	
	AP	1.159	F	1.591	F	1.412	F	-0.179	N	1.180	F	-0.411	
AVIATION BOULEVARD @ IMPERIAL HIGHWAY	AM	0.533	A	0.750	C	0.868	D	0.118	Y	0.767	C	0.017	
	PM	0.621	B	1.131	F	1.173	F	0.042	Y	0.984	E	-0.147	
	AP	0.903	E	1.273	F	1.045	F	-0.228	N	0.962	E	-0.311	
CENTINELA AVENUE @ ROUTE 90 EB RAMPS	AM	0.416	A	0.354	A	0.360	A	0.006	N	0.351	A	-0.003	
	PM	0.483	A	0.520	A	0.517	A	-0.003	N	0.508	A	-0.012	
	AP	0.261	A	0.643	B	0.645	B	0.002	N	0.653	B	0.010	
CENTINELA AVENUE @ ROUTE 90 WB RAMPS	AM	0.555	A	0.494	A	0.550	A	0.056	N	0.544	A	0.050	
	PM	0.693	B	0.396	A	0.545	A	0.149	N	0.540	A	0.144	
	AP	0.292	A	0.365	A	0.490	A	0.125	N	0.495	A	0.130	
CENTINELA AVENUE @ CULVER BOULEVARD	AM	0.585	A	0.903	E	0.927	E	0.024	Y	0.848	D	-0.055	
	PM	0.755	C	0.889	D	0.982	E	0.093	Y	0.867	D	-0.022	
	AP	0.382	A	0.668	B	0.694	B	0.026	N	0.692	B	0.024	

**ATTACHMENT C**

LAX MASTER PLAN - ALTERNATIVE D

INTERSECTION LEVEL OF SERVICE - EXISTING AND FUTURE SCENARIOS

Intersection	Peak Hour	Existing		2015 Adj. Base		2015 With Project				2015 w/Project W/ Mitigation Program			
		V/C	LOS	V/C	LOS	V/C	LOS	V/C Increase	Significant Impact	V/C	LOS	V/C Increase	Comment
CENTINELA AVENUE @ JEFFERSON BOULEVARD	AM	0.593	A	0.945	E	0.934	E	0.008	N	0.919	E	-0.026	
	PM	0.599	A	1.103	F	1.130	F	0.016	Y	1.105	F	0.002	
	AP	0.658	B	0.723	C	0.736	C	0.013	N	0.736	C	0.013	
CULVER BOULEVARD @ JEFFERSON BOULEVARD	AM	0.654	B	0.705	C	0.695	B	-0.010	N	0.696	B	-0.009	
	PM	0.721	C	1.297	F	1.209	F	-0.088	N	1.267	F	-0.030	
	AP	0.450	A	0.739	B	0.725	C	-0.014	N	0.756	C	0.017	
DOUGLAS STREET @ IMPERIAL HIGHWAY	AM	0.321	A	0.449	A	0.393	A	-0.056	N	0.300	A	-0.149	
	PM	0.380	A	0.638	B	0.867	D	0.229	Y	0.585	A	-0.053	
	AP	0.521	A	0.566	A	0.494	A	-0.072	N	0.315	A	-0.251	
HAWTHORNE BOULEVARD @ IMPERIAL HIGHWAY	AM	See footnote [a]		0.668	B	0.715	C	0.047	Y	0.613	B	-0.055	
	PM	See footnote [a]		0.889	D	0.891	D	0.002	N	0.772	C	-0.117	
	AP	See footnote [a]		0.916	E	1.058	F	0.142	Y	0.896	D	-0.020	
HAWTHORNE BOULEVARD @ LENNOX BOULEVARD	AM	See footnote [a]		0.816	D	0.838	D	0.022	Y	0.502	A	-0.314	
	PM	See footnote [a]		1.069	F	1.042	F	-0.027	N	0.639	B	-0.430	
	AP	See footnote [a]		1.136	F	1.191	F	0.055	Y	0.717	C	-0.419	
HIGHLAND AV / VISTA DEL MAR @ ROSECRANS AVENUE	AM	1.069	F	1.211	F	1.258	F	0.047	Y	1.145	F	-0.066	
	PM	1.244	F	1.316	F	1.337	F	0.021	Y	1.297	F	-0.019	
	AP	0.813	D	0.916	E	0.927	E	0.011	Y	0.771	C	-0.145	
I-105 FWY / CONTINENTAL CITY DR @ IMPERIAL HIGHWAY	AM	0.434	A	0.624	B	1.197	F	0.573	Y	0.451	A	-0.173	
	PM	0.660	B	0.647	B	1.063	F	0.416	Y	0.534	A	-0.113	
	AP	0.661	B	0.690	B	1.685	F	0.995	Y	0.652	B	-0.038	
I-105 FWY WB OFF RAMP / NASH ST @ IMPERIAL HIGHWAY	AM	0.491	A	1.005	F	0.795	C	-0.210	N	0.805	D	-0.200	
	PM	0.254	A	0.572	A	0.678	B	0.106	N	0.667	B	0.095	
	AP	1.074	F	0.420	A	0.448	A	0.028	N	0.429	A	0.009	
I-405 FWY NB OFF RAMP @ CENTURY BOULEVARD	AM	0.645	B	0.727	C	0.676	B	-0.051	N	0.687	B	-0.040	
	PM	0.540	A	0.598	A	0.642	B	0.044	N	0.687	B	0.089	
	AP	0.443	A	0.409	A	0.484	A	0.075	N	0.533	A	0.124	
I-405 FWY NB RAMPS @ IMPERIAL HIGHWAY	AM	0.239	A	0.273	A	0.543	A	0.270	N	0.306	A	0.033	
	PM	0.279	A	0.302	A	0.639	B	0.337	N	0.425	A	0.123	
	AP	0.579	A	0.648	B	0.999	E	0.351	Y	0.618	B	-0.030	
I-405 FWY NB RAMPS @ JEFFERSON BOULEVARD	AM	0.597	A	0.853	D	0.826	D	-0.027	N	0.654	B	-0.199	
	PM	0.701	A	0.853	D	0.856	D	0.003	N	0.833	D	-0.020	
	AP	0.573	C	0.691	B	0.652	B	-0.039	N	0.648	B	-0.043	
I-405 FWY NB RAMPS @ LA TIJERA BOULEVARD	AM	0.964	E	0.823	D	0.669	B	-0.154	N	0.673	B	-0.150	
	PM	1.026	F	0.898	D	0.741	C	-0.157	N	0.748	C	-0.150	
	AP	0.563	A	0.646	B	0.521	A	-0.125	N	0.401	A	-0.245	
I-405 FWY SB RAMPS @ JEFFERSON BOULEVARD	AM	0.467	A	0.652	B	0.625	B	-0.027	N	0.623	B	-0.029	
	PM	0.533	A	0.773	C	0.619	B	-0.154	N	0.692	B	-0.081	
	AP	0.414	A	0.536	A	0.536	A	0.000	N	0.533	A	-0.003	
I-405 FWY SB RAMPS @ LA TIJERA BOULEVARD	AM	0.820	D	0.725	C	0.605	B	-0.120	N	0.597	A	-0.128	
	PM	0.904	E	0.937	E	0.767	C	-0.170	N	0.761	C	-0.176	
	AP	0.387	A	0.515	A	0.443	A	-0.072	N	0.341	A	-0.174	

