4.3.2 Off-Airport Surface Transportation

4.3.2.1 Introduction

The off-airport surface transportation section addresses traffic-related impacts outside of the boundaries of the airport, including arterial roads and highway segments and ramps that serve traffic approaching and departing the airport environs. It also includes remote facilities that serve airport-related functions, such as private parking and off-airport cargo. The impacts of passengers, employees, cargo, ancillary, and collateral development (non-airport activities on airport property) on off-airport roads are also included. This analysis discusses the influence of Master Plan project implementation on the off-airport surface transportation system.

Technical Report 3b, *Off-Airport Ground Access Impacts and Mitigation Measures,* and Technical Report S-2b, *Supplemental Off-Airport Surface Transportation Technical Report,* contain detailed information regarding existing off-airport surface transportation operations, traffic modeling efforts, and analysis of future off-airport conditions. On-airport surface transportation issues are addressed in Section 4.3.1, *On-Airport Surface Transportation*.

4.3.2.2 General Approach and Methodology

The off-airport analysis methodology was generally guided by requirements of the Los Angeles Department of Transportation (LADOT). Because the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) also accept these requirements, they satisfy the requirements of both CEQA and NEPA.

The analysis was separated into two study areas, or "tiers," as illustrated in **Figure F4.3.2-1***,* Off-Airport Surface Transportation Study Areas. The first tier is the primary study area, and focused on major intersections in the general vicinity of the airport, in an area approximately bounded by the Marina Freeway (SR 90) to the north, the San Diego Freeway (I-405) to the east, Rosecrans Avenue to the south, and Vista del Mar to the west. The secondary tier of analysis focuses on corridors that radiate out beyond the first tier. Arterial streets, freeways, and freeway ramps are included in this second tier of analysis.

In addition to the two tiers of analysis described above, a Congestion Management Program (CMP) impact analysis was conducted as required by the County of Los Angeles. The CMP analysis assessed potential impacts to the countywide system of freeways and major regional highways associated with Alternative D, the LAWA staff preferred alternative. The CMP report is contained in Technical Report S-2b, *Supplemental Off-Airport Surface Transportation Technical Report.* A similar analysis was previously conducted for Alternative C, as LAWA staff's earlier preferred alternative in the Draft EIS/EIR. The CMP report for Alternative C is contained in Technical Report 3b, *Off-Airport Ground Access Impacts and Mitigation Measures*.

The following facilities were analyzed within the two study areas:

- A preliminary project impact and mitigation analysis at 61 intersections and 39 freeway ramps within the primary study area, with further analysis for Alternative C at 14 additional intersections.
- A corridor-level analysis in the secondary tier involving 30 key roadway segments, to evaluate project impacts to corridors along the outer edges of the primary study area.
- In addition to the intersections and freeway ramps analyzed for Alternative C, a project impact and mitigation analysis was conducted for Alternative D at 10 additional intersections located east of I-405. Those intersections are uniquely relevant to the operations of Alternative D because it is the only alternative that includes major airport passenger facilities on the east side of the airport, near the I-405 Freeway. For Alternative D, two different mitigation packages were evaluated; one for impacts that would occur if a new I-405 interchange at Lennox Boulevard was included in the mitigation plan to provide direct airport access, and the other if the interchange was not in the mitigation plan. This was done so that, in the event that an I-405/Lennox Boulevard interchange is not approved, an alternative mitigation package is identified and analyzed. The nature and effectiveness of the primary mitigation package with the I-405 interchange is addressed in subsection 4.3.2.8, *Mitigation Measures*. Since that is the recommended mitigation package for Alternative D, it is described and discussed in the main body of this Final EIS/EIR. The discussion and analysis of the secondary

mitigation package, which would be implemented only in the event that the primary mitigation package is not approved, are presented in Technical Report S-2b, *Supplemental Off-Airport Surface Transportation Technical Report.*

The locations of the analyzed intersections and roadway segments are illustrated in **Figure F4.3.2-1**. Although LADOT guidelines typically require analysis only during the traditional morning and evening commuter "rush" hours, this analysis also considered potential impacts during the airport peak hour. According to traffic surveys and the LADOT, the commuter peak hours are from 8:00 a.m. to 9:00 a.m. and from 5:00 p.m. to 6:00 p.m. during non-summer months. Airport design day passenger schedules indicate that the airport peak hour is from 11:00 a.m. to 12:00 noon on Fridays in August. All facilities (intersections, streets, freeways, and ramps) were analyzed for all three peak hours. To adequately address the impacts for both CEQA and NEPA, three scenarios were used as a basis of comparison as described below.

- The **Environmental Baseline** scenario represents a snapshot of 1996 traffic conditions, both on- and off-airport. This defined the baseline condition for CEQA.
- The **Adjusted Environmental Baseline** is the basis of comparison under CEQA for future mitigation for the four build alternatives. It is a hypothetical scenario that combines (1) a 1996 snapshot of airport traffic and facilities, (2) the Manchester Square property assumed as vacant, and (3) the non-airport traffic that would occur with natural regional growth by 2015. This scenario assumes the continued development of regional, non-airport land development projects ("related projects") as well as those regional traffic improvement projects that are currently approved and permitted.

  In conjunction with responding to comments received on the Supplement to the Draft EIS/EIR, some additional refinements were made to the Adjusted Environmental Baseline for select study intersections. Examples of such refinements include assumption adjustments to update and more accurately reflect the traffic lane configurations or traffic signal phasing for a particular intersection. These adjustments were made for Alternative D only.
- The **No Action/No Project Alternative** is provided as a basis of comparison under NEPA and for informational purposes under CEQA for future impacts of the four build alternatives. It is a realistic scenario, which would likely occur if the Master Plan were not adopted. It assumes that both airport and non-airport traffic would grow, but without the LAX Master Plan projects. Airport facility improvements that do not require FAA approval, approved collateral development on airport property, and operational changes were assumed as they are expected to occur if the Master Plan is not implemented.

The analysis first defined the existing operating conditions of all off-airport facilities:

- For intersections**,** morning, afternoon and airport peak period intersection turning-movement counts were either obtained from LADOT or they were counted as a part of this study. The counts were conducted on various days in 1996 and 1997.
- For roadway segments, morning, afternoon, and airport peak hour traffic volumes for the key roadway segments were derived from either ground counts obtained from local jurisdictions or counts conducted as a part of this study. The percentage of traffic on area streets that is directly attributable to airport activity was also determined for these segments from a trip-purpose survey taken in March 1995.
- For mainline freeway volumes, data was obtained from Caltrans and was derived from traffic counters that are imbedded in the pavement throughout the Caltrans system, providing continuous traffic information. Ramp volumes were obtained from mechanical traffic counters ("tube" counts).

The detailed results of these surveys are presented in Technical Report 3b, *Off-Airport Ground Transportation Impacts and Mitigation Measures*.

The existing and future conditions were analyzed using EMME/2, an industry-accepted computerized traffic demand forecasting model. The peak hour model used for this analysis was derived from the Southern California Association of Governments' (SCAG) regional model, a complex computer model which forecasts traffic for the Southern California region. The SCAG model is used in part by the City of Los Angeles in developing its long-range transportation model, the Los Angeles General Plan Framework Model. The LAX Ground Access Model covered the entire urbanized area of the Los Angeles region, with a very detailed focus in and around the primary study area. The environmental baseline scenario

Tier 2

Tier 1

LAX

KEY MAP

1,250' 2,500' 7,500'
2,500' 0 5,000'

LEGEND

- Boundaries of Tier 1 Study Area
- XX Studied Intersection Number/Letter
- XXL Studied Roadway Link Number

LAX Master Plan Final EIS/EIR	**Off-Airport Surface Transportation Study Areas**	Figure **F4.3.2-1**

was developed by calibrating the model to actual survey data, with the distribution of existing airport passenger trips determined from passenger surveys conducted by LAWA in 1993.

The future traffic conditions model was developed to represent the area's likely transportation system in 2015, accounting for different types of car, truck, and transit trips, as well as the many improvements to the transportation system planned by 2015. This process is detailed in Technical Report 3b, *Off-Airport Ground Access Impacts and Mitigation Measures.* The general process is summarized in the following steps.

- **Forecast the future traffic demand for background (non-airport) trips and assign it to area roads.** Forecasts of future year traffic demand were prepared using the LAX Ground Access Model. This model is a derivative of the SCAG Regional Transportation Model and uses trip generation, distribution and assignment algorithms from the SCAG Model. Mode splits and vehicle occupancy assumptions from the SCAG model are used directly in the LAX Model. The LAX Model forecasts peak hour travel demand, and is calibrated to detailed peak hour data. The development of the LAX Ground Access Model is documented in the LAX Ground Access Model Calibration and Validation Report dated October 15, 1998.

  Estimates of future year population, housing and employment are taken from the SCAG model, with some additions as described below, and used as input to the LAX Model's future year forecasts. These assumptions provided a consistent background that was used to analyze each of the alternatives and were based on SCAG's forecasts developed for the 1998 Regional Transportation Plan (RTP). Year 2015 forecasts, dated June 1997, were obtained from SCAG's modeling group. The forecasts were disaggregated to fit the smaller zones in the primary study area within the LAX Ground Access Model.

- **Add the traffic that is expected to be generated by probable future non-airport development projects in the region by 2015.** This included traffic from the Playa Vista development to the north of the airport and many other smaller traffic-generating projects. In addition to the population, housing and employment growth in the SCAG forecasts, traffic growth associated with other approved development projects in and near the primary study area was also incorporated into the RTP background assumptions. A list of approved development projects was developed with the assistance of the County of Los Angeles and the cities of Culver City, El Segundo, Inglewood, Los Angeles, Manhattan Beach, and Santa Monica.

  Traffic growth from the approved development projects was compared to the SCAG forecasts of growth. If the SCAG forecasts were large enough to include the approved development project(s) in a particular zone, the SCAG forecast was used. If the SCAG forecast was not large enough in a particular zone, then population, housing, and/or employment growth was added to that zone to ensure that sufficient growth was assumed to include all of the approved development projects. These trips were then "assigned" to a network of roadways to represent actual peak hour traffic flows.

- **Account for the change in traffic patterns that are likely to result from future transportation system improvements by 2015.** Funded future transportation system and transit project improvements unaffiliated with LAX, such as the High Occupancy Vehicle (HOV) lanes on the I-405 near the airport, were then added to the model networks. Improvements were assumed to the freeways, HOV lanes, surface streets, and to the transit system. These improvements are presented and discussed in Technical Report 3b, *Off-Airport Ground Access Impacts and Mitigation Measures.*

- **Add future LAX trips and assign them to the area road system.** A detailed process was used for generating airport-related trips and assigning them to specific routes. LAX vehicle trips were estimated separately for airport passengers, employees, cargo/ancillary, and collateral development (trips generated by on-airport commercial development). Private automobiles, carpools, shuttles, taxis, vans, limousines, and buses were treated separately. For airport employees, the "average vehicle ridership" (AVR), or the average number of persons per vehicle making commute trips, was increased from 1.36 in 1996 to 1.44 in 2015. The model was modified to account for the roadway and transit changes proposed in the four build alternatives. The result was a set of airport trip tables that allowed trips to be assigned to each parking roadway and commercial facility as appropriate.

  It should be noted that the demand for most surface transportation facilities is not based on total airport passengers. Rather, it is based on origin/destination (O&D) passengers only, which are the passengers that begin or end their trip in the Los Angeles region. It excludes connecting passengers,

which are those passengers that simply connect from flight to flight without leaving the inside of the airport, since they do not use the airport's surface transportation system. Connecting passengers are, however, included in many passenger demand figures such as million annual passengers (MAP). Forecasts of originating passengers are different than the forecasts of total passenger and, as a result, the requirements for surface transportation facilities will not necessarily follow the same trends as the airport's total passenger forecasts. Further, the demand for most surface transportation facilities is based on the peak hour of activity, not annual or even daily activity. Peak hour activity is typically more variable than daily or annual activity, and usually exhibits very different trends.

The trip distribution was then modified based on expected changes in population and employment around the region. The distribution of existing employee trips was determined from employee surveys taken as a part of employer trip reduction programs (previously mandated under Regulation XV by the South Coast Air Quality Management District). Future employee distributions were modified based on changes in population. The distribution of existing cargo and ancillary trips was determined from interviews with cargo carriers serving the airport. These distributions were not modified for the future scenarios, since it is anticipated that destinations of future cargo and ancillary trips would not substantially change. Distributions of trips from development of non-airport land uses (LAX Northside/Westchester Southside and Continental City), referred to as collateral trips, were taken directly from the trip distribution module of the LAX Ground Access Model. This module is a "gravity model" distribution module patterned after the SCAG and Los Angeles Citywide Framework models.

A "gravity model" is a type of mathematical formulation which applies Newton's Laws of Gravity to estimate trip distribution. Trip distribution based on a gravity model assumes that trips from an origin to a destination are directly proportional to the magnitude of attractions in the destination traffic analysis zone (which is based on the number of employees or total employment available) and inversely proportional to the travel impedance between the origin and destination zones.

- **Refine the modeling output and determine Levels of Service (LOS).** To complete the modeling process, a series of post-model processing steps were used to effectively remove any inconsistencies that may have resulted in the model's traffic estimates between adjacent links and intersections. This was done using the post-processing element of the computer traffic simulation model, which assigned specific turning movement volumes to each intersection and ensured that every vehicle was accounted for between intersections. The number of vehicles shown to exit an intersection was the same number of vehicles shown entering the adjacent intersection, provided that no land uses intercepted or generated trips between the two intersections.

  The modeling results were then analyzed to determine the facilities' operating characteristics. For intersections, the demand volumes were analyzed using the computer program CalcaDB. This program was developed by the LADOT, and uses the Circular 212[157] methodology for calculating volume-to-capacity ratios (V/C) and levels of service (LOS). The V/C ratio calculated for roadway links (i.e., specific roadway segments) and intersections is a quantitative indication of the volume of traffic (vehicles) occurring on that link or intersection compared to the design capacity of that facility. The intersection turning movement volumes output from the EMME/2 analysis were used as input into the CalcaDB analysis. For roadway and freeway segments and freeway ramps, the traffic demand was compared with the facility's traffic capacity to forecast its LOS.

  The calculation of LOS is a qualitative measure of the ability of an intersection, roadway segment, or freeway facility to handle traffic based on given conditions. LOS ranges from "A", which represents free flow conditions, through "F" which represents extreme congestion with stop-and-go conditions. **Table F4.3.2-1**, Level of Service Definitions Relative to Intersections and Roadway Links, summarizes the definitions of LOS for intersections and road segments, as defined by the Transportation Research Board.[158] LOS for freeway facilities is defined in **Table F4.3.2-2**, Level of Service Definitions, Freeway Segments and Ramps. An illustration of LOS is provided in Table F4.3.1-2, Level of Service Definitions Relative to Intersections and Roadway Links, in Section 4.3.1, *On-Airport Surface Transportation*. These definitions are from the Los Angeles County Congestion Management Program criteria. LADOT, Caltrans, and FHWA recognize all of these LOS criteria.

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157 Transportation Research Board, Interim Materials on Highway Capacity, Circular 212, 1980.

158 Transportation Research Board, Highway Capacity Manual, Special Report 209, 1994.

Table F4.3.2-1

Level of Service Definitions Relative to Intersections and Roadway Links

Level-of-Service	Interpretation	V/C[1]
A	**Uncongested operations**; for intersections, all vehicles clear in first green light opportunity.	0.000-0.600
B	**Uncongested operations**; for intersections, all vehicles clear in first green light opportunity.	0.601-0.700
C	**Light congestion**; for intersections, occasional backups on critical approaches.	0.701-0.800
D	**Moderate congestion**; for intersections, vehicles required to wait through more than one green light opportunity during short peaks.	0.801-0.900
E	**Severe congestion**; for intersections, some long-standing lines on critical approaches, with blockage occurring 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] Volume to Capacity Ratio.

Source: Transportation Research Board, Highway Capacity Manual, 1994.

Table F4.3.2-2

Level of Service Definitions, Freeway Segments and Ramps

Level-of-Service	Interpretation	D/C[1]
A	Uncongested operations	0.00-0.35
B	Uncongested operations	0.36-0.54
C	Light congestion	0.55-0.77
D	Moderate congestion	0.78-0.93
E	Severe congestion	0.94-1.00
F(0)	Total breakdown with stop-and-go operations	1.01-1.25
F(1)	Total breakdown with stop-and-go operations	1.26-1.35
F(2)	Total breakdown with stop-and-go operations	1.36-1.45
F(3)	Total breakdown with stop-and-go operations	1.46+

[1] 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) 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. Therefore, calculated LOS F traffic demands may be greater than observed traffic volumes.

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

- **Compare Significant Impacts:** Two volume/capacity impact comparisons were then performed, using the thresholds defined in subsection 4.3.2.4, *Thresholds of Significance*. The first comparison was between the project alternatives and the Adjusted Environmental Baseline, which determines the alternatives' significance and the need for mitigation under CEQA. (This is the standard method of comparison for determining mitigation.) The second comparison, to the No Action/No Project Alternative, is for informational purposes under CEQA and is the basis for the NEPA analysis.

  The FHWA, Caltrans, and LADOT do not require a typical impact and mitigation analysis of freeway links, since the Congestion Management Program (CMP) conducted for Los Angeles County fully analyzes these facilities and is accepted by the FHWA, Caltrans, and LADOT as an acceptable surrogate. The CMP summary report is included in Technical Report 3b, *Off-Airport Ground Access Impacts and Mitigation Measures.*

- **Develop Preliminary Mitigation Measures**: Preliminary mitigation measures were then developed only for the Adjusted Environmental Baseline comparison. Not only is this comparison required by

CEQA and is the standard method of determining significance, it also tends to result in a more conservative mitigation plan (i.e., results in more impacts) than would a comparison to the No Action/No Project Alternative.

- **Refine Mitigation Plan with Los Angeles Department of Transportation (LADOT):** The preliminary mitigation plan resulting from the Adjusted Environmental Baseline comparison was then reviewed and refined by the LADOT for Alternative C. This was done to provide for further detail at select locations and to consider 14 additional intersections that LADOT has particular interest, in addition to the 61 intersections initially analyzed, for a total of 75 intersections. A similar process was undertaken relative to the evaluation of Alternative D, with a total of 10 more intersections considered beyond that of Alternative C, for a total of 85 intersections.
- **Determine Construction Impacts**: In the analysis of Alternatives A, B and C, policy recommendations were made to minimize peak hour traffic impacts to motorists at or near the airport.

  The analysis of Alternative D includes a more extensive evaluation of surface transportation impacts that would occur during the peak construction period.[159] Based on the anticipated construction phasing of the components of Alternative D, the peak construction period would occur in the Year 2008. The Year 2008 construction analysis for Alternative D was performed by first determining the amount of construction traffic on the area street network during that peak period. Hourly trip generation estimates were prepared for construction employee and construction truck trips. Using this information, the number of construction-related trips occurring during each hour of the day was determined. This information also revealed when the peak hour(s) of construction-related traffic would occur. The construction traffic was then combined with Year 2008 project traffic for the three typical peak hours of area traffic (morning and evening commuter peak hours and airport peak hour). This approach ensured that mitigation of Year 2008 impacts accounted for both project-related and construction-related impacts.

  To determine if any construction-related impacts would occur outside the three typical peak hours, an analysis was conducted to estimate traffic conditions on select roadways during the two construction peak hours. First, Year 2008 total hourly traffic volumes were estimated on select roadways using profiles of hourly traffic volumes obtained during model calibration and validation in 1995. Separate profiles were developed for freeway mainlines, freeway ramps, and arterial streets. These profiles were used to estimate the percentage of daily trips occurring during each hour of the day (peaking factors). The percentages for the a.m. and p.m. peak hours, combined with model estimates for Year 2008 traffic volumes during those hours (total both directions), were used to estimate total daily traffic. Once total daily traffic was estimated, the hourly peaking factors were used to estimate hourly traffic volumes.

  Second, total project traffic from Alternative D was estimated for Year 2008. Profiles of hourly airport traffic were developed based on traffic counts collected in 1995. These profiles were developed for airline passengers, employees, and cargo/ancillary trips. Hourly estimates of airport trips were then developed for both with-construction and without-construction conditions.

  Third, project traffic was estimated for selected roadways during the peak construction hours. This step began by obtaining from the LAX Ground Access Model the airport volumes on select roadways (separate estimates for passengers, employees, and cargo/ancillary trips) during the a.m., p.m. and airport peak hours. Estimates were then developed for the off-peak hours based on the peaking factors for the separate airport trip categories.

  Finally, non-airport background traffic for 2008 was estimated by subtracting the airport trips from the total trips on select roadways. This data was then analyzed to determine construction-related traffic impacts during the construction peak hours.

The other primary principles and recommendations governing the off-airport surface transportation analysis are the USDOT FHWA policies and procedures for Supplemental Environmental Evaluations. This is documented in the FHWA Technical Advisory entitled "Guidance for Preparing and Processing Environmental and Section 4(F) Documents (T 6640.8A). The technical guidance was established to

[159] The peak construction traffic year of 2008 is different from the peak construction activity year of 2005 used in the air quality analysis, based on certain construction equipment emissions, which include on-road vehicles and off-road vehicles/equipment, being highest in 2005.

provide FHWA field offices and project applicants with direction on the preparation and processing of federally sponsored environmental documents. A more detailed analysis of the FHWA requirements is provided in Appendix K, *Supplemental Environmental Evaluation for LAX Expressway and State Route 1 Improvements*.

For the LAX off-airport transportation modeling and analysis, the primary focus from the FHWA Technical Advisory is in seven primary areas:

- **System Linkage** - Will the proposed projects being added in the LAX Master Plan alternatives be "connecting links"? How do these fit into the transportation system?
- **Capacity** - Is the capacity of the present facility inadequate for the present traffic? Projected traffic? What capacity is needed? What is the level(s) of service for existing and proposed facilities?
- **Transportation Demand** - Including relationship to any statewide plan or adopted urban transportation plan together with an explanation of the project's traffic forecasts that are substantially different from those estimates from the 23 U.S.C. 134 (Section 134) planning process. In Southern California, the Regional Transportation Plan prepared by SCAG is the basis for comparison and its list of projects and growth forecasts are inherent in the No Action/No Project Alternative.
- **Social Demands or Economic Development** - New employment, schools, land use plans, recreation, etc. What projected economic development/land use changes indicate the need to improve or add to the highway capacity?
- **Modal Interrelationships** - How will the proposed facilities interface with and serve to complement airports, rail and port facilities, mass transit services, etc.?
- **Safety** - Is the proposed project necessary to correct an existing or potential safety hazard? Is the existing accident rate excessively high? Why? How will the proposed project improve it?
- **Roadway Deficiencies** - Is the proposed project necessary to correct existing roadway deficiencies, e.g., substandard geometrics, load limits on structures, inadequate cross-section, or high maintenance cost? How will the proposed projects improve it?

The off-airport transportation analysis was guided by these principles in the following manner:

- **System Linkage** - The study area and modeling analyses allow for the assessment of the LAX Expressway, the ring road around the airport and associated facilities to be assessed in a systems context. As outlined in the FHWA Technical Advisory, the benefits and effects of the facilities included in the four build alternatives were compared against a No Action/No Project Alternative that includes all other adopted and programmed transportation improvements.
- **Capacity** - The analysis identified the capacity constraints of the No Action/No Project Alternative in terms of level(s) of service and other measures.
- **Transportation Demand** - As specified in the FHWA Technical Advisory, all adopted and programmed statewide and RTP facilities were included in the model networks as well as all related roadway projects from surrounding jurisdictions. These comparisons allowed a comparison of the traffic forecasts between the build alternatives and the No Action/No Project Alternative, which conforms to the RTP.
- **Social Demand or Economic Development** - The trip generation includes all adopted land use improvements and developments, both on- and off-airport property. The trip generation includes the related projects from all surrounding communities, which has been reconciled with the adopted regional growth forecasts from the SCAG. With the inclusion of these adopted land uses, the ability of the system to serve new land uses both on and off-airport property was assessed.
- **Modal Interrelationships** - Both the on-airport and off-airport models and traffic analysis accounted for the effects of planned and programmed transit improvements in the study area. The off-airport transportation model was based on the market shares from SCAG's regional transportation model and its mode choice component. In addition, as part of the impact assessment and mitigation analysis, the role of Transportation Demand Management (TDM) and increased transit was assessed for air passengers, airport workers and other airport destined travelers.
- **Safety** - The key measure for safety improvement addressed in the analysis is the percentage of airport traffic that will be removed from the local roadway system and carried on freeways or the LAX Expressway and the ring road.

- **Roadway Deficiencies** - The benefits of the LAX Expressway, ring road and other transportation network improvements are addressed in terms of how they improve congestion and traffic performance in the study area.

4.3.2.3 Affected Environment/Environmental Baseline

Environmental Baseline (1996)

Existing Airport Access Routes

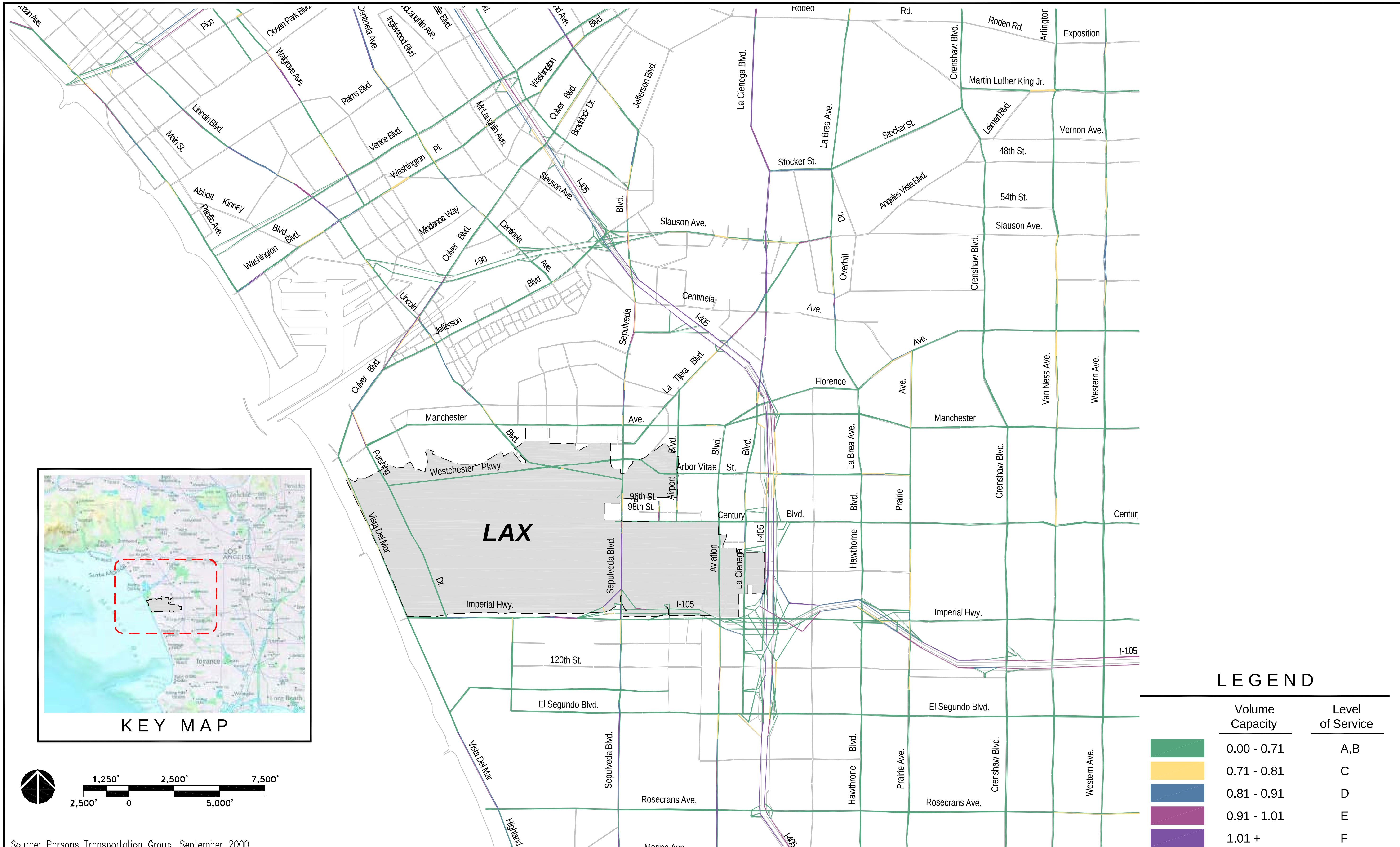
LAX is located in the western portion of Los Angeles County. This area of the county is mostly built out, and very little land remains undeveloped. As the largest airport in the Los Angeles region, LAX receives traffic from throughout the entire region. However, its location in the heart of an urban area and the lack of any direct freeway connection to the CTA requires that LAX be served by many local and arterial roads, with direct CTA access solely provided from Century Boulevard and Sepulveda Boulevard. These roads are in turn served by two freeways (I-405 and I-105). The primary airport access routes are identified below and illustrated in **Figure F4.3.2-1** and Figure F4.3.1-1, Road System Serving LAX, in Section 4.3.1, *On-Airport Surface Transportation.*