**ATTACHMENT C**

LAX MASTER PLAN - ALTERNATIVE D

INTERSECTION LEVEL OF SERVICE - EXISTING AND FUTURE SCENARIOS

Intersection	Peak Hour	Existing		2015 Adj. Base		2015 With Project				2015 w/Project W/ Mitigation Program			
		V/C	LOS	V/C	LOS	V/C	LOS	V/C Increase	Significant Impact	V/C	LOS	V/C Increase	Comment
INGLEWOOD AVENUE @ ARBOR VITAE STREET	AM	See		0.780	C	0.833	D	0.053	Y	0.703	C	-0.077	
	PM	footnote		0.831	D	0.903	E	0.072	Y	0.727	C	-0.104	
	AP	[a]		0.829	D	0.922	E	0.093	Y	0.783	C	-0.046	
INGLEWOOD AVENUE @ CENTURY BOULEVARD	AM	See		0.711	C	0.727	C	0.016	N	0.715	C	0.004	
	PM	footnote		0.800	C	0.797	C	-0.003	N	0.729	C	-0.071	
	AP	[a]		0.907	E	0.894	D	-0.013	N	0.829	D	-0.078	
INGLEWOOD AVENUE @ IMPERIAL HIGHWAY	AM	See		0.936	E	0.853	D	-0.083	N	0.785	C	-0.151	
	PM	footnote		1.093	F	1.083	F	-0.010	N	1.016	F	-0.077	
	AP	[a]		0.990	E	0.994	E	0.004	N	0.901	E	-0.089	
INGLEWOOD AVENUE @ LENNOX BOULEVARD	AM	See		0.904	E	0.921	E	0.017	Y	0.661	B	-0.243	
	PM	footnote		1.143	F	1.148	F	0.005	N	0.724	C	-0.419	
	AP	[a]		1.115	F	1.251	F	0.136	Y	0.658	B	-0.457	
LA BREA AVENUE @ CENTURY BOULEVARD	AM	See		0.855	D	0.876	D	0.021	Y	0.800	C	-0.055	
	PM	footnote		0.974	E	0.935	E	-0.039	N	0.900	D	-0.074	
	AP	[a]		0.979	E	0.988	E	0.009	N	0.937	E	-0.042	
LA BREA AVENUE @ ARBOR VITAE STREET	AM	See		0.697	B	0.719	C	0.022	N	0.614	B	-0.083	
	PM	footnote		0.712	C	0.715	C	0.003	N	0.650	B	-0.062	
	AP	[a]		0.903	E	0.926	E	0.023	Y	0.819	D	-0.084	
LA CIENEGA BOULEVARD @ 104TH STREET	AM	See		0.479	A	0.370	A	-0.109	N	0.219	A	-0.260	
	PM	footnote		0.603	B	0.245	A	-0.358	N	0.201	A	-0.402	
	AP	[a]		0.846	D	0.629	B	-0.217	N	0.367	A	-0.479	
LA CIENEGA BOULEVARD @ 111TH STREET	AM	0.197	A	0.223	A	0.634	B	0.411	N	0.316	A	0.093	
	PM	0.255	A	0.218	A	0.468	A	0.250	N	0.229	A	0.011	
	AP	0.683	B	0.593	A	1.062	F	0.469	Y	0.667	B	0.074	
LA CIENEGA BOULEVARD @ 120TH STREET	AM	0.237	A	0.309	A	0.450	A	0.141	N	0.386	A	0.077	
	PM	0.303	A	0.453	A	0.461	A	0.008	N	0.525	A	0.072	
	AP	0.263	A	0.455	A	0.422	A	-0.033	N	0.440	A	-0.015	
LA CIENEGA BOULEVARD @ ARBOR VITAE STREET	AM	0.756	C	0.855	D	1.031	F	0.176	Y	0.754	C	-0.101	
	PM	0.637	B	0.899	D	1.069	F	0.170	Y	0.821	D	-0.078	
	AP	0.727	C	0.921	E	1.014	F	0.093	Y	0.947	E	0.026	
LA CIENEGA BOULEVARD @ CENTINELA AVENUE	AM	1.001	F	1.128	F	1.237	F	0.109	Y	1.062	F	-0.066	
	PM	1.025	F	1.136	F	1.160	F	0.024	Y	1.088	F	-0.048	
	AP	0.699	B	1.000	E	1.159	F	0.159	Y	0.974	E	-0.026	
LA CIENEGA BOULEVARD @ CENTURY BOULEVARD	AM	0.680	B	0.726	C	1.358	F	0.632	Y	1.200	F	0.474	Not Fully Mitigated
	PM	0.692	B	0.798	C	1.151	F	0.353	Y	1.048	F	0.250	
	AP	0.572	A	0.546	A	1.369	F	0.823	Y	0.981	E	0.435	
LA CIENEGA BOULEVARD @ EL SEGUNDO BOULEVARD	AM	0.552	A	0.632	B	0.724	C	0.092	Y	0.600	A	-0.032	
	PM	0.575	A	0.667	B	0.695	B	0.028	N	0.626	B	-0.041	
	AP	0.403	A	0.461	A	0.574	A	0.113	N	0.436	A	-0.025	
LA CIENEGA BOULEVARD @ FLORENCE AVENUE	AM	0.749	C	0.798	C	0.941	E	0.143	Y	0.737	C	-0.061	
	PM	0.957	E	1.119	F	1.244	F	0.125	Y	1.002	F	-0.117	
	AP	1.437	F	1.608	F	1.732	F	0.124	Y	1.412	F	-0.196	



**ATTACHMENT C**

LAX MASTER PLAN - ALTERNATIVE D

INTERSECTION LEVEL OF SERVICE - EXISTING AND FUTURE SCENARIOS

Intersection	Peak Hour	Existing		2015 Adj. Base		2015 With Project				2015 w/Project W/ Mitigation Program			
		V/C	LOS	V/C	LOS	V/C	LOS	V/C Increase	Significant Impact	V/C	LOS	V/C Increase	Comment
LA CIENEGA BOULEVARD @ I-405 FWY SB RAMPS N/O CENTURY BL	AM	0.644	B	0.706	C	0.764	C	0.058	Y	0.685	B	-0.021	
	PM	0.663	B	0.570	A	0.447	A	-0.123	N	0.321	A	-0.249	
	AP	0.711	C	0.734	C	0.917	E	0.183	Y	0.583	A	-0.151	
LA CIENEGA BOULEVARD @ I-405 FWY SB RAMPS N/O IMPERIAL HWY	AM	0.267	A	0.297	A	0.245	A	-0.052	N	0.249	A	-0.048	
	PM	0.232	A	0.207	A	0.287	A	0.080	N	0.282	A	0.075	
	AP	0.457	A	0.335	A	0.508	A	0.173	N	0.496	A	0.161	
LA CIENEGA BOULEVARD @ I-405 FWY SB RAMPS S/O CENTURY BL	AM	0.221	A	0.354	A	0.549	A	0.195	N	0.251	A	-0.103	
	PM	0.432	A	0.506	A	0.527	A	0.021	N	0.419	A	-0.087	
	AP	0.614	B	0.565	A	0.563	A	-0.002	N	0.305	A	-0.260	
LA CIENEGA BOULEVARD @ IMPERIAL HIGHWAY	AM	0.321	A	0.659	B	0.764	C	0.105	Y	0.662	B	0.003	Not Fully Mitigated
	PM	0.308	A	0.547	A	0.738	C	0.191	Y	0.714	C	0.167	
	AP	0.474	A	0.544	A	0.856	D	0.312	Y	0.852	D	0.308	
LA CIENEGA BOULEVARD @ LA TIJERA BOULEVARD	AM	0.759	C	0.725	C	0.743	C	0.018	N	0.753	C	0.028	
	PM	0.729	C	1.107	F	0.861	D	-0.246	N	0.870	D	-0.237	
	AP	0.519	A	0.678	B	0.572	A	-0.106	N	0.569	A	-0.109	
LA CIENEGA BOULEVARD @ LENNOX BOULEVARD	AM	0.371	A	0.398	A	0.343	A	-0.055	N	N/A	N/A	N/A	
	PM	0.216	A	0.586	A	0.819	D	0.233	Y	N/A	N/A	N/A	
	AP	0.689	B	0.741	C	0.709	C	-0.032	N	N/A	N/A	N/A	
LA CIENEGA BOULEVARD @ MANCHESTER AVENUE	AM	0.684	B	0.732	C	0.778	C	0.046	Y	0.751	C	0.019	
	PM	0.769	C	0.791	C	0.852	D	0.061	Y	0.772	C	-0.019	
	AP	1.056	F	1.196	F	1.285	F	0.089	Y	1.179	F	-0.017	
LA TIJERA BOULEVARD @ MANCHESTER AVENUE	AM	0.585	A	0.619	B	0.611	B	-0.008	N	0.615	B	-0.004	
	PM	0.532	A	0.720	C	0.800	D	0.080	Y	0.737	C	0.017	
	AP	0.530	A	0.647	B	0.594	A	-0.053	N	0.565	A	-0.082	
LINCOLN BOULEVARD @ 83RD STREET	AM	0.892	D	1.024	F	1.104	F	0.080	Y	0.867	D	-0.157	
	PM	0.641	B	1.128	F	1.280	F	0.152	Y	1.057	F	-0.071	
	AP	0.725	C	0.904	E	0.885	D	-0.019	N	0.765	C	-0.139	
LINCOLN BOULEVARD @ BALI WAY	AM	0.524	A	0.554	A	0.547	A	-0.007	N	0.559	A	0.005	
	PM	0.749	C	0.826	D	0.922	E	0.096	Y	0.726	C	-0.100	
	AP	0.408	A	0.477	A	0.577	A	0.100	N	0.657	B	0.180	
LINCOLN BOULEVARD @ FIJI WAY	AM	0.558	A	0.586	B	0.707	C	0.121	Y	0.678	B	0.092	
	PM	0.685	B	0.770	C	0.823	D	0.053	Y	0.732	C	-0.038	
	AP	0.495	A	0.621	B	0.588	A	-0.033	N	0.457	A	-0.164	
LINCOLN BOULEVARD @ JEFFERSON BOULEVARD	AM	0.710	C	1.158	F	1.000	E	-0.158	N	1.048	F	-0.110	See footnotes [b], [c]
	PM	0.713	C	1.035	F	1.286	F	0.251	Y	1.146	F	0.111	
	AP	0.630	B	0.761	C	0.799	C	0.038	N	0.794	C	0.033	
LINCOLN BOULEVARD @ LA TIJERA BOULEVARD	AM	0.429	A	0.478	A	0.490	A	0.012	N	0.497	A	0.019	
	PM	0.435	A	0.502	A	0.693	B	0.191	N	0.690	B	0.188	
	AP	0.221	A	0.350	A	0.390	A	0.040	N	0.389	A	0.039	
LINCOLN BOULEVARD @ MANCHESTER AVENUE	AM	0.712	C	0.795	C	0.934	E	0.139	Y	0.838	D	0.043	See footnote [c]
	PM	0.777	C	1.165	F	1.371	F	0.206	Y	1.169	F	0.004	
	AP	0.599	A	0.789	C	0.966	E	0.177	Y	0.808	D	0.019	

**ATTACHMENT C**

LAX MASTER PLAN - ALTERNATIVE D

INTERSECTION LEVEL OF SERVICE - EXISTING AND FUTURE SCENARIOS

Intersection		Peak Hour	Existing		2015 Adj. Base		2015 With Project			2015 w/Project W/ Mitigation Program				
			V/C	LOS	V/C	LOS	V/C	LOS	V/C Increase	Significant Impact	V/C	LOS	V/C Increase	Comment
LINCOLN BOULEVARD	@ MARINA EXPRESSWAY	AM	0.793	C	0.942	E	0.956	E	0.014	Y	1.011	F	0.069	See footnote [c]
		PM	0.704	C	1.050	F	1.068	F	0.018	Y	1.085	F	0.035	
		AP	0.522	A	0.622	B	0.760	C	0.138	Y	0.786	C	0.164	
LINCOLN BOULEVARD	@ MAXELLA AVENUE	AM	0.595	A	0.838	D	0.782	C	-0.056	N	0.693	B	-0.145	
		PM	0.643	B	0.978	E	0.981	E	0.003	N	0.888	D	-0.090	
		AP	0.487	A	0.819	D	0.839	D	0.020	Y	0.799	C	-0.020	
LINCOLN BOULEVARD	@ MINDANAO WAY	AM	0.807	D	0.964	E	0.951	E	-0.013	N	0.901	E	-0.063	
		PM	0.713	C	1.178	F	0.992	E	-0.186	N	0.969	E	-0.209	
		AP	0.625	B	0.853	D	0.936	E	0.083	Y	0.814	D	-0.039	
LINCOLN BOULEVARD	@ TEALE STREET	AM	0.902	E	0.732	C	0.797	C	0.065	Y	0.798	C	0.066	See footnote [c]
		PM	0.825	D	0.907	E	1.052	F	0.145	Y	0.976	E	0.069	
		AP	0.549	A	0.588	A	0.654	B	0.066	N	0.649	B	0.061	
LINCOLN BOULEVARD	@ VENICE BOULEVARD	AM	0.891	D	0.907	E	0.787	C	-0.120	N	0.904	E	-0.003	
		PM	0.883	D	1.005	F	0.938	E	-0.067	N	0.976	E	-0.029	
		AP	0.780	C	0.926	E	0.838	D	-0.088	N	0.901	E	-0.025	
LINCOLN BOULEVARD	@ WASHINGTON BOULEVARD	AM	0.833	D	1.046	F	1.046	F	0.000	N	1.054	F	0.008	See footnote [c]
		PM	0.829	D	1.022	F	1.065	F	0.043	Y	0.963	E	-0.059	
		AP	0.702	C	0.881	D	0.762	C	-0.119	N	0.669	B	-0.212	
MAIN STREET	@ IMPERIAL HIGHWAY	AM	0.833	D	0.619	B	0.699	B	0.080	N	0.532	A	-0.087	
		PM	0.945	E	1.035	F	1.120	F	0.085	Y	0.824	D	-0.211	
		AP	0.547	A	0.562	A	0.616	B	0.054	N	0.518	A	-0.044	
PERSHING DRIVE	@ IMPERIAL HIGHWAY	AM	0.795	C	0.987	E	1.069	F	0.082	Y	0.543	A	-0.444	
		PM	0.627	B	0.781	C	0.809	D	0.028	Y	0.656	B	-0.125	
		AP	0.478	A	0.498	A	0.595	A	0.097	N	0.363	A	-0.135	
PERSHING DRIVE	@ MANCHESTER AVENUE	AM	0.478	A	0.390	A	0.433	A	0.043	N	0.456	A	0.066	
		PM	0.521	A	0.515	A	0.569	A	0.054	N	0.573	A	0.058	
		AP	0.231	A	0.267	A	0.204	A	-0.063	N	0.209	A	-0.058	
PERSHING DRIVE	@ WESTCHESTER PARKWAY	AM	0.186	A	0.306	A	0.245	A	-0.061	N	0.243	A	-0.063	
		PM	0.148	A	0.270	A	0.313	A	0.043	N	0.318	A	0.048	
		AP	0.095	A	0.113	A	0.085	A	-0.028	N	0.085	A	-0.028	
PRAIRIE AVENUE	@ LENNOX BOULEVARD	AM	See footnote [a]		1.029	F	0.976	E	-0.053	N	0.777	C	-0.252	
		PM			1.323	F	1.253	F	-0.070	N	0.942	E	-0.381	
		AP			1.280	F	1.277	F	-0.003	N	0.890	D	-0.390	
SEPULVEDA BOULEVARD	@ 76TH / 77TH STREET	AM	0.698	B	0.712	C	0.673	B	-0.039	N	0.671	B	-0.041	See footnote [c]
		PM	0.594	A	0.677	B	0.722	C	0.045	Y	0.722	C	0.045	
		AP	0.670	B	0.678	B	0.666	B	-0.012	N	0.663	B	-0.015	
SEPULVEDA BOULEVARD	@ 79TH / 80TH STREET	AM	0.641	B	0.679	B	0.671	B	-0.008	N	0.674	B	-0.005	See footnote [c]
		PM	0.671	B	0.731	C	0.904	E	0.173	Y	0.845	D	0.114	
		AP	0.393	A	0.433	A	0.565	A	0.132	N	0.541	A	0.108	
SEPULVEDA BOULEVARD	@ 83RD STREET	AM	0.672	B	0.780	C	0.721	C	-0.059	N	0.727	C	-0.053	See footnote [c]
		PM	0.603	B	0.833	D	0.983	E	0.150	Y	0.911	E	0.078	
		AP	0.338	A	0.439	A	0.405	A	-0.034	N	0.405	A	-0.034	