- **Century Boulevard.** An eight lane divided roadway extending from the entrance to LAX at Sepulveda Boulevard on the west to Central Avenue on the east, it serves communities east of the airport such as Inglewood. With a full interchange at I-405 and direct access to the CTA, Century Boulevard serves the "front door" of LAX as well as main access for other airport-related traffic and the commercial establishments including major hotels and high-rise office buildings between I-405 and Sepulveda Boulevard.
- **Sepulveda Boulevard.** A major north-south arterial serving as a direct access route and providing connections to I-405 north of LAX (via Howard Hughes Parkway) and to I-105 south of LAX. It provides access to communities both north of LAX such as Culver City and Westchester, as well as the South Bay communities. Sepulveda Boulevard is designated State Route (SR) 1 from Lincoln Boulevard on the north to Pacific Coast Highway on the south, including adjacent to LAX.
- **Lincoln Boulevard.** A major arterial roadway north of LAX, it provides access to the densely populated communities north of LAX, such as Marina del Rey, Venice, and Santa Monica. Lincoln Boulevard is designated SR 1 from Sepulveda Boulevard on the south to I-10 on the north.
- **La Tijera Boulevard**. Although only three miles in length, La Tijera Boulevard is a primary airport route, used by many motorists attempting to avoid the traffic congestion on I-405. It provides airport access to the north, via on- and off-ramps with I-405 and an intersection with La Cienega Boulevard.
- **Arbor Vitae Street.** A minor east-west arterial on the north side of LAX, it provides airport access from communities to the east, such as Inglewood.
- **I-405 (San Diego Freeway).** A high-volume, north-south freeway that provides regional access to the coastal communities on the west side of Los Angeles. It passes along the east side of LAX and provides airport access via on- and off-ramps at Howard Hughes Parkway, La Tijera Boulevard, Manchester Boulevard, La Cienega Boulevard, Century Boulevard, I-105, Imperial Highway, and El Segundo Boulevard.
- **I-105 (Glenn M. Anderson Freeway or commonly called the Century Freeway).** Opened in 1993, this east-west freeway extends from Sepulveda Boulevard on the west to the San Gabriel Freeway (I-605) on the east. Access to LAX is provided by ramps at Sepulveda Boulevard, Imperial Highway and Nash Street. MTA Green Line service, located in the center median of the freeway, opened in 1995 and provides light rail service from Redondo Beach on the west to I-605 to the east. The Green Line's airport station is provided at the southeast corner of Aviation Boulevard and Imperial Highway.

Existing Route Conditions

Airport neighbors are aware that there is considerable airport traffic that uses surface streets, particularly north of LAX. To fully understand the existing traffic conditions around the airport and its causes, two closely-related factors, described below, must be viewed side-by-side:

- The existing roadway congestion levels, illustrated in **Figure F4.3.2-2**, Existing (1996) Off-Airport Road Congestion PM Peak Hour, which indicates each road's LOS via different color designations.



Source: Parsons Transportation Group, September 2000

LAX Master Plan Final EIS/EIR

Existing (1996) Off-Airport Road Congestion
PM Peak Hour

Figure
F4.3.2-2

- The percentage of traffic on each route that is caused by the airport, illustrated in **Figure F4.3.2-3**, Existing (1996) Airport Traffic vs. Non-Airport Traffic Comparison PM Peak Hour (the evening peak hour is typical of current conditions), which shows the relative number of airport and non-airport vehicles on each road with varying widths of LAX and non-LAX colored bands.

In an ideal airport traffic system, all regional airport traffic (passengers, employees, etc.) would stay on freeways all the way to the airport terminal or parking area. Only locally-generated airport traffic would use surrounding surface streets. In other words, there would not be any regional airport traffic "cutting through" nearby surface streets. This is how the access systems to most other major airports in the United States are designed.

North of LAX, unfortunately, there are three primary reasons why these characteristics are not exhibited.

- When the I-405 north of LAX is congested, motorists off-load onto surface streets. There is little incentive for motorists to stay on this freeway to access the airport.
- LAX does not have any direct freeway access to the CTA or parking areas, forcing all motorists to off-load onto surface streets as they near LAX. This further encourages motorists to off-load the freeway earlier than they otherwise would.
- The orientation of regional freeways and arterials north of LAX encourages off-loading. Throughout most of its length, I-405 is aligned in a northwest/southeast orientation. Because most of the roads in the Los Angeles region are oriented north/south, there are few arterials that closely parallel I-405 and offer a convenient alternative when I-405 is congested. The only exception is north of LAX between SR-90 (Marina Expressway) and I-10 (Santa Monica Freeway), where the arterial roadway grid also "shifts" northwest/southeast to parallel I-405. As a result, arterial routes that are near and parallel to the I-405 and ultimately lead to LAX such as Sepulveda Boulevard, Lincoln Boulevard, and Centinela Avenue present an attractive opportunity for airport motorists to easily off-load onto arterial streets.

As a result, much of the regional airport traffic cuts through arterial streets to the north. This is illustrated in **Figure F4.3.2-3**, Existing (1996) Airport Traffic vs. Non-Airport Traffic Comparison PM Peak Hour, which shows a significant percentage of airport-related traffic on arterial streets north of LAX, such as Sepulveda and La Tijera Boulevards.

South of LAX, there is a higher percentage of LAX traffic on I-405 and a lower percentage on the arterials, indicating that airport traffic is in fact staying on the freeway system as desired. This is a result of the layout of the roadway network south of LAX.

There are no alternative arterial routes that closely parallel I-405 south. In fact, south of LAX, all major arterial routes change to a north/south orientation, while I-405 south of Rosecrans Avenue continues in a northwest/southeast direction. As a result, as I-405 continues farther south of LAX, it moves even more distant from the north/south arterial routes that serve LAX, such as Sepulveda and Aviation Boulevards. Most airport motorists find it too circuitous and time-consuming to exit the freeway and use adjacent arterial streets until they are very close to the airport.

A benefit for South Bay residents is that little cut-through airport traffic is on South Bay arterial routes such as Sepulveda Boulevard and Aviation Boulevard. The airport-bound motorists on these routes are primarily South Bay residents that are air passengers or who work at LAX.

East of the airport, I-105 does exhibit some breakdown conditions throughout several hours of the day, although not as consistently as on I-405. Most of this freeway operates at LOS E or better, even during the evening peak hour. Several arterial routes exist adjacent to this east/west freeway, such as Imperial Highway and Century Boulevard, allowing easy off-loading of airport traffic to avoid I-105 during peak periods. Also, a rapid transit line - the MTA Green Line - is located in the median of this freeway, providing a convenient alternative to I-105 car travel. A historically problematic area of this freeway has been the westbound-to-northbound off-ramp to Sepulveda Boulevard. Traffic consistently queued from the traffic signal at the base of this ramp, often far enough to interfere with westbound "through" traffic on I-105. This dangerous situation was partially alleviated in 1999 with the restriping of this ramp from one to two lanes.

Another important issue regarding airport traffic is illustrated in **Figure F4.3.2-3**. Although LAX-related traffic is known to utilize the surface streets west of I-405, the portion of total traffic attributable to LAX is relatively small on all area roads, except in the immediate vicinity of the airport. This is particularly true during the commuter evening rush hour when, for example, only about eight percent of traffic on

Sepulveda Boulevard south of El Segundo Boulevard is airport-related. Further, although it would be ideal for airport access to be provided directly via freeways, the dispersion of LAX traffic onto many arterial and freeway routes does have a side benefit in that its impact is minimized on any given route. As a result, even if all LAX-bound traffic were removed, there would be little noticeable difference on most roads outside of the immediate vicinity of the airport, particularly during the morning and evening rush hours.

The number of deficient[160] intersections, street links, freeway segments, and freeway ramps within the study area during any hour are shown in **Table F4.3.2-3**, Existing and Future Transportation Deficiencies, for the environmental baseline conditions. 29 of 130 traffic facilities reviewed during the assessment of 1996 baseline environmental conditions are considered to be deficient.

Table F4.3.2-3

Existing and Future Transportation Deficiencies

	1996 Environmental Baseline	2015 Adjusted Environmental Baseline	2015 No Action/ No Project
Deficient Intersections	18	34	40
Deficient Street Links	6	8	9
Deficient Fwy. Segments	3	4	4
Deficient Fwy. Ramps	2	1	2
Total Deficient Facilities	**29**	**47**	**55**

Source: Barton-Aschman Associates, Inc. - PTG (2000).

To determine if the 1996 traffic conditions used as the environmental baseline condition in the Draft EIS/EIR changed materially since that time, traffic count data from the Los Angeles Department of Transportation (LADOT) was analyzed. Data provided by LADOT was reviewed for 52 intersections in the vicinity of the airport. Traffic counts were first made at these intersections in 1994, 1995 or 1997. Traffic at the intersections was counted again in 2001. A comparison of the data showed that the average annual growth rate for the 52 intersections was approximately 1.0 percent and 0.7 percent per year for the a.m. and p.m. peak hours, respectively. It is a small growth rate and indicates that 1996 conditions are still applicable as an environmental baseline condition.

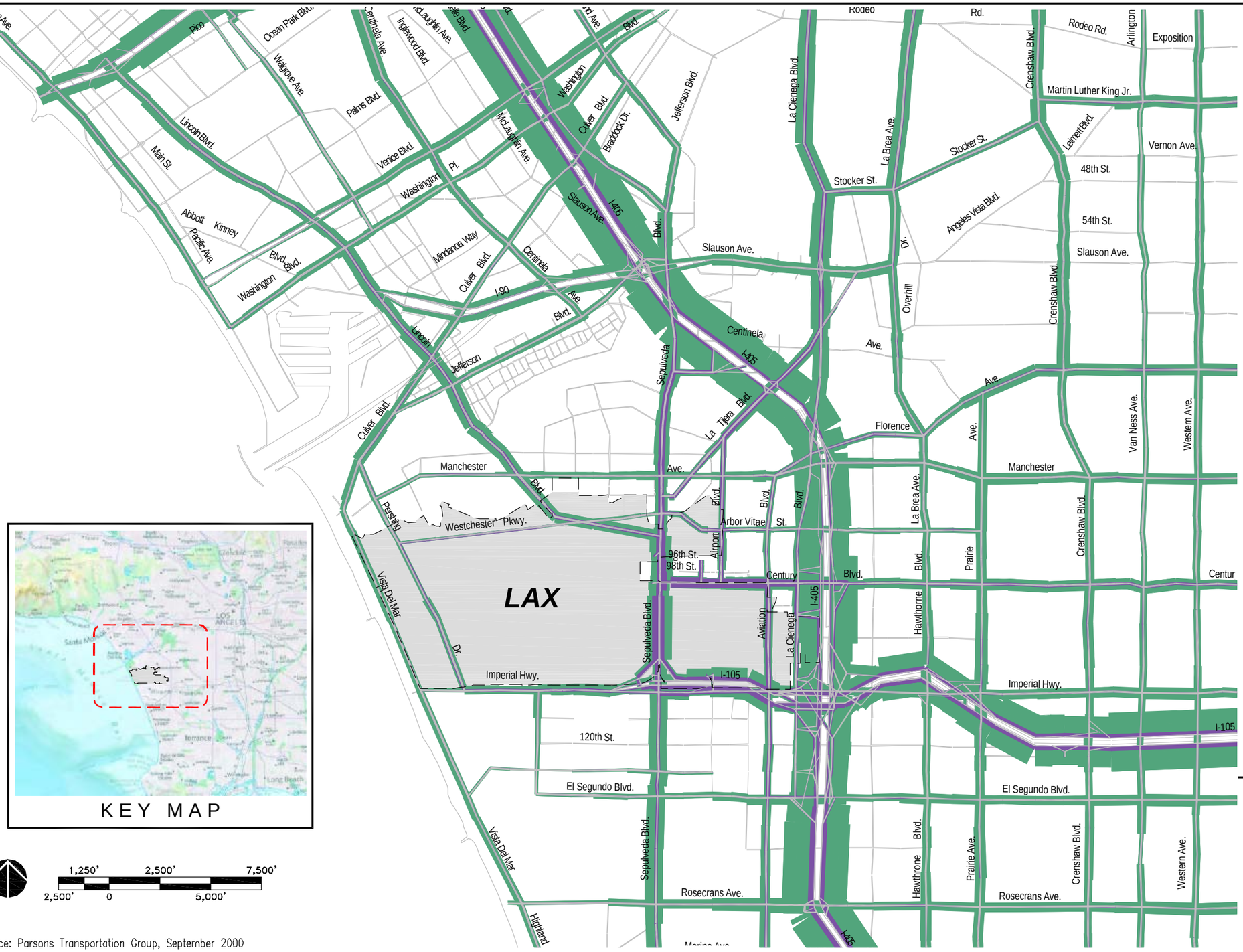
Employee Access

Two primary factors influence employee surface transportation patterns.

- Although employees at LAX are dispersed throughout the airport, their primary parking areas tend to be in Lots D and E on the east side of the airport, and off of World Way West, accessed from Pershing Drive on the west side of the airport.
- Employees tend to live closer to the airport than passengers do, and they use local and arterial streets more than passengers.

As a result, the impacts of employee trips tends to be concentrated on primary arterial access routes such as Lincoln Boulevard, Sepulveda Boulevard, Westchester Parkway, and Imperial Highway. Generation of employee trips generally reflect three employee shifts (day, evening, and midnight). Fortunately for area commuters, only the morning peak hour of airport employee traffic coincides with the typical commuter peak. The primary airport employee peak is at about 3:00 p.m., which is before the afternoon commuter peak hour of 5:00 to 6:00 p.m. Secondary peaks occur from about 6:00 a.m. to 7:00 a.m. (which tends to spill into and effect the commuter peak hour of 8:00 a.m. to 9:00 a.m.) and again at about 10:00 p.m., well after the commuter peak hour is over.

[160] An intersection or surface street is deficient (City of Los Angeles standard, as summarized in the Transportation Element of the City's General Plan) if its Level of Service is E or F. A freeway or freeway ramp is deficient (Los Angeles County CMP standard) if its Level of Service is F.



Source: Parsons Transportation Group, September 2000

LAX Master Plan Final EIS/EIR

Existing (1996) Airport Traffic vs. Non-Airport Traffic Comparison
PM Peak Hour

Figure
F4.3.2-3

Cargo/Ancillary Access

Cargo and ancillary vehicles enter and exit the airport at all LAX property driveways except for the CTA entrance at Century Boulevard and Sepulveda Boulevard. Peak activity in and out of the driveways is from about 12:00 noon to 2:00 p.m. Therefore, similar to LAX passenger activity, the cargo and ancillary activity does not exhibit the same peaking characteristics as area commuter activity, which peaks from 8:00 a.m. to 9:00 a.m. and again from 5:00 p.m. to 6:00 p.m.

Transit Access

Bus and rail transit services provide access to LAX. A regional transit center is located on 96th Street, near Parking Lot C. Buses from numerous regional transit systems stop at this center. Access to the CTA is provided by airport shuttle buses; direct public transit bus access into the CTA is prohibited as a means to reduce congestion.

The Van Nuys FlyAway service provides daily scheduled bus service from Van Nuys Airport to and from LAX. Ridership statistics for the Van Nuys FlyAway show that on the Fridays in August 1999, the service accommodated an average of 2,600 daily riders (both air passengers and employees) with 101 one-way trips, or about 50 round-trips. This resulted in an average vehicle occupancy of about 25.6 riders per one-way trip. During the peak hour, this saves about 180 private vehicle trips, or about 1.2 percent of the peak hour trips made at LAX in 1996.

Rail transit service is available from the Metropolitan Transportation Authority (MTA) Green Line rapid transit system. The LAX station is located about two miles from the CTA, on the southeast corner of Aviation Boulevard and Imperial Highway. LAWA began providing scheduled shuttle service between the CTA and this station in August 1995. However, few passengers use this service. About 73 percent of the transit riders using these services are employees of the airport and nearby areas.[161] In 1998, this shuttle accommodated an estimated 5,400 persons each week; however, only about 60 percent transferred to/from the Green Line as intended. About 11 percent used the park-and-ride lot as "airport parking." This appears to indicate that some people have used the shuttle to avoid the cost of parking in airport-operated and private parking facilities. The remaining riders transferred from another bus or used another form of transportation to get to the shuttle bus.

Adjusted Environmental Baseline

The evaluation of off-airport surface transportation impacts and development of mitigation measures for significant impacts identified in the analysis are based on a comparison of future year traffic conditions with the project to future year traffic conditions without the project. The future year baseline representing without-project conditions in the off-airport surface transportation analysis is referred to as the Adjusted Environmental Baseline. The overall nature of, and basis for using the Adjusted Environmental Baseline in evaluating certain impacts associated with the LAX Master Plan is described above in Chapter 4, *Affected Environment, Consequences, and Mitigation Measures* (Analytical Framework Section).

Within the Off-Airport Surface Transportation analysis, the primary objective of the transportation impact analysis is to identify the impacts that the proposed project has on the surrounding transportation system. In order to accurately identify and quantify these impacts, it is necessary to separate traffic growth due to the project from unrelated regional traffic growth due to other causes (such as general population and employment growth and land development in areas outside the airport).

Procedures to isolate traffic growth due to the project from all other traffic growth have been in use for many years. These procedures operate under the assumption that there will be no change in trip generation on the project site in the without-project scenario, but that regional traffic growth due to all other factors will continue. Traffic impact analysis policies and guidelines for both the City of Los Angeles and the County of Los Angeles require such assumptions.

The Adjusted Environmental Baseline includes the same on-airport historical airport activity (1996) and physical facilities (1997) as the environmental baseline, but it also includes off-airport land use activity and regional traffic development anticipated by the Year 2015. Except for these factors, the physical

[161] Godbe Research & Analysis, Survey of Greenline Passenger Behavior, April, 1998.

characteristics of the airport in the Adjusted Environmental Baseline are identical to the environmental baseline.

To obtain the "with-project" scenario, traffic growth due to the project is added to the without-project scenario. Transportation impacts are then identified by comparing these two traffic levels.

Use of the Adjusted Environmental Baseline for transportation impact and mitigation analysis is conservative in that it identifies more impacts and leads to more mitigation measures than would result if the No Action/No Project Alternative were used as the basis for future conditions without the project. Because the Adjusted Environmental Baseline assumes no growth in airport traffic, the difference in total traffic between with-project and without-project conditions is larger than it would be if the No Action/No Project Alternative (where airport traffic is allowed to grow substantially) were used in the comparison. If the current (unadjusted) environmental baseline were used as the basis for evaluating future (2015) project impacts, there would be no way to distinguish between impacts caused by the project versus future traffic congestion resulting from non-airport traffic growth.

In addition to accounting for future non-airport traffic growth, traffic facilities such as traffic signal upgrades or improvements in lane configurations that are anticipated to be built in the future were also incorporated into the Adjusted Environmental Baseline modeling of the Master Plan alternatives. This was conducted in coordination with the LADOT and included planned, programmed, or implemented roadway network facility improvements. The modeling was performed using the methodology summarized in subsection 4.3.2.2, *General Approach and Methodology*. The number of deficient intersections, street links, freeway segments, and freeway ramps was then determined. As shown in **Table F4.3.2-3**, even though the Adjusted Environmental Baseline does not reflect any airport traffic growth from 1996 conditions, deficiencies would still increase substantially, from 29 in 1996 to 47 in year 2015.

4.3.2.4 Thresholds of Significance

4.3.2.4.1 CEQA Thresholds of Significance

A significant off-airport surface transportation impact would occur if the direct and indirect changes in the environment that may be caused by the particular build alternative would potentially result in one or more of the following future conditions:

Intersections

- The LOS is C, its final link Volume to Capacity ratio (V/C) is 0.701 to 0.80, and the project-related increase in V/C is 0.040 or greater, or
- The LOS is D, its final link V/C is 0.801 to 0.90, and the project-related increase in V/C is 0.020 or greater, or
- The LOS is E or F, its final link V/C is 0.901 or greater, and the project-related increase in V/C is 0.010 or greater.

These thresholds are dictated in the LADOT Traffic Study Policies and Procedures,[162] and are accepted by Caltrans and the FHWA.

Roadway Segments

- The LOS is C, its final link V/C is 0.701 to 0.80, and the project-related increase in V/C is 0.080 or greater, or
- The LOS is D, its final link V/C is 0.801 to 0.90, and the project-related increase in V/C is 0.040 or greater, or
- The LOS is E or F, its final link V/C is 0.901 or greater, and the project-related increase in V/C is 0.02 or greater.

[162] Los Angeles Department of Transportation (LADOT), Traffic Study Policies and Procedures. November 1993 (revised April 1999).

These thresholds are dictated in the LADOT Traffic Study Policies and Procedures,[163] and are accepted by Caltrans and the FHWA.

Construction

- The respective Master Plan alternatives cause sufficient construction-related traffic to result in disruption to normal traffic flows.
- The cumulative construction-related traffic would result in disruption to normal traffic flows.

Freeway segments and ramps were analyzed as part of the CMP for Los Angeles County, which is discussed in subsection 4.3.2.8.2 below. The above thresholds of significance were utilized because they address the potential concerns relative to off-airport surface transportation associated with the Master Plan alternatives, namely the ability of airport and non-airport motorists to safely and efficiently traverse area intersections and roadways, and the ability of background traffic to adequately operate during construction.

4.3.2.4.2 Federal Standards

There are no federal standards that define significance thresholds for off-airport surface transportation.

4.3.2.5 Master Plan Commitments

In addition to the on-airport Master Plan commitments summarized in subsection 4.3.1.5, *Master Plan Commitments*, the following off-airport commitments are to be included in the construction specifications and contracts:

- **ST-9. Construction Deliveries (Alternatives A, B, C, and D).**

  Construction deliveries requiring lane closures shall receive prior approval from the Construction Coordination Office. Notification of deliveries shall be made with sufficient time to allow for any modifications of approved traffic detour plans.

- **ST-10. Designated Truck Routes (Alternatives A, B, and C).**

  For dirt and aggregate and all other materials and equipment, truck deliveries will be on designated routes only (freeways and non-residential streets). Every effort will be made for routes to avoid residential frontages. The designated routes on City of Los Angeles streets are subject to approval by LADOT's Bureau of Traffic Management and may include, but will not necessarily be limited to:

  - Florence Avenue (I-405 to Aviation Boulevard)
  - Manchester Avenue (east of Aviation Boulevard)
  - Aviation Boulevard (Manchester Boulevard to Imperial Highway)
  - Arbor Vitae Street (I-405 to Sepulveda Boulevard)
  - Westchester Parkway
  - Imperial Highway (east of Sepulveda Boulevard)
  - La Cienega Boulevard (Manchester Boulevard to Imperial Highway)
  - Airport Boulevard (south of Arbor Vitae Street)
  - Sepulveda Boulevard (La Tijera Boulevard to Imperial Highway)
  - I-405
  - I-105 (east of Sepulveda Boulevard)
  - Pershing Drive (Westchester Parkway to Imperial Highway)

[163] Los Angeles Department of Transportation (LADOT), Traffic Study Policies and Procedures, November 1993 (revised April 1999).

- **ST-11. Stockpile Locations (Alternatives A, B, and C).**

  Stockpile locations will be confined to the eastern area of the airport vicinity, to the extent practical and feasible. Multiple stockpile locations may be provided, as required.

- **ST-12. Designated Truck Delivery Hours (Alternatives A, B, C, and D).**

  Truck deliveries shall be encouraged to use nighttime hours and shall avoid the peak periods of 7:00 a.m. to 9:00 a.m. and 4:30 p.m. to 6:30 p.m.

- **ST-13. Construction Employee Parking Locations (Alternatives A, B, and C).**

  Employee parking will be provided along the east end of the airport, to the extent possible. Shuttle buses will transport employees to construction sites. In addition, remote parking locations (of not less than 1 mile away from project construction activities) will be established for construction employees with shuttle service to the airport. An emergency return system will be established for employees that must leave unexpectedly.

- **ST-14. Construction Employee Shift Hours (Alternatives A, B, C, and D).**

  Shift hours that do not coincide with the heaviest commuter traffic periods (7:00 a.m. to 9:00 a.m., 4:30 p.m. to 6:30 p.m.) will be established. Work periods will be extended to include weekends and multiple work shifts, to the extent possible and necessary.

- **ST-15. Separation of Construction Traffic (Alternatives A, B, and C).**

  Construction traffic will be separated from regular airport traffic by various means, including keeping in service as haul routes any existing roads that would be replaced and any detour routes (where appropriate), even after the parallel new roadway is open to traffic.

- **ST-16. Designated Haul Routes (Alternatives A, B, C, and D).**

  Every effort will be made to ensure that haul routes are located away from sensitive noise receptors.

- **ST-17. Maintenance of Haul Routes (Alternatives A, B, C, and D).**

  Haul routes on off-airport roadways will be maintained periodically and will comply with City of Los Angeles or other appropriate jurisdictional requirements for maintenance. Minor striping, lane configurations, and signal phasing modifications will be provided as needed.

- **ST-18. Construction Traffic Management Plan (Alternatives A, B, C, and D).**

  A complete construction traffic plan will be developed to designate detour and/or haul routes, variable message and other sign locations, communication methods with airport passengers, construction deliveries, construction employee shift hours, construction employee parking locations, and other relevant factors.

- **ST-19. Closure Restrictions of Existing Roadways (Alternatives A, B, C, and D).**

  Other than short time periods during nighttime construction, existing roadways will remain open until they are no longer needed for regular traffic or construction traffic, unless a temporary detour route is available to serve the same function. This will recognize that there are three functions taking place concurrently: (1) airport traffic, (2) construction haul routes, and (3) construction of new facilities.

- **ST-20. Stockpile Locations (Alternative D).**

  Stockpile locations will be confined to the eastern area of the airport vicinity, to the extent practical and feasible. After the eastern facilities are under construction in Alternative D, stockpile locations will be selected that are as close to I-405 and I-105 as possible, and can be accessed by construction vehicles with minimal disruption to adjacent streets. Multiple stockpile locations may be provided, as required.

- **ST-21. Construction Employee Parking Locations (Alternative D).**

  During construction of the eastern airport facilities, employee parking locations will be selected that are as close to I-405 and I-105 as possible and can be accessed by employee vehicles with minimal disruption to adjacent streets. Shuttle buses will transport employees to construction sites. In addition, remote parking locations (of not less than 1 mile away from project construction activities)

will be established for construction employees with shuttle service to the airport. An emergency return system will be established for employees that must to leave unexpectedly.