**ATTACHMENT C**

LAX MASTER PLAN - ALTERNATIVE D

INTERSECTION LEVEL OF SERVICE - EXISTING AND FUTURE SCENARIOS

Intersection	Peak Hour	Existing		2015 Adj. Base		2015 With Project				2015 w/Project W/ Mitigation Program			
		V/C	LOS	V/C	LOS	V/C	LOS	V/C Increase	Significant Impact	V/C	LOS	V/C Increase	Comment
SEPULVEDA BOULEVARD @ CENTINELA AVENUE	AM	0.945	E	1.211	F	1.361	F	0.150	Y	1.227	F	0.016	See footnote [c]
	PM	0.917	E	1.254	F	1.180	F	-0.074	N	1.205	F	-0.049	
	AP	0.682	B	0.953	E	1.002	F	0.049	Y	0.904	E	-0.049	
SEPULVEDA BOULEVARD @ CENTURY BOULEVARD	AM	0.679	B	0.722	C	0.837	D	0.115	Y	0.768	C	0.046	
	PM	0.692	B	0.845	D	0.897	D	0.052	Y	0.755	C	-0.090	
	AP	0.571	A	0.675	B	0.659	B	-0.016	N	0.568	A	-0.107	
SEPULVEDA BOULEVARD @ EL SEGUNDO BOULEVARD	AM	0.869	D	1.209	F	1.232	F	0.023	Y	1.152	F	-0.057	
	PM	1.025	F	1.222	F	1.302	F	0.080	Y	1.125	F	-0.097	
	AP	0.896	D	1.081	F	1.130	F	0.049	Y	0.992	E	-0.089	
SEPULVEDA BOULEVARD @ HOWARD HUGHES PARKWAY	AM	0.715	C	0.641	B	0.563	A	-0.078	N	0.574	A	-0.067	See footnote [c]
	PM	0.698	B	0.860	D	0.916	E	0.056	Y	0.908	E	0.048	
	AP	0.558	A	0.616	B	0.573	A	-0.043	N	0.574	A	-0.042	
SEPULVEDA BOULEVARD @ I-105 WB OFF RAMP N/O IMPERIAL HWY	AM	1.134	F	1.345	F	1.251	F	-0.094	N	1.151	F	-0.194	See footnote [c]
	PM	0.931	E	1.021	F	1.153	F	0.132	Y	1.048	F	0.027	
	AP	0.769	C	1.016	F	0.953	E	-0.063	N	0.841	D	-0.175	
SEPULVEDA BOULEVARD @ IMPERIAL HIGHWAY	AM	1.018	F	1.032	F	0.827	D	-0.205	N	0.854	D	-0.178	See footnote [c]
	PM	1.129	F	1.107	F	1.251	F	0.144	Y	1.098	F	-0.009	
	AP	1.095	F	0.809	D	0.917	E	0.108	Y	0.888	D	0.079	
SEPULVEDA BOULEVARD @ LA TIJERA BOULEVARD	AM	0.694	B	0.902	E	0.880	D	-0.022	N	0.828	D	-0.074	
	PM	0.644	B	0.868	D	0.825	D	-0.043	N	0.828	D	-0.040	
	AP	0.301	A	0.426	A	0.438	A	0.012	N	0.400	A	-0.026	
SEPULVEDA BOULEVARD @ LINCOLN BOULEVARD	AM	0.582	A	0.498	A	0.602	B	0.104	N	0.587	A	0.089	
	PM	0.594	A	0.539	A	0.653	B	0.114	N	0.625	B	0.086	
	AP	0.499	A	0.362	A	0.361	A	-0.001	N	0.362	A	0.000	
SEPULVEDA BOULEVARD @ MANCHESTER AVENUE	AM	0.787	C	0.871	D	0.832	D	-0.039	N	0.911	E	0.040	See footnote [c]
	PM	0.837	D	1.031	F	1.174	F	0.143	Y	1.141	F	0.110	
	AP	0.603	B	0.774	C	0.643	B	-0.131	N	0.680	B	-0.094	
SEPULVEDA BOULEVARD @ MARIPOSA AVENUE	AM	0.730	C	0.772	C	0.946	E	0.174	Y	0.836	D	0.064	See footnote [c]
	PM	0.799	C	1.132	F	1.126	F	-0.006	N	0.977	E	-0.155	
	AP	0.788	C	1.193	F	1.199	F	0.006	N	1.087	F	-0.106	
SEPULVEDA BOULEVARD @ ROSECRANS AVENUE	AM	1.220	F	1.327	F	1.310	F	-0.017	N	1.211	F	-0.116	
	PM	1.388	F	1.623	F	1.674	F	0.051	Y	1.564	F	-0.059	
	AP	1.436	F	1.231	F	1.257	F	0.026	Y	1.156	F	-0.075	
SEPULVEDA BOULEVARD @ WESTCHESTER PARKWAY	AM	0.585	A	0.883	D	0.721	C	-0.162	N	0.751	C	-0.132	
	PM	0.627	B	0.986	E	0.897	D	-0.089	N	0.989	E	0.003	
	AP	0.453	A	0.490	A	0.466	A	-0.024	N	0.463	A	-0.027	
VISTA DEL MAR @ CULVER BOULEVARD	AM	0.668	B	0.670	B	0.568	A	-0.102	N	0.562	A	-0.108	
	PM	0.550	A	0.473	A	0.480	A	0.007	N	0.493	A	0.020	
	AP	0.372	A	0.422	A	0.388	A	-0.034	N	0.402	A	-0.020	
VISTA DEL MAR @ GRAND AVENUE	AM	0.749	C	0.888	D	0.913	E	0.025	Y	0.819	D	-0.069	
	PM	0.494	A	0.488	A	0.439	A	-0.049	N	0.431	A	-0.057	
	AP	0.357	A	0.569	A	0.489	A	-0.080	N	0.430	A	-0.139	

**ATTACHMENT C**

LAX MASTER PLAN - ALTERNATIVE D

INTERSECTION LEVEL OF SERVICE - EXISTING AND FUTURE SCENARIOS

Intersection	Peak Hour	Existing		2015 Adj. Base		2015 With Project				2015 w/Project W/ Mitigation Program			
		V/C	LOS	V/C	LOS	V/C	LOS	V/C Increase	Significant Impact	V/C	LOS	V/C Increase	Comment
VISTA DEL MAR @ IMPERIAL HIGHWAY	AM	0.465	A	0.909	E	0.959	E	0.050	Y	0.906	E	-0.003	
	PM	0.468	A	0.634	B	0.711	C	0.077	Y	0.619	B	-0.015	
	AP	0.541	A	0.656	B	0.586	A	-0.070	N	0.587	A	-0.069	

Footnote:

[a] This is one of 10 locations that was added to the list of study intersections for the traffic impact analysis of Alternative D only. For these intersections, the LOS was calculated for the future scenarios only.

[b] The mitigation measure proposed at this intersection is not expected to fully mitigate the project impact.

[c] The final volume-to-capacity ratio does not reflect the anticipated trip-reduction benefit of the transit enhancement proposed at this intersection.

## **ATTACHMENT D TRANSPORTATION MITIGATION PROGRAM**

A comprehensive traffic mitigation program has been developed for the Project that includes transit system enhancements, freeway interchange improvements, roadway improvements, intersection improvements, and an improvement phasing plan. The improvements are described in more detail in the sections below.

All transportation improvements and associated traffic signal work within the City of Los Angeles must be guaranteed through the B-Permit process of the Bureau of Engineering, prior to the issuance of any building permit and completed prior to the issuance of any certificate of occupancy in accordance with the Mitigation Phasing Plan (see **Attachment E**), to the satisfaction of LADOT and the Bureau of Engineering. Temporary certificates of occupancy may be granted in the event of any delay through no fault of the applicant, provided that, in each case, the applicant has demonstrated reasonable efforts and due diligence to the satisfaction of LADOT. In the event the originally proposed mitigation measures become infeasible, substitute mitigation measures may be provided subject to approval by LADOT or other governing agency with jurisdiction over the mitigation location, upon demonstration that the substitute measure is equivalent or superior to the original measure in mitigating the Project's significant impact.

All improvements along state highways and at freeway ramps require approval from the State of California Department of Transportation (Caltrans). An encroachment permit must be obtained from Caltrans for each of these improvements before the issuance of any building permits, to the satisfaction of Caltrans, LADOT, and the Bureau of Engineering. Additionally, improvements proposed in the Marina Del Rey area are subject to review and approval by the County of Los Angeles Department of Public Works.

### **A. TRANSIT SYSTEM ENHANCEMENTS**

The Project will provide additional transit capacity by improving the service frequency along existing transit routes that traverse impacted intersections, and/or by extending or adding regional bus service to the airport properties. This increased transit capacity along impacted intersections will offer the ability to reduce the number of automobiles in the corridors served by the additional buses. Several of the intersection significant traffic impacts resulting from Alternative D can be mitigated through a fair-share contribution to MTA's Metro Rapid Bus Program or to other regionally significant transit enhancements. Many of these significant traffic impacts are expected along Lincoln and Sepulveda Boulevards, which are two corridors included in MTA's 5-year plan for deployment of the Metro Rapid Bus Program. Expansion of the existing transit system, through additional buses and improved signal operations providing priority treatment for buses, can serve as an effective vehicle trip-reduction measure. However, it has yet to be determined if the proposed transit enhancements would augment existing bus routes operated by other providers, by new service offered by the airport, or by a combination of the two. LAWA should work with MTA, LADOT and with the other local-area bus service providers to investigate these options.

A key feature of the proposed Alternative D project is the expansion of the LAX Fly-Away program, which provides an attractive travel option for LAX-destined commuters. New remote locations are being evaluated in Downtown Los Angeles, Norwalk, and in the Cities of Long Beach and Inglewood, and at the Norwalk/Santa Fe Springs transportation center. Also, a second Fly-Away terminal is being considered in the San Fernando Valley area. Since Alternative D would restrict access to the central-terminal-area to all vehicles other than the Fly-Away buses, there is a clear incentive for airport-bound travelers to commute to LAX via the Fly-Away buses. Therefore, should the proposed fair-share transit enhancements not be implemented, expansion of the Fly-Away program, beyond the proposed remote terminals described above, can serve as a reasonable substitute mitigation measure to provide an attractive alternative for airport-bound passengers through limited-stop service using buses equipped with luggage racks that travel along the Lincoln and Sepulveda corridors.

The trip-reduction benefit provided through enhancement of the regional transit system is necessary to

fully or partially reduce project-related traffic impacts at fourteen intersections (listed in Section D below). Prior to the recordation of any final tract map, the applicant must record a covenant and agreement, to the satisfaction of LADOT, to guarantee the provisions of the transit system enhancements

## **B. FREEWAY INTERCHANGE IMPROVEMENTS**

Two major freeway access improvements are proposed as part of the Transportation Mitigation Program for Alternative D and are described below. For these improvements, final review and approval is required by Caltrans. LADOT will work with LAWA staff, their consultants and Caltrans in the development of any necessary Project Study Reports for the proposed freeway system improvements. In the event these proposed freeway improvements become infeasible or are not approved by the governing agency, substitute mitigation measures should be provided subject to approval by LADOT or other governing agency with jurisdiction over the mitigation location, upon demonstration that the substitute measure is equivalent or superior to the original measure in mitigating the project's significant impact.