- **ST-22. Designated Truck Routes (Alternative D).**

  For dirt and aggregate and all other materials and equipment, truck deliveries will be on designated routes only (freeways and non-residential streets). Every effort will be made for routes to avoid residential frontages. The designated routes on City of Los Angeles streets are subject to approval by LADOT's Bureau of Traffic Management and may include, but will not necessarily be limited to:

  - Pershing Drive (Westchester Parkway to Imperial Highway)
  - Florence Avenue (Aviation Boulevard to I-405)
  - Manchester Boulevard (Aviation Boulevard to I-405)
  - Aviation Boulevard (Manchester Avenue to Imperial Highway)
  - Westchester Parkway/Arbor Vitae Street (Pershing Drive to I-405)
  - Century Boulevard (Sepulveda Boulevard to I-405)
  - Imperial Highway (Pershing Drive to I-405)
  - La Cienega Boulevard (north of Imperial Highway)
  - Airport Boulevard (Arbor Vitae Street to Century Boulevard)
  - Sepulveda Boulevard (Westchester Parkway to Imperial Highway)
  - I-405
  - I-105

The following Master Plan commitments from other disciplines are also relevant to this analysis:

- **C-1. Establishment of a Ground Transportation/Construction Coordination Office (Alternatives A, B, C, and D).**
- **LU-3. Comply with City of Los Angeles Transportation Element Bicycle Plan (Alternatives A, B, and C).**
- **LU-5. Comply with City of Los Angeles Transportation Element Bicycle Plan (Alternative D).**

The above commitments are provided in their entirety in Chapter 5, *Environmental Action Plan.*

4.3.2.6 Environmental Consequences

As described in the Analytical Framework discussion in the introduction to Chapter 4, the basis for determining impacts under CEQA is different from that of NEPA. Under CEQA, the impacts of a proposed project and alternatives are measured against the "environmental baseline," which is normally the physical conditions that existed at the time the Notice of Preparation was published (i.e., June 1997, or 1996 when a full year of data is appropriate, for the LAX Master Plan Draft EIS/EIR). As such, the CEQA analysis in this Final EIS/EIR uses the environmental baseline, or in some cases an "adjusted environmental baseline," as the basis by which to measure and evaluate the impacts of each alternative. Under NEPA, the impacts of each action alternative (i.e., build alternative) are measured against the conditions that would otherwise occur in the future if no action were to occur (i.e., the "No Action" alternative). As such, the NEPA analysis in this Final EIS/EIR uses the No Action/No Project Alternative as the basis by which to measure and evaluate the impacts of each build alternative (i.e., Alternatives A, B, C, and D) in the future (i.e., at buildout in 2015 or, for construction-related impacts, selected future interim year). Based on this fundamental difference in the approach to evaluating impacts, the nature and significance of impacts determined under CEQA are not necessarily representative of, or applicable to, impacts determined under NEPA. The following presentation of environmental consequences should, therefore, be reviewed and considered accordingly.

4.3.2.6.1 Operations Impacts

4.3.2.6.1.1 No Action/No Project Alternative

The No Action/No Project Alternative is a more realistic view of future traffic conditions than the Adjusted Environmental Baseline. Airport activity would continue to grow and the LAX Northside and Continental City properties would be developed, as well as various cargo projects developed by specific cargo companies, even though Master Plan facilities would not be constructed. Therefore, vehicle trips by airport passengers, employees, and cargo activities would increase, as would collateral development trips from LAX Northside and Continental City, as summarized in **Table F4.3.2-4**, Peak Hour Trip Generation of LAX Master Plan Alternatives. This table shows the large increase in traffic that can be expected in the No Action/No Project Alternative over 1996 conditions. That is, if growing passenger demand is allowed to fill the airport's existing capacity and the LAX Northside and Continental City properties develop as currently permitted, there is expected to be about 125 percent more airport-related trips during the 2015 evening peak hour than in 1996. The Master Plan would reduce the density of the LAX Northside development, known as Westchester Southside in the Master Plan, substantially reducing vehicle trips generated from this property. The most substantial impacts would be during the morning and evening rush hours, when the commercial and industrial land uses in this property generate the most traffic.

Table F4.3.2-4

Peak Hour Trip Generation of LAX Master Plan Alternatives

Alternative/ Category	2015[1] AM Peak Hour	2015[1] Airport Peak Hour	2015[1] PM Peak Hour
1996 and Adjusted Environmental Baseline			
Passenger & Related Trips	9,529	16,141	10,626
Cargo/Ancillary Trips	4,025	3,466	3,702
Collateral Trips	0	0	0
Total Airport Trips	13,554	19,607	14,328
Trips Eliminated[2]	0	0	0
Net Total Trips	**13,554**	**19,607**	**14,328**
No Action/No Project Alternative			
Passenger & Related Trips	13,105	18,296	14,270
Cargo/Ancillary Trips	6,520	5,541	5,661
Collateral Trips[3]	12,540	3,984	12,479
Total Airport Trips	32,165	27,821	32,410
Trips Eliminated[2]	0	0	0
Net Total Trips	**32,165**	**27,821**	**32,410**
Alternative A			
Passenger & Related Trips	15,187	24,178	18,143
Cargo/Ancillary Trips	7,419	7,151	6,190
Collateral Trips[4]	4,134	2,261	4,656
Total Airport Trips	26,962	33,738	29,193
Trips Eliminated[2]	-2,590	-1,608	-2,373
Net Total Trips	**24,372**	**32,130**	**26,820**
Alternative B			
Passenger & Related Trips	14,959	23,699	18,020
Cargo/Ancillary Trips	7,419	7,151	6,190
Collateral Trips[4]	4,134	2,261	4,656
Total Airport Trips	26,512	33,111	28,866
Trips Eliminated[2]	-3,741	-1,693	-2,505
Net Total Trips	**23,771**	**31,418**	**26,361**

Table F4.3.2-4

Peak Hour Trip Generation of LAX Master Plan Alternatives

Alternative/ Category	2015[1] AM Peak Hour	2015[1] Airport Peak Hour	2015[1] PM Peak Hour
Alternative C			
Passenger & Related Trips	16,146	22,493	17,097
Cargo/Ancillary Trips	7,419	7,151	6,190
Collateral Trips[4]	4,134	2,261	4,656
Total Airport Trips	27,699	31,905	27,943
Trips Eliminated[2]	-2,739	-1693	-2,505
Net Total Trips	**24,960**	**30,212**	**25,438**
Alternative D			
Passenger & Related Trips	11,891	21,107	13,072
Cargo/Ancillary Trips	6,284	5,309	5,455
Collateral Trips[5]	4,134	2,260	4,654
Total Airport Trips	22,309	28,676	23,181
Trips Eliminated[2]	-2,150	-1,170	-1,973
Net Total Trips	**20,159**	**27,506**	**21,208**

1 Estimates are passenger car equivalents and include all airport origins and destinations.
2 Some non-airport trips are eliminated by land acquisition.
3 Collateral trips include those from LAX Northside with existing trip cap.
4 Collateral trips include those from proposed Westchester Southside.
5 Collateral trips include those from LAX Northside, with reduced trip cap under Alternative D that would limit total trip generation within LAX Northside to a level comparable to the total trip generation under Westchester Southside.

Source: Barton-Aschman Associates, Inc. - PTG 2000, as updated by PTG, 2003.

Under the No Action/No Project Alternative, traffic congestion would clearly increase in the vicinity of the airport, as reflected in **Table F4.3.2-3**. When compared to baseline conditions, an increased number of future facilities would be deficient - almost doubling by 2015, from 29 in 1996 to 55 in 2015. Roadways such as Sepulveda Boulevard, La Tijera Boulevard, and El Segundo Boulevard would be become more congested than under baseline conditions and the congested periods on arterials would expand during the day, much like the characteristics exhibited by I-405 north of the airport. This scenario is supported by SCAG, which states in their 2001 Regional Transportation Plan that "in 1997 the average traveler spent approximately 18 percent of travel time in congestion delay, with an average commute trip of 15 miles taking about 30 minutes. If we were to do nothing more than currently committed projects, we could experience an increase in congestion delay within the Region of over 100 percent by 2025. The aggregated daily vehicle hours spent in the Region could increase by over 50 percent to about 14 million hours and a 15-mile commute trip could take, on average, about 45 minutes compared to 30 minutes in 1997."

Furthermore, **Table F4.3.2-5**, Impact of No Action/No Project Alternative (Tier 1 Study Area, PM Peak Hour), shows the impact of this alternative within the Tier 1 study area, generally bounded by the Marina Freeway (SR 90) on the north, I-405 to the east, Rosecrans Avenue to the south, and Vista del Mar to the west. This table summarizes the impacts in terms of total Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT), average freeway speeds, and lane-miles operating at LOS F. The VMT shows how many collective miles are driven by motorists on the area roadway system, while VHT shows how much time is spent by motorists on the freeway system. Under the No Action/No Project Alternative, traffic conditions would deteriorate, with evening peak hour VMT increasing 36 percent and hours traveled increasing by almost 100 percent. The average freeway travel speeds around LAX would decrease by 15 percent to 27.3 miles per hour, and there is expected to be a 78 percent increase in the number of lane miles operating at LOS F.

Table F4.3.2-5

Impact of No Action/No Project Alternative (Tier 1 Study Area, PM Peak Hour)

	Existing (1996)	No Action/No Project (2015)	Percent Change from Existing
Vehicle Miles Traveled	396,259	540,823	+36%
Vehicle Hours Traveled	12,416	24,478	+97%
Average Freeway Speed (mph)	32.0	27.3	-15%
Lane-Miles at LOS (Freeway and Arterials)	85.2	151.4	+78%

Source: Barton-Aschman Associates, Inc. - PTG, 2000.

4.3.2.6.1.2 Alternatives A, B, and C

Alternatives A, B, and C would have similar improvements to ground access facilities in and around the airport. As such, a general discussion of the consequences of these improvements is provided below for these three alternatives. The general discussion below focuses on a comparison of future conditions under Alternatives A, B, and C to future conditions under the No Action/No Project Alternative, to better depict the consequences of taking no action to improve access to LAX. For the purposes of determining mitigation requirements, a detailed discussion provides a comparison of impacts to the Adjusted Environmental Baseline.

General Consequences of Alternatives A, B, and C

As described in subsection 4.3.2.3, *Affected Environment/Environmental Baseline*, the absence of two important airport infrastructure elements hinders the free flow of airport traffic, which often impacts non-airport traffic on adjacent surface streets. These important elements include:

- Direct freeway access to the airport terminal area.
- A high-speed alternative to I-405 to the north.

Implementation of Alternatives A, B, or C would remedy these deficiencies by providing the following major surface transportation improvements.

- A new airport expressway (the LAX Expressway) would be built adjacent to I-405 north of LAX during Phase II of the Master Plan. It would begin just north of the I-405/Howard Hughes Parkway interchange and connect to the new airport ring road, just west of Aviation Boulevard (Alternative B) and west of I-405 (Alternatives A and C).[164] The expressway is intended to 1) allow airport motorists to avoid congested segments of I-405, 2) encourage them to use the freeway system for their entire trip, instead of using adjacent surface streets as an alternative route; and 3) help reduce congestion on this highly traveled section of I-405. (Joint funding for this expressway would be pursued. Examples of potential funding sources include federal funds (e.g., Transportation Equity Act for the 21st Century (TEA-21)), state funds through the State Transportation Improvement Program process, and airport funds, for that portion of the Expressway used exclusively by airport passengers and employees.)
- A new non-stop ring road would connect the LAX Expressway at Arbor Vitae Street to the airport terminal areas. It would be a six-lane divided, limited access freeway that would directly service the airport's new West Terminal Area, and provide access to the CTA with only one stop. This freeway would encircle the north, west, and south sides of LAX. The ring road is intended to help keep airport motorists on the area freeway system for their entire trip.

[164] A complete description of the LAX Expressway is provided in the LAX Master Plan. While this EIS/EIR provides an assessment of environmental impacts of the Expressway, a more detailed Project Study Report (PSR) would be required prior to project approval by Caltrans and the FHWA. The PSR would provide a highly detailed analysis of potential alignments, and traffic and noise impacts. Both this EIS/EIR and the PSR must be fully approved before the LAX Expressway can begin construction. Further, additional analysis of the LAX Expressway is provided in Appendix K, *Supplemental Environmental Evaluation for LAX Expressway and State Route 1 Improvements*. Either of the two potential alignments shown in Appendix K could be used for either Alternative A or C, with the resulting environmental impacts consistent with those shown in this section. The only viable LAX Expressway alignment for Alternative B is that shown in the LAX Master Plan and analyzed here.

An analysis of Alternatives A, B, and C traffic conditions, following the procedures outlined in subsection 4.3.2.2, *General Approach and Methodology*, and discussed in detail below, shows that these alternatives would ensure that the project would not worsen area traffic conditions, and, in many cases, would actually improve these conditions.

In particular, impacts to arterial and local streets - particularly to the north - would be minimized by shifting much of the north airport demand to the new LAX Expressway. This reduction in the number of LAX vehicles "cutting through" the north surface streets is apparent in **Figure F4.3.2-4**, Difference in Airport Traffic, Alternative C vs. No Action/No Project PM Peak Hour. This figure illustrates those roads that would serve more airport traffic than the No Action/No Project Alternative (shown in red), and those roads that would serve less airport traffic (shown in blue). The project's roadway improvements would appropriately redirect airport traffic away from most arterial roads and onto the freeways and the new LAX Expressway. Arterials such as Sepulveda Boulevard, La Tijera Boulevard, Culver Boulevard, El Segundo Boulevard, and Rosecrans Boulevard would serve less airport traffic with the project than without. Furthermore, the congested section of I-405 between SR-90 and I-105 would have less airport traffic - benefiting both airport and non-airport traffic - while the other sections of I-405 and I-105 would have more airport traffic, indicating an appropriate reallocation of airport traffic.

These benefits are quantified in **Table F4.3.2-6**, Study Area Traffic Benefits of LAX Master Plan Alternatives, Year 2015. Alternatives A, B, and C would result in improvements in all of these characteristics and would alleviate congestion.

Table F4.3.2-6

Study Area Traffic Benefits of LAX Master Plan Alternatives, Year 2015

	Alternative				
Average Speed (MPH)[1] on Freeways	**NA/NP[2]**	**A**	**B**	**C**	**D**
AM Peak Hour	29.2	30.4	30.7	30.6	30.1
PM Peak Hour	27.3	28.0	28.1	28.1	27.7
Freeway and Arterial Lanes-Miles at Level of Service F					
AM Peak Hour	121.3	120.1	107.3	112.7	107.9
PM Peak Hour	151.4	140.1	137.9	135.1	147.5
Tier 1 Vehicle Hours Traveled on Freeway System					
AM Peak Hour	22,511	19,335	18,632	19,304	19,091
PM Peak Hour	24,478	22,460	22,070	22,247	22,040

[1] MPH = miles per hour.
[2] NA/NP = No Action/No Project.

Source: Barton Aschman Associates, Inc. - PTG (2000), as updated by PTG, 2003.

As shown, the addition of the LAX Expressway and the ring road around the airport would create improvements in peak speeds and result in a reduction in the number of roadway lane miles that are at LOS F for both the a.m. and p.m. peak hours of travel. For the a.m. peak hour, the average operating speed for study area roadways (arterials and freeways combined) was 29.2 miles per hour. Under Alternatives A, B, and C, average vehicular speeds in the a.m. peak hour would improve to 30.4 mph, 30.7 mph and 30.6 mph, respectively. The reduction in roadway lane-miles operating at LOS F versus the No Action/No Project Alternative is also shown. The greatest improvements would occur in the p.m. peak hour. Alternatives A, B, and C would achieve reductions from 151.4 lane miles in the No Action/No Project Alternative to 140.1 lane miles, 137.9 lane miles and 135.1 lane miles, respectively operating at LOS F.

Another key measure of the area-wide traffic benefits of the project is reductions in VHT. Each of these three Master Plan alternatives is forecast to have significant reductions in VHT for both the a.m. and p.m. peak traffic hours in year 2015. During the a.m. peak hour on roads in the study area, Alternatives A, B, and C would achieve 19,335 VHT, 18,632 VHT, and 19,304 VHT, respectively, versus 22,511 VHT for the No Action/No Project Alternative.

However, because a critical section of I-405 would be operating at higher speeds, there would likely be a regional response in which more long regional trips would use I-405 instead of using adjacent surface streets as an alternative route, to take advantage of the higher speeds on I-405. This would create traffic increases on I-405 to the north of the LAX Expressway. These I-405 traffic increases would simply reflect the shift in traffic from adjacent surface streets, and should not be construed as adverse impacts created by the project. They are inevitable positive responses that occur whenever an effective regional improvement is provided. Even with the I-405 traffic increases farther north and south, the overall regional impact still would be a substantial improvement over both the Adjusted Environmental Baseline and the No Action/No Project Alternative.

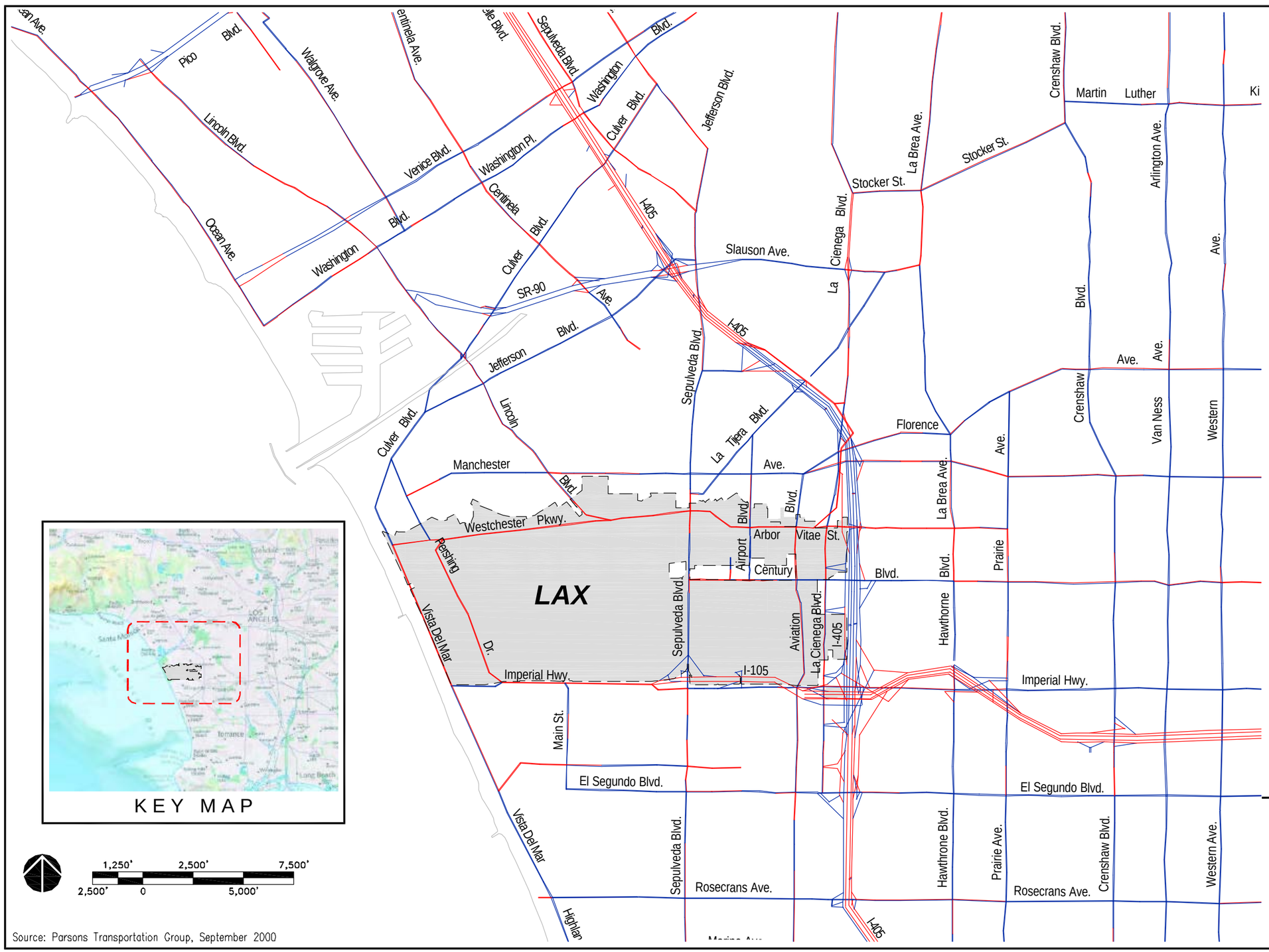
In summary, Alternative A, B, or C would mitigate project impacts, and, in some cases, it would improve regional traffic flow compared to conditions that would exist if the Master Plan is not developed. While trip generation would not dramatically change, substantial shifts in the locations and directionality of trips would occur, causing some substantial volume reductions on various local roads. All of these measures demonstrate that these alternatives would achieve the requirements specified in the Federal Highway Administration's (FHWA's) Circular 6640.8A (Guidance for Preparing and Processing Environmental and Section 4(f) Documents).

Alternative A - Added Runway North

Alternatives A, B, and C have similar off-airport surface transportation plans. Primary elements include a new LAX Expressway connecting I-405 north of the airport to a new non-stop ring road at Arbor Vitae Street, which would provide non-stop access around the north, west, and south sides of the airport, ultimately connecting to a westward extension of I-105. The new west terminal is also designed in all three of these alternatives to accommodate approximately 50 percent or more of the airport's passenger demand, shifting this demand from the existing CTA. Additional details of the Alternative A plan are provided in the Draft LAX Master Plan.

Adjusted Environmental Baseline Comparison

Based on a comparison of the LOS of each facility (i.e., intersection, street link, freeway segment, and freeway ramp) under Alternative A to its corresponding LOS in the Adjusted Environmental Baseline condition, the numbers of facilities that would be significantly affected are as shown in **Table F4.3.2-7**, Significantly Affected Surface Transportation Facilities Compared to Adjusted Environmental Baseline. Alternative A would have a higher impact than Alternatives B and C, but a lower impact than Alternative D.



Source: Parsons Transportation Group, September 2000

LAX Master Plan Final EIS/EIR

Difference in Airport Traffic, Alternative C vs. No Action/No Project
PM Peak Hour

Figure
F4.3.2-4

Table F4.3.2-7

Significantly Affected Surface Transportation Facilities Compared to Adjusted Environmental Baseline

	NA/NP[2]	2015[1] Alternatives			
		Alt. A	Alt. B	Alt. C	Alt. D
Base Analysis (All Alternatives)					
Affected Intersections (61 analyzed)	49	33	29	29	42
Affected Street Links (30 analyzed)	12	8	5	8	11
Affected Freeway Segments[3] (15 analyzed)	3	4	4	4	5
Affected Freeway Ramps[3](39 analyzed)	3	0	1	0	3
Total Significantly-Affected Facilities	**67**	**45**	**39**	**41**	**61**
Additional Analyses (Alternatives C and D)					
Affected Intersections (14 additional intersections analyzed for Alternatives C and D)	N/A[4]	N/A	N/A	8	10
Other Affected Intersections (10 additional intersections particular to Alternative D)	N/A	N/A	N/A	N/A	6

1 During any peak hour, comparison to Adjusted Environmental Baseline used to determine significance and mitigation under CEQA.
2 NA/NP = No Action/No Project Alternative. Represents significantly affected facilities if No Action/No Project Alternative conditions were compared to the Adjusted Environmental Baseline, similar to Alternatives A, B, C, and D.
3 As presented in Technical Report S-2b, *Supplemental Off-Airport Surface Transportation Technical Report*, significantly affected freeway segments and ramps are addressed and fully mitigated through the Congestion Management Program.
4 N/A = Not Applicable.

Source: Barton-Aschman Associates, Inc. - PTG, 2000, as updated by PTG, 2003.

Table F4.3.2-8, Year 2015 Alternative A Levels of Service (Adjusted Environmental Baseline Comparison), shows an LOS comparison of significantly impacted facilities. In Alternative A, the primary impact would be during the a.m. peak hour, in which 24 intersections would be affected by 2015. During the p.m. peak hour, 13 intersections would be affected by 2015. This table also reflects the increasing use of the Sepulveda and Lincoln corridors for airport access, particularly during the morning peak hour. Both of these circumstances are highly influenced by employees driving to and from LAX during the morning peak hour. Employees tend to live closer to the airport than passengers, and therefore, use local and arterial streets more than I-405 and I-105 to get to and from work. As discussed in subsection 4.3.2.3, *Affected Environment/Environmental Baseline*, the morning employee shift change causes peaking during the morning commuter peak hour more so than during the airport peak hour or afternoon peak hour.

Table F4.3.2-8

Year 2015 Alternative A Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative A V/C	Alternative A LOS	Impact
Intersection 4	Airport at Century	AM	N/A	0.486	A	0.884	D	Yes
		PM	N/A	0.663	B	0.626	B	No
		AP	N/A	0.753	C	0.719	C	No
Intersection 6	Airport at Manchester	AM	N/A	0.793	C	0.745	C	No
		PM	N/A	0.868	D	0.783	C	No
		AP	N/A	0.987	E	1.043	F	Yes
Intersection 8	La Cienega at Arbor Vitae	AM	N/A	0.949	E	1.639	F	Yes
		PM	N/A	0.944	E	1.714	F	Yes
		AP	N/A	0.893	D	1.312	F	No

Table F4.3.2-8

Year 2015 Alternative A Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative A V/C	Alternative A LOS	Impact
Intersection 11	Aviation at Century	AM	N/A	0.940	E	1.023	F	Yes
		PM	N/A	1.062	F	1.084	F	Yes
		AP	N/A	1.850	F	1.332	F	No
Intersection 12	Aviation at El Segundo	AM	N/A	1.089	F	1.111	F	Yes
		PM	N/A	1.082	F	1.086	F	No
		AP	N/A	1.060	F	1.188	F	No
Intersection 13	Aviation at Imperial Hwy	AM	N/A	1.033	F	0.766	C	No
		PM	N/A	1.307	F	1.155	F	No
		AP	N/A	1.254	F	1.122	F	No
Intersection 15	Aviation at Rosecrans	AM	N/A	1.329	F	1.339	F	Yes
		PM	N/A	1.659	F	1.712	F	Yes
		AP	N/A	1.594	F	1.691	F	No
Intersection 22	Sepulveda at Centinela	AM	N/A	1.404	F	1.448	F	Yes
		PM	N/A	1.261	F	1.299	F	Yes
		AP	N/A	1.044	F	1.020	F	No
Intersection 26	La Cienega at Century	AM	N/A	0.756	C	0.807	D	Yes
		PM	N/A	0.840	D	0.890	D	No
		AP	N/A	0.616	B	0.673	B	No
Intersection 35	Sepulveda at El Segundo	AM	N/A	1.110	F	1.111	F	No
		PM	N/A	1.279	F	1.236	F	No
		AP	N/A	0.975	E	1.082	F	No
Intersection 40	La Cienega at Florence	AM	N/A	0.789	C	0.822	D	Yes
		PM	N/A	1.076	F	1.106	F	No
		AP	N/A	1.566	F	1.572	F	Yes
Intersection 44	Sepulveda at Howard Hughes Parkway	AM	N/A	0.748	C	0.844	D	Yes
		PM	N/A	0.959	E	0.904	D	No
		AP	N/A	0.736	C	0.723	C	No
Intersection 46	I-105 NB Ramps at Imperial	AM	N/A	0.275	A	0.287	A	No
		PM	N/A	0.303	A	0.312	A	No
		AP	N/A	0.636	B	0.701	B	Yes
Intersection 50	Sepulveda at Imperial	AM	N/A	0.822	D	0.960	E	Yes
		PM	N/A	1.092	F	1.467	F	Yes
		AP	N/A	0.842	D	0.827	D	No
Intersection 52	La Cienega at Imperial	AM	N/A	0.691	B	0.752	C	Yes
		PM	N/A	0.544	A	0.614	B	No
		AP	N/A	0.574	A	0.627	B	No
Intersection 57	Lincoln at Jefferson	AM	N/A	1.408	F	1.418	F	Yes
		PM	N/A	1.187	F	1.200	F	Yes
		AP	N/A	0.835	D	0.858	D	No
Intersection 71	La Cienega at Lennox	AM	N/A	0.379	A	0.432	A	No
		PM	N/A	0.484	A	0.581	A	No
		AP	N/A	0.876	D	1.046	F	Yes
Intersection 72	La Cienega at Manchester	AM	N/A	0.700	B	0.726	C	No
		PM	N/A	0.772	C	0.762	C	No
		AP	N/A	1.148	F	1.252	F	Yes
Intersection 78	I-405 NB Ramps at La Tijera	AM	N/A	0.828	D	1.004	E	Yes
		PM	N/A	0.941	E	0.835	D	No
		AP	N/A	0.626	B	0.430	A	No
Intersection 79	I-405 SB Ramps at La Tijera	AM	N/A	0.745	C	0.777	C	Yes
		PM	N/A	0.939	E	0.908	E	No
		AP	N/A	0.422	A	0.498	A	No
Intersection 81	Lincoln at La Tijera	AM	N/A	0.509	A	0.882	D	Yes
		PM	N/A	0.556	A	1.209	F	Yes
		AP	N/A	0.422	A	0.969	E	No
Intersection 83	Sepulveda at La Tijera	AM	N/A	0.889	D	1.317	F	Yes
		PM	N/A	0.910	E	1.775	F	Yes
		AP	N/A	0.485	A	0.831	D	No
Intersection 87	Lincoln at 83rd	AM	N/A	1.131	F	1.224	F	Yes
		PM	N/A	1.482	F	1.579	F	No
		AP	N/A	1.517	F	1.536	F	No