1. I-105 Freeway between Aviation Boulevard and La Cienega Boulevard - A new freeway connection is proposed that would provide direct access between the I-105 freeway and the proposed LAX passenger and parking facilities. Inbound airport traffic traveling westbound on the freeway would use the proposed elevated off-ramp over Imperial Highway that would be directly connected to the proposed internal roadways of the airport. Similarly, outbound traffic would use the proposed internal airport roadways to access the new elevated on-ramp over Imperial Highway to the eastbound I-105 freeway.
2. I-405 Freeway and Lennox Boulevard - A new freeway interchange at this location is proposed as a measure to provide full freeway access between the I-405 freeway and the LAX passenger parking facilities. Inbound airport traffic traveling north and south on the freeway would have off-ramps at Lennox Boulevard that would directly connect motorists with to the proposed internal roadway system of the airport. Similarly, outbound traffic destined for either the northbound or southbound I-405 freeway would use the proposed internal airport roadways to access the on-ramps at Lennox Boulevard. East of the freeway, Lennox Boulevard would be closed to prevent traffic along Lennox Boulevard from accessing either the I-405 freeway or La Cienega Boulevard. The Lennox Boulevard cul-de-sac would also prevent airport-related traffic from traveling through the Lennox community.

## **C. ROADWAY IMPROVEMENTS**

The traffic impact analysis report proposes key roadway improvements needed to address the expected traffic demands resulting from the Project. For these project component improvements, the final determination on the feasibility of street widenings and proposed sidewalk widths shall be made by the Department of Public Works, Bureau of Engineering. All proposed street improvements and associated traffic signal work within the City of Los Angeles must be guaranteed through the B-Permit process of the Bureau of Engineering, prior to the issuance of any building permit and completed prior to the issuance of any certificate of occupancy in accordance with the Mitigation Phasing Plan, to the satisfaction of LADOT and the Bureau of Engineering. Temporary certificates of occupancy may be granted in the event of any delay through no fault of the applicant, provided that, in each case, the applicant has demonstrated reasonable efforts and due diligence to the satisfaction of LADOT.

The following roadway improvements are proposed:

1. 111<sup>th</sup> Street Widening – Widen 111<sup>th</sup> Street between Aviation Boulevard and La Cienega Boulevard in order to provide an additional through lane in each direction of traffic. The improvement of 111<sup>th</sup> Street will provide direct access to the Intermodal Transportation Center,

and access to the internal airport street system that leads to the Ground Transportation Center to the north and the I-105 Freeway to the south. The cross section would be 2 through lanes in both the westbound and eastbound directions.

2. Arbor Vitae Street Widening – Widen the south side of Arbor Vitae Street between Aviation Boulevard and La Cienega Boulevard in order to provide an additional through lane in each direction where feasible. Since the north side of Arbor Vitae Street along this stretch of roadway is within the jurisdiction of the City of Inglewood, then this improvement is also subject to review and approval by the City of Inglewood. This roadway improvement includes the removal of the existing service road on the south side of Arbor Vitae Street just west of La Cienega Boulevard and the widening of the sidewalk also on the south side of Arbor Vitae Street. Arbor Vitae Street is expected to provide access to the Commercial Vehicle Holding Area within the Ground Transportation Center. The anticipated cross section would be 3 through lanes in both the westbound and eastbound directions.
3. Aviation Boulevard – Widen the east side of Aviation Boulevard between Arbor Vitae Street and Imperial Highway in order to provide an additional through lane in each direction. The west side of Aviation Boulevard along this stretch of roadway is within the jurisdiction of the Metropolitan Transportation Authority providing railroad right-of-way. This roadway improvement also includes the widening of the sidewalk on the east side of Aviation Boulevard and the striping of bike lanes, where feasible, for both directions of traffic. The anticipated cross section would be 3 through lanes and 1 bike lane in both the northbound and southbound directions.
4. La Cienega Boulevard – Widen the west side of La Cienega Boulevard between Arbor Vitae Street and 111<sup>th</sup> Street to provide an additional northbound through lane, and between Arbor Vitae Street and 104<sup>th</sup> Street to provide an additional southbound through lane. This roadway improvement includes the widening of the sidewalk on the west side of La Cienega Boulevard. The anticipated cross section would be 3 through lanes in both the northbound and southbound directions.

#### **D. INTERSECTION IMPROVEMENTS**

Several intersection improvements are proposed to mitigate the negative traffic impacts of the Project. For all of the proposed improvements within the City of Los Angeles, the final determination on the feasibility of street widenings and of sidewalk width modifications shall be made by the Department of Public Works, Bureau of Engineering. Intersection improvements proposed in other jurisdictions are subject to review and approval by that same jurisdiction.

All proposed street improvements and associated traffic signal work within the City of Los Angeles must be guaranteed through the B-Permit process of the Bureau of Engineering, prior to the issuance of any building permit and completed prior to the issuance of any certificate of occupancy in accordance with the Mitigation Phasing Plan, to the satisfaction of LADOT and the Bureau of Engineering. Temporary certificates of occupancy may be granted in the event of any delay through no fault of the applicant, provided that, in each case, the applicant has demonstrated reasonable efforts and due diligence to the satisfaction of LADOT.

The following intersection improvements are proposed:

1. Airport Boulevard and Arbor Vitae Street (intersection # 3) - restripe the northbound approach to provide a right-turn lane with the option of changing one of the two northbound through lanes to an optional through/right-turn lane. (It should be noted that this mitigation is proposed to address a temporary project impact during the interim construction year 2008. No impact is expected by project build-out year 2015.)

2. Airport Boulevard and Manchester Avenue (intersection #6) – restripe the westbound approach to provide an additional through lane on Manchester Avenue. The resulting westbound lane configuration would provide 1 left-turn lane, 3 through lanes, and 1 right-turn lane.
3. Arbor Vitae Street and Aviation Boulevard (intersection # 7) - the project component improvements for both Arbor Vitae Street and Aviation Boulevard (discussed in Section C above) call for the widening of the east side of Aviation Boulevard south of Arbor Vitae Street and the south side of Arbor Vitae Street east of Aviation Boulevard to achieve standard street widths per the General Plan of the City of Los Angeles. The resulting lane configuration would provide: northbound - 1 left-turn lane, 2 through lanes, and 1 right-turn lane; southbound - 1 left-turn lane, 1 through lane, and 1 optional through/right-turn lane; eastbound - 1 left-turn lane, 2 through lanes, and 1 optional through/right-turn lane, and westbound - 2 left-turn lanes, 2 through lanes, and 1 right-turn lane.
4. Arbor Vitae Street and Inglewood Avenue (intersection #502) – restripe the southbound approach to provide 1 left-turn lane, 1 through lane, and 1 right-turn lane. This would require the removal of parking on the west side of Inglewood Boulevard, north of Arbor Vitae Street (Subject to review and approval by the City of Inglewood.)
5. Arbor Vitae Street and La Brea Avenue (intersection #506) – contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. (Subject to review and approval by the City of Inglewood.)
6. Arbor Vitae Street and La Cienega Boulevard (intersection #8) – the project component improvements for both Arbor Vitae Street and La Cienega Boulevard (discussed in Section C above) call for widening the south side of Arbor Vitae Street west of La Cienega Boulevard and the west side of La Cienega Boulevard south of Arbor Vitae Street to achieve standard street widths per the General Plan of the City of Los Angeles. The traffic mitigation involves the addition of an eastbound right-turn lane and the widening of the east side of La Cienega Boulevard (including the construction of retaining walls in Caltrans right-of-way) to provide an additional northbound through lane. The resulting lane configuration would be: northbound - 1 left-turn lane, 1 through lane, and 1 optional through/right-turn lane; southbound - 1 left-turn lane, 1 through lane, and 1 optional through/right-turn lane; eastbound - 1 left-turn lane, 3 through lanes, and 1 right-turn lane; and, westbound - 1 left-turn lane, 2 through lanes, 1 optional through/right-turn lane, and 1 right turn lane. (Subject to joint review and approval by the Cities of Los Angeles and Inglewood.)
7. Aviation Boulevard and 111th Street (intersection #10 ) – the project component improvements for both Aviation Boulevard and 111<sup>th</sup> Street (discussed in Section C above) call for widening the east side of Aviation Boulevard north and south of 111th Street to achieve standard street widths per the General Plan of the City of Los Angeles. The traffic mitigation involves the addition of a second southbound left-turn lane and a second westbound right-turn lane. The resulting lane configuration would provide: northbound - 1 left-turn lane, 3 through lanes, and 1 right-turn lane; southbound - 2 left-turn lanes, 2 through lanes, and 1 optional through/right-turn lane; eastbound - 1 left-turn lane and 1 optional through/right-turn lane, and westbound - 1 left-turn lane, 1 optional through/right-turn lane, and 2 right-turn lanes.
8. Aviation Boulevard and Century Boulevard (intersection #11) – the impact at this intersection is mitigated through the construction of the proposed I-405 Freeway at Lennox Boulevard interchange as discussed in Section B above.
9. Aviation Boulevard and El Segundo Boulevard (intersection #12) – restripe the eastbound approach to provide 1 left-turn lane, 3 through lanes, and 1 optional through/right-turn lane, restripe the southbound approach to provide 2 left-turn lanes, 2 through lanes, and 1 optional