Table F4.3.2-8

Year 2015 Alternative A Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative A V/C	Alternative A LOS	Impact
Intersection 88	Lincoln at Manchester	AM	N/A	0.792	C	1.007	F	Yes
		PM	N/A	1.543	F	1.710	F	Yes
		AP	N/A	0.921	E	1.218	F	No
Intersection 94	Lincoln at Teale	AM	N/A	0.620	B	0.765	C	Yes
		PM	N/A	0.640	B	0.650	B	No
		AP	N/A	0.458	A	0.481	A	No
Intersection 98	Pershing at Manchester	AM	N/A	0.482	A	0.405	A	No
		PM	N/A	0.610	B	0.754	C	Yes
		AP	N/A	0.366	A	0.208	A	No
Intersection 99	Sepulveda at Manchester	AM	N/A	1.008	F	1.100	F	Yes
		PM	N/A	1.085	F	1.033	F	No
		AP	N/A	0.888	D	0.873	D	No
Intersection 100	Sepulveda at Mariposa	AM	N/A	0.801	C	0.936	E	Yes
		PM	N/A	1.084	F	1.471	F	Yes
		AP	N/A	1.204	F	1.652	F	No
Intersection 103	Sepulveda at Rosecrans	AM	N/A	1.644	F	1.632	F	No
		PM	N/A	1.692	F	1.719	F	Yes
		AP	N/A	1.888	F	1.939	F	No
Intersection 106	Sepulveda at 76th/77th	AM	N/A	0.762	C	0.858	D	Yes
		PM	N/A	0.666	B	0.637	B	No
		AP	N/A	0.722	C	0.654	B	No
Intersection 111	La Cienega at I-405 SB Ramps N/O Century	AM	N/A	0.586	A	0.768	C	Yes
		PM	N/A	0.555	A	0.593	A	No
		AP	N/A	0.688	B	0.746	C	No
Intersection 307	La Cienega at I-405 NB Off-Ramp at Century	AM	N/A	0.729	C	0.764	C	Yes
		PM	N/A	0.604	A	0.643	B	No
		AP	N/A	0.395	A	0.463	A	No
Intersection 312	La Cienega at El Segundo	AM	N/A	0.620	B	0.661	B	No
		PM	N/A	0.659	B	0.735	C	Yes
		AP	N/A	0.464	A	0.505	A	No
Link 1	Lincoln s/o Venice	AM	NB/EB	0.748	C	0.765	C	No
			SB/WB	0.909	E	0.929	E	Yes
		PM	NB/EB	0.977	E	0.971	E	No
			SB/WB	0.915	E	0.944	E	Yes
		AP	NB/EB	0.749	C	0.784	C	No
			SB/WB	0.808	D	0.810	D	No
Link 2	Centinela s/o Venice	AM	NB/EB	0.922	E	0.949	E	Yes
			SB/WB	0.645	B	0.674	B	No
		PM	NB/EB	0.837	D	0.842	D	No
			SB/WB	0.898	D	0.948	E	Yes
		AP	NB/EB	0.739	C	0.774	C	No
			SB/WB	0.875	D	0.876	D	No
Link 4	Sepulveda s/o Venice	AM	NB/EB	0.870	D	0.883	D	No
			SB/WB	0.734	C	0.746	C	No
		PM	NB/EB	1.063	F	1.082	F	No
			SB/WB	0.933	E	0.965	E	Yes
		AP	NB/EB	0.827	D	0.838	D	No
			SB/WB	0.982	E	0.982	E	No
Link 5	Overland s/o Venice	AM	NB/EB	0.876	D	0.907	E	Yes
			SB/WB	0.962	E	0.989	E	Yes
		PM	NB/EB	0.903	D	0.909	E	No
			SB/WB	1.165	F	1.210	F	Yes
		AP	NB/EB	0.877	D	0.901	D	No
			SB/WB	1.024	F	1.041	F	No
Link 14	Aviation n/o Rosecrans	AM	NB/EB	0.683	B	0.689	B	No
			SB/WB	0.234	A	0.265	A	No
		PM	NB/EB	0.460	A	0.475	A	No
			SB/WB	0.759	C	0.807	D	Yes
		AP	NB/EB	0.410	A	0.440	A	No
			SB/WB	0.317	A	0.337	A	No

Table F4.3.2-8

Year 2015 Alternative A Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative A V/C	Alternative A LOS	Impact
Link 21	Lincoln s/o Jefferson	AM	NB/EB	0.829	D	1.036	F	Yes
			SB/WB	0.410	A	0.388	A	No
		PM	NB/EB	0.911	E	0.911	E	No
			SB/WB	0.675	B	0.703	B	No
		AP	NB/EB	0.611	B	0.644	B	No
			SB/WB	0.639	B	0.635	B	No
Link 26	Sepulveda s/o Slauson	AM	NB/EB	0.901	D	0.949	E	Yes
			SB/WB	0.399	A	0.397	A	No
		PM	NB/EB	0.742	C	0.731	C	No
			SB/WB	0.828	D	0.862	D	No
		AP	NB/EB	0.540	A	0.509	A	No
			SB/WB	0.515	A	0.488	A	No
Link 28	El Segundo w/o Hawthorne	AM	NB/EB	0.193	A	0.202	A	No
			SB/WB	0.518	A	0.518	A	No
		PM	NB/EB	0.794	C	0.807	D	No
			SB/WB	0.397	A	0.419	A	No
		AP	NB/EB	0.696	B	0.706	C	No
			SB/WB	0.888	D	0.916	E	Yes

N/A = Not Applicable.

[1] AP = Airport peak hour. Significant impacts occur in the airport peak hour only when the total traffic volume through the intersection or link is greater in the airport peak hour than in the AM and PM peak hours and the criteria for significant impacts are met.

Source: Barton-Aschman Associates, Inc.

The number of significantly affected surface transportation facilities under Alternative A versus the Adjusted Environmental Baseline is an important measure of the effect of the airport's continued operation and growth on the local transportation system. These effects, if significant, must be mitigated under CEQA.

No Action/No Project Alternative Comparison

A comparison of Alternative A to the future traffic conditions that would occur under the No Action/No Project Alternative yields 29 significantly affected facilities by 2015, as shown in **Table F4.3.2-9**, Significantly-Affected Surface Transportation Facilities Compared to No Action/No Project Alternative. Alternative A would result in fewer significant impacts compared to the No Action/No Project Alternative than compared to the Adjusted Environmental Baseline. This is due to the increasing levels of traffic expected to occur under the No Action/No Project Alternative in 2015. Locations of the significantly affected facilities in Alternative A (as compared to the No Action/No Project Alternative) are shown in **Table F4.3.2-10**, Alternative A Affected Intersections (2015 - Compared to No Action/No Project Alternative). With the exception of Intersection #48, I-105 westbound off-ramps/Nash at Imperial, all of these facilities would experience significant impacts under Alternative A as compared to the Adjusted Environmental Baseline, and would be subject to mitigation under CEQA. To fully mitigate potential future impacts, Intersection #48 was included in the recommended mitigation plan (see subsection 4.3.2.8, *Mitigation Measures*).

Table F4.3.2-9

Significantly-Affected Surface Transportation Facilities Compared To No Action/No Project Alternative

	2015		
	Alternative A	**Alternative B**	**Alternative C**
Affected Intersections	19	20	17
Affected Street Links	6	2	5
Affected Freeway Segments[1]	4	3	3
Affected Freeway Ramps[1]	0	1	0
Total Significantly-Affected Facilities	**29**	**26**	**25**

[1] As presented in Technical Report 3b, *Off-Airport Ground Access Impacts and Mitigation Measures*, significantly affected freeway segments and ramps are addressed and fully mitigated through the Congestion Management Program (CMP).

Source: Barton-Aschman Associates, Inc. - PTG, 2000.

Table F4.3.2-10

Alternative A Affected Intersections (2015 - Compared to No Action/No Project Alternative)

Intersection Number[1, 2]	Intersection Name
4	Airport Blvd and Century Blvd.
6	Airport Blvd. and Manchester Ave.
8	Arbor Vitae St. and La Cienega Blvd.
10	Aviation Blvd. and 111th St.
13	Aviation Blvd. and Imperial Hwy.
18	Centinela Ave. and Jefferson Blvd.
44	Sepulveda Blvd. and Howard Hughes Pkwy.
48	I-105 WB Off Ramps/Nash and Imperial Hwy.
50	Sepulveda Blvd. and Imperial Hwy.
51	Imperial Hwy. and Vista del Mar
71	La Cienega Blvd. at Lennox Blvd.
78	I-405 NB Ramps at La Tijera Blvd.
81	La Tijera Blvd and Lincoln Blvd.
83	La Tijera Blvd and Sepulveda Blvd.
87	Lincoln Blvd and 83rd St.
94	Lincoln Blvd and Teale St.
100	Mariposa Ave. and Sepulveda Blvd.
106	Sepulveda Blvd. and 76th/77th St.
111	La Cienega Blvd. at I-405 SB Ramps n/o Century

[1] Based on LOS comparison with the No Action/No Project Alternative.
[2] Corresponds to Figure F4.3.2-1.

Source: Barton-Aschman Associates, Inc. - PTG, 2000.

Consistency with Regional and Local Transportation Plans

Alternative A was reviewed for consistency with the following transportation plans:

- Southern California Association of Governments (SCAG) Regional Transportation Plan.
- Los Angeles County Congestion Management Program.
- City of Los Angeles General Plan, Transportation Element.
- Coastal Transportation Corridor Specific Plan, administered by the City of Los Angeles.

- Transportation Improvement and Mitigation Program for South Central Los Angeles Community Plan Area.
- City of El Segundo General Plan.
- City of Hawthorne Circulation Element.

Few policies in these transportation plans apply to the surface transportation element of the LAX Master Plan. Of those policies that do, no surface transportation component of Alternative A conflicts with these policies. However, some plans may require amendments to reflect increased airport demand.

Alternative B - Added Runway South

Alternatives A, B, and C have similar off-airport surface transportation plans, except the alignment of the LAX Expressway. In Alternative B, the expressway would follow the MTA rail alignment adjacent to Florence Avenue, connecting to the ring road just west of Aviation Boulevard. Other elements include a new non-stop ring road, which provides access around the north, west, and south sides of the airport, ultimately connecting to a westward extension of I-105. The new west terminal is also designed in all three of these alternatives to accommodate over half of the airport's passenger demand, shifting this demand from the existing CTA. Additional details of the Alternative B plan are provided in the Draft LAX Master Plan.

Adjusted Environmental Baseline Comparison

Based on a comparison to the Adjusted Environmental Baseline, the facilities that would experience significant impacts in Alternative B are summarized in **Table F4.3.2-7** and **Table F4.3.2-11**, Year 2015 Alternative B Levels of Service (Adjusted Environmental Baseline Comparison). Although the impact trends would mirror those in Alternative A, Alternative B would have fewer affected facilities, particularly on the outskirts of the airport's influence area. As with Alternative A, most of the impacts would occur during the a.m. peak hour (23 intersections in 2015). During the p.m. peak hour, 19 intersections would be affected in 2015.

Table F4.3.2-11

Year 2015 Alternative B Levels of Service
(Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative B V/C	Alternative B LOS	Impact
Intersection 8	La Cienega at Arbor Vitae	AM	N/A	0.949	E	1.142	F	Yes
		PM	N/A	0.944	E	1.063	F	Yes
		AP	N/A	0.893	D	1.195	F	No
Intersection 11	Aviation at Century	AM	N/A	0.940	E	0.970	E	Yes
		PM	N/A	1.062	F	1.222	F	Yes
		AP	N/A	1.850	F	1.203	F	No
Intersection 12	Aviation at El Segundo	AM	N/A	1.089	F	1.069	F	No
		PM	N/A	1.082	F	1.103	F	Yes
		AP	N/A	1.060	F	1.175	F	No
Intersection 13	Aviation at Imperial	AM	N/A	1.033	F	1.084	F	Yes
		PM	N/A	1.307	F	1.301	F	No
		AP	N/A	1.254	F	1.245	F	No
Intersection 14	Aviation at Manchester	AM	N/A	1.152	F	0.983	E	No
		PM	N/A	1.047	F	1.168	F	Yes
		AP	N/A	1.493	F	1.550	F	Yes
Intersection 15	Aviation at Rosecrans	AM	N/A	1.329	F	1.351	F	Yes
		PM	N/A	1.659	F	1.684	F	Yes
		AP	N/A	1.594	F	1.719	F	No
Intersection 22	Sepulveda at Centinela	AM	N/A	1.404	F	1.423	F	Yes
		PM	N/A	1.261	F	1.274	F	Yes
		AP	N/A	1.044	F	1.022	F	No
Intersection 26	La Cienega at Century	AM	N/A	0.756	C	0.868	D	Yes
		PM	N/A	0.840	D	0.984	E	Yes
		AP	N/A	0.616	B	0.670	B	No