- through/right-turn lane; and a contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. (Subject to review and approval by the City of El Segundo.)
10. Aviation Boulevard and Imperial Highway (intersection #13) - Project Component Improvements calls for widening the east side of Aviation Boulevard north of Imperial Highway to achieve Major Highway (Class II) standards per the General Plan of the City of Los Angeles. Mitigation of this impact involves restriping the northbound approach to provide 2 left-turn lanes, 3 through lanes, and 1 right-turn lane.
  11. Aviation Boulevard and Manchester Avenue (intersection #14) – restripe both the eastbound and westbound approaches to provide 1 left-turn lane, 2 through lanes, and 1 optional through/right-turn lane, and a contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. This proposal would require the elimination of parking on the south side of Manchester Avenue east of Aviation Boulevard and on the north side of Manchester Avenue west of Aviation Boulevard in order to provide appropriate merging distances. (Subject to review and approval by the City of Inglewood.)
  12. Aviation Boulevard and Rosecrans Avenue (intersection #15) - upgrade the traffic signal operation to provide a northbound right-turn overlap arrow. (Subject to review and approval by the agency with jurisdiction over this intersection.)
  13. Bali Way and Lincoln Boulevard (intersection #16) - provide a fair-share contribution to Los Angeles County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way.
  14. Centinela Avenue and Culver Boulevard (intersection #17) - reconfigure the southbound approach to provide 1 left-turn lane, 2 through lanes, and 1 right-turn lane.
  15. Centinela Avenue and Jefferson Boulevard (intersection #18) - upgrade the traffic signal operation to provide a southbound right-turn overlap arrow.
  16. Centinela Avenue and La Cienega Boulevard (intersection #20) - remove the median islands on La Cienega Boulevard north and south of Centinela Avenue and restripe the northbound and southbound approaches to provide 2 left-turn lanes, 2 through lanes, and 1 optional through/right-turn lane. The westbound lane configuration would be changed to provide 2 left-turn lanes, 2 through lanes, and 1 optional through/right-turn lane. (Subject to review and approval by the City of Inglewood.)
  17. Centinela Avenue and Sepulveda Boulevard (intersection #22) - remove the median island on the east leg from the intersection to the underpass of the I-405 Freeway in order to install a westbound right-turn lane. The westbound approach would be restriped to provide 2 left-turn lanes, 2 through lanes, and 1 right-turn lane. Also, provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX. (Subject to review and approval by the City of Culver City.)
  18. Century Boulevard and Inglewood Avenue (intersection #503) - contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. It should be noted that this mitigation is proposed to address a temporary project impact during the interim construction year 2008. No impact is expected by project build-out year 2015. (Subject to review and approval by the City of Inglewood.)
  19. Century Boulevard and La Cienega Boulevard (intersection #26) - along with the project component roadway improvement along La Cienega Boulevard, restripe the intersection to

provide the following lane configuration: Northbound - 1 left-turn lane, 2 through lanes, 1 optional through/right-turn lane, and 1 right-turn lane; Southbound - 1 left-turn lane, 3 through lanes, and 1 right-turn lane; Eastbound - 1 left-turn lane, 3 through lanes, and 2 right-turn lanes; Westbound - 1 left-turn lane, 3 through lanes, and 1 optional through/right-turn lane. Although the impact is reduced, this intersection would remain significantly impacted.

20. Century Boulevard and Sepulveda Boulevard (intersection #27) - reconfigure the west leg of the intersection to allow for authorized vehicles only into the Central Terminal Area and trim the median island on the north leg of the intersection in order to restripe the westbound approach to provide 2 left-turn lanes, 1 optional left-turn/through lane, and 1 right-turn lane.
21. Douglas Street and Imperial Highway (intersection #34) - improve the intersection by providing a northbound free right-turn operation. To accommodate this movement, one eastbound through lane will be removed from Imperial Highway between Nash Street and Douglas Street.
22. El Segundo Boulevard and La Cienega Boulevard (intersection #312) - contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. (Subject to review and approval by the City of Hawthorne.)
23. El Segundo Boulevard and Sepulveda Boulevard (intersection #35) - upgrade the traffic signal operation to provide an eastbound right-turn overlap arrow, and contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. (Subject to review and approval by the City of El Segundo.)
24. Fiji Way and Lincoln Boulevard (intersection #39) - provide a fair-share contribution to the Los Angeles County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way.
25. Florence Avenue and La Cienega Boulevard (intersection #40) - upgrade the traffic signal phasing to provide protective-permissive operations for the north and southbound approaches (instead of split phasing), restripe the southbound approach to provide 2 left-turn lanes, 1 through lane, and 1 optional through/right-turn lane, and a contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. (Subject to review and approval by the City of Inglewood.)
26. Grand Avenue and Vista Del Mar (intersection #36) - restripe the westbound approach to provide 1 left-turn lane, 1 optional left-turn/through/right-turn lane, and 1 right-turn lane.
27. Hawthorne Boulevard and Imperial Highway (intersection #42) - reconfigure the southbound approach to provide 1 left-turn lane, 3 through lanes, and 1 right-turn lane, and a contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. The removal of parking on the west side of Hawthorne Boulevard north of Imperial Highway may be required for implementation of this mitigation. (Subject to review and approval by the City of Hawthorne.)
28. Hawthorne Boulevard and Lennox Boulevard (intersection #309) - the impact at this intersection is mitigated through the construction of the proposed I-405 Freeway at Lennox Boulevard interchange as discussed in Section B above.
29. Highland / Vista del Mar and Rosecrans Avenue (intersection #43) - upgrade the traffic signal operation to provide a westbound right-turn overlap arrow. (Subject to review and approval by the City of Manhattan Beach.)
30. Howard Hughes Parkway and Sepulveda Boulevard (intersection #44) - provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit

traveling to and from LAX.

31. I-105/Continental City and Imperial Highway (intersection #45) - as part of the proposed internal airport roadway system, a north leg will be constructed at this intersection. This southbound approach would provide 3 left-turn lanes and 2 right-turn lanes. Also, as part of the project definition, the north side of Imperial Highway west of Continental City Drive would be widened to install a third westbound through lane. The mitigation for this intersection involves widening the north and south sides of Imperial Highway east of Continental City Drive in order to install two westbound right-turn lanes. The westbound approach would provide 1 left-turn lane, 3 through lanes, and 2 right-turn lanes.
32. I-405 NB Ramps and Imperial Highway (intersection #46) - widen the off-ramp to provide 2 left-turn lanes, and 1 optional left-turn/right-turn lane in the northbound direction, and contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. (Subject to review and approval by Caltrans and the City of Hawthorne.)
33. Imperial Highway and Inglewood Avenue (intersection #505) - restripe to provide 1 left-turn lane, 1 through lane, and 1 right-turn lane in the southbound direction, and a contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. It should be noted that this mitigation is proposed to address a temporary project impact during the interim construction year 2008. No impact is expected by project build-out year 2015. (Subject to review and approval by the City of Inglewood.)
34. Imperial Highway and La Cienega Boulevard (intersection #52) - even with the proposed freeway access improvements and the project-component improvement along La Cienega Boulevard, this intersection is not fully mitigated.
35. Imperial Highway and Main Street (intersection #47) - narrow the median island on the east leg and restripe to provide a second westbound left-turn lane. (Subject to review and approval by the City of El Segundo).
36. Imperial Highway and Pershing Drive (intersection #49) - widen the north side of Imperial Highway east of Pershing Drive to install either a second right-turn lane or a free right-turn for westbound traffic. The median on Imperial Highway would be narrowed to allow 3 receiving lanes for a southbound triple left-turn movement. The southbound approach would provide 2 left-turn lanes, 1 optional left-turn/through lane, and 1 right-turn lane.
37. Imperial Highway and Sepulveda Boulevard (intersection #50) - upgrade the traffic signal operation to provide a northbound and a westbound right-turn overlap arrow. Also, provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX.
38. Imperial Highway and Vista del Mar (intersection #51) - upgrade the traffic signal phasing to provide split phasing operation for the westbound approach (instead of permissive phasing), and to provide a northbound right-turn overlap arrow.
39. Inglewood Avenue and Lennox Boulevard (intersection #310) - the impact at this intersection is mitigated through the construction of the proposed I-405 Freeway at Lennox Boulevard interchange as discussed in Section B above.
40. Jefferson Boulevard and Lincoln Boulevard (intersection #57) - provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX. The amount of trip-reduction benefit afforded by this proposed enhancement to the regional transit system is not expected to be enough to fully mitigate the project impact at this

intersection.

41. La Brea Avenue / Hawthorne Boulevard and Century Boulevard (intersection #25) - remove the raised median islands on La Brea Avenue/Hawthorne Boulevard and install additional left-turn lanes for the north and southbound approaches. The northbound approach would provide 2 left-turn lanes, 3 through lanes, and 1 optional through/right-turn lane, and the southbound approach would provide 2 left-turn lanes, 3 through lanes, and 1 right-turn lane. (Subject to review and approval by the City of Inglewood.)
42. La Cienega Boulevard and 111th Street (intersection #67) - the project component improvements for both La Cienega Boulevard and 111<sup>th</sup> Street (discussed in Section C above) call for widening the south side of 111th Street west of La Cienega Boulevard and the removal of the median island on La Cienega Boulevard south of 111th Street. The resulting lane configuration would be: northbound - 2 left-turn lanes, and 3 through lanes; southbound - 3 through lanes, and 1 right-turn lane, and eastbound - 2 left-turn lanes, and 2 right-turn lanes. Also, upgrade the traffic signal operation to provide a southbound right-turn overlap arrow.
43. La Cienega Boulevard and I-405 SB Ramps N/O Century Boulevard (intersection #111) - the impact at this intersection is mitigated through the construction of the proposed I-405 Freeway at Lennox Boulevard interchange as discussed in Section B above.
44. La Cienega Boulevard and Lennox Boulevard (intersection #71) - with the proposed interchange providing full access to the I-405 Freeway from Lennox Boulevard (see Section B above), this signalized intersection will be removed.
45. La Cienega Boulevard and Manchester Boulevard (intersection #72) - improve the traffic signal phasing to provide protective-permissive operations for the north and southbound approaches (instead of split phasing), and restripe La Cienega Boulevard from north of Florence Avenue to south of Olive Street in order to provide 2 left-turn lanes, 1 through lane, and 1 optional through/right-turn lane in the southbound direction. (Subject to review and approval by the City of Inglewood.)
46. La Tijera Boulevard and Manchester Avenue (intersection #82) - revise the eastbound approach to provide 1 left-turn lane, 2 through lanes, and 1 optional through/right-turn lane. This may require the removal of parking on Manchester Avenue, east of La Tijera Boulevard during the p.m. peak hour.
47. Lincoln Boulevard and 83rd Street (intersection #87) - widen and restripe the eastbound approach to provide an additional left-turn lane, and improve the traffic signal operation to provide a westbound right-turn overlap arrow.
48. Lincoln Boulevard and Manchester Avenue (intersection #88) - widen the north and south legs of the intersection to provide northbound and southbound exclusive right-turn lanes, and remove the median island on the east leg of the intersection to provide a second westbound left-turn lane. The resulting lane configuration would provide: northbound - 1 left-turn lane, 4 through lanes, and 1 right-turn lane; southbound - 1 left-turn lane, 3 through lanes, and 1 right-turn lane; westbound - 2 left-turn lanes, 2 through lanes, and 1 right-turn lane, and eastbound - 2 left-turn lanes, 2 through lanes, and 1 optional through/right turn lane. Also, provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX.
49. Lincoln Boulevard and Marina Expressway (intersection #89) - provide a fair-share contribution to the Los Angeles County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way. Also, provide a fair-share contribution to MTA's proposed Metro Rapid Program

or other enhancement that benefits transit traveling to and from LAX.

50. Lincoln Boulevard and Maxella Avenue (intersection #90) – provide a fair-share contribution to the Los Angeles County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way.
51. Lincoln Boulevard and Mindanao Way (intersection #91) - provide a fair-share contribution to the Los Angeles County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way.
52. Lincoln Boulevard and Teale Street (intersection #94) - upgrade the traffic signal operation to provide a northbound right-turn overlap arrow. Also, provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX.
53. Lincoln Boulevard and Washington Boulevard (intersection #96) - provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX. Also, provide a fair-share contribution to the Los Angeles County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way.
54. Manchester Avenue and Sepulveda Boulevard (intersection #99) - mitigation for this intersection involves restricting parking on the north side of Manchester Avenue during the Airport and PM peak periods to allow the restriping of the westbound approach to provide: **Option I** - 1 left-turn lane, 2 through lanes and 1 right-turn lane; or **Option II** - 2 left-turn lanes, 2 through lanes, and 1 optional through/right-turn lane. Also, improve the traffic signal operation to provide a westbound right-turn overlap arrow and provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX.
55. Mariposa Avenue and Sepulveda Boulevard (intersection #100) - contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. Also, provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX. (Subject to review and approval by the City of El Segundo.)
56. Sepulveda Boulevard and 76<sup>th</sup> / 77<sup>th</sup> Streets (intersection #106) - provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX.
57. Sepulveda Boulevard and 79<sup>th</sup> / 80<sup>th</sup> Streets (intersection #136) - widen and restripe the north side of 79th/80th Street to provide 1 left-turn lane, 1 through lane, and 1 optional through/right-turn lane in the westbound direction. Also, provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX.
58. Sepulveda Boulevard and 83<sup>rd</sup> Street (intersection #137) - provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX.
59. Sepulveda Boulevard and I-105 Ramp N/O Imperial (intersection #105) - contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. Also, provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancement that benefits transit traveling to and from LAX.
60. Sepulveda Boulevard and La Tijera Boulevard (intersection #83) - restripe the westbound approach to provide 1 left-turn lane, 2 through lanes, and 1 right-turn lane. This will require the

removal of parking from both the north and south sides of La Tijera Boulevard east of Sepulveda Boulevard during the a.m. and p.m. peak periods. (It should be noted that this mitigation is proposed to address a temporary project impact during the interim construction year 2008. No impact is expected by project build-out year 2015.)

61. Sepulveda Boulevard and Rosecrans Avenue (intersection #103) - contribute to the design and implementation of ATSAC/ATCS or similar traffic signal upgrade at this intersection. (Subject to review and approval by the cities of El Segundo and Manhattan Beach.)

## **E. TRANSPORTATION IMPROVEMENT PHASING PLAN**

Alternative D is proposed to be built in six phases. To ensure that the full build out of the Project does not take place until all of the required transportation improvements are implemented in a timely fashion, a Transportation Improvement Phasing Plan has been prepared that coordinates all mitigation measures, project development and the associated permitting. The phasing plan maintains an appropriate balance between the incremental level of development and corresponding incremental provision of transportation capacity/enhancements. Prior to the issuance of any certificate of occupancy for a sub-phase, the required improvements of the previous sub-phase must be implemented in accordance with the Phasing Plan to the satisfaction of LADOT and Bureau of Engineering. Also, prior to the issuance of the final certificate of occupancy in the final sub-phase, all required improvements in the entire mitigation phasing plan shall be funded, completed, or resolved to the satisfaction of LADOT. For the LAX Master Plan Alternative D project, LADOT has approved the Phasing Plan as shown in **Attachment E**. To address the potential for changes to the airport construction schedule or other unforeseen circumstances, this Phasing Plan may need to be modified in the future to adjust the mitigation sequencing. Any changes to the mitigation Phasing Plan shall be subject to further review and approval by LADOT in coordination with LAWA.

**ATTACHMENT E**  
**TRANSPORTATION IMPROVEMENT PHASING PLAN FOR ALTERNATIVE D**

<b>Phase</b>	<b>Facility</b>	<b>Transportation Improvements</b>
1A	West Employee Parking Garage	<p>Complete off-site intersection improvements at:</p> <ul style="list-style-type: none"> <li>• Grand Avenue and Vista del Mar</li> <li>• Highland Avenue/Vista del Mar and Rosecrans Boulevard</li> <li>• Imperial Highway and Main Street</li> <li>• Imperial Highway and Pershing Drive</li> <li>• Imperial Highway and Sepulveda Boulevard</li> <li>• Imperial Highway and Vista del Mar</li> <li>• Jefferson Boulevard and Lincoln Boulevard</li> <li>• Lincoln Boulevard and Manchester Avenue</li> <li>• Lincoln Boulevard and Teale Street</li> <li>• Rosecrans Avenue and Sepulveda Boulevard</li> <li>• 83<sup>rd</sup> Street and Lincoln Boulevard</li> </ul> <p>Provide a fair-share contribution to LA County's "Marina Expressway to Admiralty Way" project OR complete alternative off-site intersectional improvements at the following intersections:</p> <ul style="list-style-type: none"> <li>• Lincoln Boulevard and Bali Way</li> <li>• Lincoln Boulevard and Fiji Way</li> <li>• Lincoln Boulevard and Marina Expressway</li> <li>• Lincoln Boulevard and Maxella Avenue</li> <li>• Lincoln Boulevard and Mindanao Way</li> <li>• Lincoln Boulevard and Washington Boulevard</li> </ul> <p>Provide a fair-share contribution toward MTA's Metro Rapid Bus Program (possible concepts include but are not limited to paying for larger or additional buses from those planned by MTA or paying the cost of retrofitting some buses to better accommodate airline passengers and their baggage to and from LAX) OR other enhancements to benefit transit to and from LAX (possible concepts include but are not limited to traffic signal priority improvements for bus flow, transit marketing, airport employee and/or air passenger fare subsidies) to mitigate the following intersections:</p> <ul style="list-style-type: none"> <li>• Imperial Highway and Sepulveda Boulevard</li> <li>• Jefferson Boulevard and Lincoln Boulevard</li> <li>• Lincoln Boulevard and Manchester Avenue</li> <li>• Lincoln Boulevard and Marina Expressway</li> <li>• Lincoln Boulevard and Teale Street</li> <li>• Lincoln Boulevard and Washington Boulevard</li> </ul>

Phase	Facility	Transportation Improvements
1B	Intermodal Transportation Center (ITC)	<ul style="list-style-type: none"> <li>• Complete pedestrian connection between ITC and Green Line light rail station south of Imperial Highway.</li> <li>• Complete the project-component widening of Aviation Boulevard between Century Boulevard and Imperial Highway. This includes the mitigation of adding a second SB left-turn lane at 111<sup>th</sup> Street.</li> <li>• Complete the project-component roadway improvements (discontinuous widening) along 111th Street between Aviation Boulevard and La Cienega Boulevard. This includes the mitigation of adding a second WB right-turn lane at Aviation Boulevard.</li> <li>• Widen northbound I-405 off-ramp at Imperial Highway.</li> </ul> <p>Provide a fair-share contribution toward MTA's Metro Rapid Bus Program (possible concepts include but are not limited to paying for larger or additional buses from those planned by MTA or paying the cost of retrofitting some buses to better accommodate airline passengers and their baggage to and from LAX) OR other enhancements to benefit transit to and from LAX (possible concepts include but are not limited to traffic signal priority improvements for bus flow, transit marketing, airport employee and/or air passenger fare subsidies) to mitigate the following intersections:</p> <ul style="list-style-type: none"> <li>• Centinela Avenue and Sepulveda Boulevard</li> <li>• Howard Hughes Parkway and Sepulveda Boulevard</li> <li>• Manchester Avenue and Sepulveda Boulevard</li> <li>• Mariposa Avenue and Sepulveda Boulevard</li> <li>• 76th St/77th St and Sepulveda Boulevard</li> <li>• 79th St/ 80th St and Sepulveda Boulevard</li> <li>• 83rd Street and Sepulveda Boulevard</li> <li>• I-105 Freeway Westbound off-ramp at Sepulveda Boulevard</li> </ul> <p>Complete off-site intersection improvements at:</p> <ul style="list-style-type: none"> <li>• I-105 Freeway ramps/Continental City Drive &amp; Imperial Highway (at-grade intersectional improvement only)</li> <li>• I-405 northbound off-ramp at Imperial Highway</li> <li>• Aviation Boulevard and El Segundo Boulevard</li> <li>• Aviation Boulevard and Imperial Highway</li> <li>• Aviation Boulevard and Rosecrans Boulevard</li> <li>• Douglas Street and Imperial Highway</li> <li>• El Segundo Boulevard and La Cienega Boulevard</li> <li>• La Cienega Boulevard and 111<sup>th</sup> Street</li> <li>• Manchester Avenue and Sepulveda Boulevard</li> <li>• Mariposa Avenue and Sepulveda Boulevard</li> <li>• 79<sup>th</sup> Street/80<sup>th</sup> Street and Sepulveda Boulevard</li> </ul>



<b>Phase</b>	<b>Facility</b>	<b>Transportation Improvements</b>
1C	Southeast Surface Parking	Complete construction of the project-component internal north-south airport roadway that bisects the surface parking lot and terminates at 111th Street.
1D	Consolidated Rent-a-Car Center	Complete off-site intersection improvements at: <ul style="list-style-type: none"> <li>• Airport Boulevard and Arbor Vitae Street</li> <li>• Airport Boulevard and Manchester Avenue</li> <li>• Centinela Avenue and Jefferson Boulevard</li> <li>• Centinela Avenue and Sepulveda Boulevard</li> <li>• Century Boulevard and Sepulveda Boulevard</li> <li>• La Tijera Boulevard and Manchester Avenue</li> <li>• La Tijera Boulevard and Sepulveda Boulevard</li> <li>• Sepulveda Boulevard and I-105 Freeway WB Off-Ramp north of Imperial Highway</li> </ul>
1E	On-Airport (see Note 8 below)	{No transportation improvements required for this Phase}

Phase	Facility	Transportation Improvements
1F	Ground Transportation Center (including Commercial Vehicle Holding Area)	<ul style="list-style-type: none"> <li>• Complete project-component GTC/ITC Roadways and Century Bridge.</li> <li>• Complete project-component realignment of 104<sup>th</sup> Street east of the internal airport roadways to connect to 102<sup>nd</sup> Street .</li> <li>• Complete project-component widening of Arbor Vitae Street between Aviation Boulevard and La Cienega Boulevard. This includes the mitigation of installing a second WB left-turn lane at Aviation Boulevard and an EB right-turn lane at La Cienega Boulevard.</li> <li>• Complete project-component widening of Aviation Boulevard between Arbor Vitae Street and Century Boulevard.</li> <li>• Complete project-component roadway improvements on La Cienega Boulevard between Arbor Vitae Street and Imperial Highway. This includes the mitigation of installing an additional through lane for NB traffic at Arbor Vitae Street.</li> <li>• Complete project-component roadway improvements on Century Boulevard between Aviation Boulevard and Glasgow Place.</li> <li>• Widen the off-ramp from southbound I-405 Freeway north of Century Boulevard at La Cienega Boulevard.</li> <li>• Begin construction of direct connection between I-105 Freeway ramps and internal airport roadways east of ITC (See Note 7 below).</li> <li>• Begin construction of I-405 Interchange at Lennox Boulevard (See Note 7 below).</li> </ul> <p>Complete off-site intersection improvements at:</p> <ul style="list-style-type: none"> <li>• Arbor Vitae Street and Inglewood Avenue</li> <li>• Arbor Vitae Street and La Brea Avenue</li> <li>• Aviation Boulevard and Manchester Boulevard</li> <li>• Centinela Avenue and Culver Boulevard</li> <li>• Centinela Avenue and La Cienega Boulevard</li> <li>• Century Boulevard and Hawthorne Blvd/La Brea Avenue</li> <li>• Century Boulevard and Inglewood Avenue</li> <li>• Century Boulevard and La Cienega Boulevard</li> <li>• El Segundo Boulevard and Sepulveda Boulevard</li> <li>• Florence Avenue and La Cienega Boulevard</li> <li>• Hawthorne Boulevard and Imperial Highway</li> <li>• Imperial Highway and Inglewood Avenue</li> <li>• La Cienega Boulevard and Manchester Boulevard</li> </ul>

Notes:

1. For a detailed description of the intersection improvements, see Tables F4.3.2-28 and F4.3.2-29 of the Final EIR or Attachment D of LADOT's Project Assessment Letter dated April 16, 2004.
2. LADOT may recommend that temporary Certificates of Occupancy be granted in the event of any delay: 1) by Caltrans on encroachment permits, or 2) in obtaining required approvals from other City departments, government agencies or jurisdictions through no fault of Los Angeles World Airports, provided that LAWA has demonstrated reasonable efforts and due diligence to the satisfaction of LADOT.
3. In all cases, except as noted in (2) above, the required Traffic Mitigation or Project Component of each sub-phase for the corresponding land use sub-phase shall be guaranteed to the satisfaction of LADOT and City of Los Angeles Public Works prior to the issuance of any Building Permit and completed prior to the issuance of any Certificate of Occupancy permit.
4. Where appropriate, as determined by LAWA and LADOT, revisions may be made to this Phasing Plan.
5. Appropriate transit improvements to the LAC-MTA bus system to and from LAX and "fair-share" contributions to the LA County's "Marina Expressway to Admiralty Way" project must be agreed upon by LAWA, LADOT, FAA, and the respective outside agency. Depending on the outcome of the negotiations to determine LAWA's appropriate level and types of transit improvement or "fair-share" contribution, this phasing plan may be altered at the discretion of LADOT. FAA approval may still be required for substitute mitigations. Mitigation measures are applicable only to the extent that the use of airport revenue to funds such measures is permissible under federal law and policies.
6. In the event the applicant is unable to obtain necessary construction permits from the concerned agencies in a timely fashion, a temporary certificate of occupancy may be granted by the City provided the applicant has demonstrated reasonable efforts to complete the necessary designs and improvements to the satisfaction of LADOT. Should any improvement not receive required approval, the City may substitute an alternative measure of an equivalent effectiveness.
7. LAWA will strive for completion of both the direct freeway connections from the I-405 Freeway at Lennox Boulevard and from the I-105 Freeway onto the airport roadways east of the ITC. If these freeway improvements are not completed in time for the opening of the GTC, LAWA may be required to implement substitute mitigation improvements prior to opening the GTC, including, but not limited to, Changeable Message Signs to direct traffic and/or Closed Circuit Television Cameras to monitor traffic flow, to the satisfaction of LADOT.
8. For proposed LAX Master Plan facilities not listed, such as the CTA Landside Terminals, South CTA Concourse Rework, Satellite Concourse, Tom Bradley International Terminal Rework, North CTA Concourse, or LAX Northside, there are no traffic mitigations or project components to be specifically phased with the construction of those components.
9. Prior to the issuance of any final certificate of occupancy in the final phase of this off-airport Transportation Improvement Phasing Plan, all required improvements in the entire phasing plan shall be funded, completed, or resolved to the satisfaction of LADOT.

April 15, 2004

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