Table F4.3.2-11

Year 2015 Alternative B Levels of Service
(Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative B V/C	Alternative B LOS	Impact
Intersection 40	La Cienega Blvd. at Florence Ave	AM	N/A	0.789	C	0.842	D	Yes
		PM	N/A	1.087	F	1.106	F	Yes
		AP	N/A	1.566	F	1.567	F	No
Intersection 44	Sepulveda at Howard Hughes Parkway	AM	N/A	0.748	C	0.827	D	Yes
		PM	N/A	0.959	E	0.879	D	No
		AP	N/A	0.736	C	0.677	B	No
Intersection 45	I-105/Continental City at Imperial	AM	N/A	0.740	C	0.760	C	No
		PM	N/A	0.745	C	0.699	B	No
		AP	N/A	0.773	C	0.526	A	No
Intersection 48	I-105 WB Off/Nash at Imperial	AM	N/A	1.292	F	1.308	F	Yes
		PM	N/A	0.614	B	0.623	B	No
		AP	N/A	0.447	A	0.430	A	No
Intersection 50	Sepulveda at Imperial	AM	N/A	0.822	D	1.053	F	Yes
		PM	N/A	1.092	F	1.566	F	Yes
		AP	N/A	0.842	D	0.846	D	No
Intersection 52	La Cienega at Imperial	AM	N/A	0.691	B	0.728	C	No
		PM	N/A	0.544	A	0.559	A	No
		AP	N/A	0.574	A	0.638	B	No
Intersection 54	I405 NB Ramps at Jefferson	AM	N/A	0.845	D	0.871	D	Yes
		PM	N/A	0.921	E	0.893	D	No
		AP	N/A	0.733	C	0.711	C	No
Intersection 57	Lincoln at Jefferson	AM	N/A	1.408	F	1.428	F	Yes
		PM	N/A	1.187	F	1.214	F	Yes
		AP	N/A	0.835	D	0.839	D	No
Intersection 72	La Cienega at Manchester	AM	N/A	0.700	B	0.714	C	No
		PM	N/A	0.772	C	0.824	D	Yes
		AP	N/A	1.148	F	1.200	F	Yes
Intersection 78	I-405 NB Ramps at La Tijera	AM	N/A	0.828	D	0.997	E	Yes
		PM	N/A	0.941	E	0.824	D	No
		AP	N/A	0.626	B	0.483	A	No
Intersection 81	Lincoln at La Tijera	AM	N/A	0.509	A	0.882	D	Yes
		PM	N/A	0.556	A	1.069	F	Yes
		AP	N/A	0.422	A	0.926	E	No
Intersection 82	La Tijera at Manchester	AM	N/A	0.636	B	0.626	B	No
		PM	N/A	0.763	C	0.864	D	Yes
		AP	N/A	0.698	B	0.604	B	No
Intersection 83	Sepulveda at La Tijera	AM	N/A	0.889	D	1.385	F	Yes
		PM	N/A	0.910	E	1.824	F	Yes
		AP	N/A	0.485	A	0.788	C	No
Intersection 87	Lincoln at 83rd	AM	N/A	1.131	F	1.220	F	Yes
		PM	N/A	1.482	F	1.550	F	Yes
		AP	N/A	1.517	F	1.525	F	No
Intersection 88	Lincoln at Manchester	AM	N/A	0.792	C	1.028	F	Yes
		PM	N/A	1.543	F	1.703	F	Yes
		AP	N/A	0.921	E	1.221	F	No
Intersection 94	Lincoln at Teale	AM	N/A	0.620	B	0.764	C	Yes
		PM	N/A	0.640	B	0.640	B	No
		AP	N/A	0.458	A	0.482	A	No
Intersection 98	Pershing at Manchester	AM	N/A	0.482	A	0.391	A	No
		PM	N/A	0.610	B	0.641	B	No
		AP	N/A	0.366	A	0.215	A	No
Intersection 99	Sepulveda at Manchester	AM	N/A	1.008	F	1.116	F	Yes
		PM	N/A	1.085	F	1.031	F	No
		AP	N/A	0.888	D	0.844	D	No
Intersection 100	Sepulveda at Mariposa	AM	N/A	0.801	D	0.929	E	Yes
		PM	N/A	1.084	F	1.466	F	Yes
		AP	N/A	1.204	F	1.679	F	No
Intersection 101	Pershing at Westchester Pkwy	AM	N/A	0.331	A	0.635	B	No
		PM	N/A	0.299	A	0.837	D	Yes
		AP	N/A	0.138	A	0.445	A	No

Table F4.3.2-11

Year 2015 Alternative B Levels of Service
(Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative B V/C	Alternative B LOS	Impact
Intersection 106	Sepulveda at 76th/77th	AM	N/A	0.762	C	0.837	D	Yes
		PM	N/A	0.666	B	0.630	B	No
		AP	N/A	0.722	C	0.669	B	No
Intersection 111	La Cienega at I-405 SB Ramps n/o Century	AM	N/A	0.586	A	0.763	C	Yes
		PM	N/A	0.555	A	0.787	C	Yes
		AP	N/A	0.688	B	0.903	E	Yes
Intersection 307	I-405 NB Off-ramp at Century	AM	N/A	0.729	C	0.819	D	Yes
		PM	N/A	0.604	B	0.647	B	No
		AP	N/A	0.395	A	0.455	A	No
Link 2	Centinela s/o Venice	AM	NB/EB	0.922	E	0.945	E	Yes
			SB/WB	0.645	B	0.660	B	No
		PM	NB/EB	0.837	D	0.837	D	No
			SB/WB	0.898	D	0.930	E	Yes
		AP	NB/EB	0.739	C	0.765	C	No
			SB/WB	0.875	D	0.867	D	No
Link 5	Overland s/o Venice	AM	NB/EB	0.876	D	0.900	D	No
			SB/WB	0.962	E	0.979	E	No
		PM	NB/EB	0.903	E	0.915	E	No
			SB/WB	1.165	F	1.187	F	Yes
		AP	NB/EB	0.877	D	0.892	D	No
			SB/WB	1.024	F	1.045	F	No
Link 21	Lincoln s/o Jefferson	AM	NB/EB	0.829	D	1.025	F	Yes
			SB/WB	0.410	A	0.380	A	No
		PM	NB/EB	0.911	E	0.901	E	No
			SB/WB	0.675	B	0.703	C	No
		AP	NB/EB	0.611	B	0.642	B	No
			SB/WB	0.639	B	0.625	B	No
Link 26	Sepulveda s/o Slauson	AM	NB/EB	0.901	E	0.938	E	Yes
			SB/WB	0.399	A	0.371	A	No
		PM	NB/EB	0.742	C	0.723	C	No
			SB/WB	0.828	D	0.828	D	No
		AP	NB/EB	0.540	A	0.503	A	No
			SB/WB	0.515	A	0.457	A	No
Link 28	El Segundo w/o Hawthorne	AM	NB/EB	0.193	A	0.197	A	No
			SB/WB	0.518	A	0.519	A	No
		PM	NB/EB	0.794	C	0.806	D	No
			SB/WB	0.397	A	0.413	A	No
		AP	NB/EB	0.696	B	0.710	C	No
			SB/WB	0.888	D	0.916	E	Yes

N/A = Not Applicable.

[1] AP = Airport peak hour. Significant impacts occur in the airport peak hour only when the total volumes through the intersection or link is greater in the airport peak hour than in the AM and PM peak hours and the criteria for significant impacts are met.

Source: Barton-Aschman Associates, Inc.

No Action/No Project Alternative Comparison

Compared to the future traffic conditions that would occur under the No Action/No Project Alternative, 26 facilities would be significantly affected in 2015. This is summarized in **Table F4.3.2-9** and **Table F4.3.2-12**, Alternative B Affected Intersections (2015 - Compared to No Action/No Project Alternative). With the exception of Intersection #18, Centinela Boulevard at Jefferson Boulevard, all of these facilities would experience impacts as compared to the Adjusted Environmental Baseline, and would be subject to mitigation. To fully mitigate potential future impacts, Intersection #18 was included in the recommended mitigation plan (see subsection 4.3.2.8, *Mitigation Measures*).

Table F4.3.2-12

Alternative B Affected Intersections
(2015 - Compared to No Action/No Project Alternative)

Intersection Number[1, 2]	Intersection Name
8	Arbor Vitae St and La Cienega Blvd.
10	Aviation Blvd at 111th St.
11	Aviation Blvd at Century Blvd.
13	Aviation Blvd at Imperial Hwy.
14	Aviation Blvd at Manchester
18	Centinela at Jefferson
26	La Cienega at Century
44	Sepulveda at Howard Hughes Pkwy.
45	I-105 Fwy/ Continental City at Imperial Hwy.
48	I-105 WB Off/Nash at Imperial
50	Sepulveda at Imperial
78	I-405 N/B Ramps at La Tijera Blvd.
81	Lincoln at La Tijera
83	Sepulveda at La Tijera
87	Lincoln at 83rd
94	Lincoln at Teale
100	Sepulveda at Mariposa
101	Pershing at Westchester Parkway
106	Sepulveda at 76th/77th
111	La Cienega at I-405 SB Ramps n/o Century

1 Based on LOS comparison with the No Action/No Project Alternative.
2 Corresponds to Figure F4.3.2-1.

Source: Barton-Aschman Associates, Inc., PTG, 2000.

Consistency with Regional and Local Transportation Plans

Alternative B was reviewed for consistency with the following transportation plans:

- Southern California Association of Governments (SCAG) Regional Transportation Plan.
- Los Angeles County Congestion Management Program.
- City of Los Angeles General Plan, Transportation Element.
- Coastal Transportation Corridor Specific Plan, administered by the City of Los Angeles.
- Transportation Improvement and Mitigation Program for South Central Los Angeles Community Plan Area.
- City of El Segundo General Plan.
- City of Hawthorne Circulation Element.

Few policies in the reviewed transportation plans apply to the surface transportation element of the LAX Master Plan. Of those policies that do, no surface transportation component of Alternative B would conflict with these policies. However, some plans may require amendments to reflect increased airport demand.

Alternative C - No Additional Runway

Alternative C has a similar off-airport surface transportation plan as Alternative A. These elements include a new non-stop ring road, which provides access around the north, west, and south sides of the airport, ultimately connecting to a westward extension of I-105. The new west terminal is also designed in Alternatives A, B, and C to accommodate over half of the airport's passenger demand, shifting this demand from the existing CTA. Additional details of the Alternative C plan are provided in the Draft LAX Master Plan.

Adjusted Environmental Baseline Comparison

Based on a comparison to the Adjusted Environmental Baseline, the facilities that would experience significant impacts in Alternative C are summarized in **Table F4.3.2-7** and **Table F4.3.2-13**, Year 2015 Alternative C Levels of Service (Adjusted Environmental Baseline Comparison). The Alternative C impacts would be very similar to those of Alternative A. The alternative reflects an increased use of the primary Lincoln Boulevard and Sepulveda Boulevard corridors, mostly from employees traveling to and from work. **Table F4.3.2-13** does not include the 14 additional intersections analyzed for Alternatives C and D. As **Table F4.3.2-7** indicates, 8 of these 14 intersections were significantly impacted with Alternative C as compared to the Adjusted Environmental Baseline.

Table F4.3.2-13

Year 2015 Alternative C Levels of Service
(Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative C V/C	Alternative C LOS	Impact
Intersection 8	La Cienega at Arbor Vitae	AM	N/A	0.949	E	1.570	F	Yes
		PM	N/A	0.944	E	1.460	F	Yes
		AP	N/A	0.893	D	1.153	F	No
Intersection 11	Aviation at Century	AM	N/A	0.940	E	1.322	F	Yes
		PM	N/A	1.062	F	1.123	F	Yes
		AP	N/A	1.850	F	1.876	F	No
Intersection 12	Aviation at El Segundo	AM	N/A	1.089	F	1.166	F	Yes
		PM	N/A	1.082	F	1.108	F	Yes
		AP	N/A	1.060	F	1.206	F	No
Intersection 15	Aviation at Rosecrans	AM	N/A	1.329	F	1.340	F	Yes
		PM	N/A	1.659	F	1.687	F	Yes
		AP	N/A	1.594	F	1.706	F	No
Intersection 22	Sepulveda at Centinela Ave.	AM	N/A	1.404	F	1.454	F	Yes
		PM	N/A	1.261	F	1.313	F	Yes
		AP	N/A	1.044	F	1.010	F	No
Intersection 26	La Cienega at Century	AM	N/A	0.756	C	1.082	F	Yes
		PM	N/A	0.840	D	1.054	F	Yes
		AP	N/A	0.616	B	0.868	D	No
Intersection 35	Sepulveda at El Segundo	AM	N/A	1.110	F	1.125	F	Yes
		PM	N/A	1.279	F	1.248	F	No
		AP	N/A	0.975	E	1.087	F	No
Intersection 40	La Cienega Blvd at Florence Ave	AM	N/A	0.789	C	0.866	D	Yes
		PM	N/A	1.087	F	1.098	F	Yes
		AP	N/A	1.566	F	1.566	F	No
Intersection 44	Sepulveda at Howard Hughes Parkway	AM	N/A	0.748	C	0.851	D	Yes
		PM	N/A	0.959	E	0.937	E	No
		AP	N/A	0.736	C	0.724	C	No
Intersection 48	I-105 WB Off/Nash at Imperial	AM	N/A	1.293	F	1.244	F	No
		PM	N/A	0.614	B	0.716	C	Yes
		AP	N/A	0.447	A	0.412	A	No
Intersection 50	Sepulveda at Imperial	AM	N/A	0.822	D	1.011	F	Yes
		PM	N/A	1.092	F	1.650	F	Yes
		AP	N/A	0.842	D	0.924	E	No
Intersection 52	La Cienega at Imperial	AM	N/A	0.691	B	0.747	C	Yes
		PM	N/A	0.544	A	0.596	A	No
		AP	N/A	0.574	A	0.580	A	No
Intersection 57	Lincoln at Jefferson	AM	N/A	1.408	F	1.431	F	Yes
		PM	N/A	1.187	F	1.226	F	Yes
		AP	N/A	0.835	D	0.861	D	No
Intersection 71	La Cienega at Lennox Blvd.	AM	N/A	0.379	A	0.632	B	No
		PM	N/A	0.484	A	0.775	C	Yes
		AP	N/A	0.876	D	1.321	F	Yes
Intersection 72	La Cienega at Manchester	AM	N/A	0.700	B	0.745	C	Yes
		PM	N/A	0.772	C	0.780	C	No
		AP	N/A	1.148	F	1.242	F	Yes

Table F4.3.2-13

Year 2015 Alternative C Levels of Service
(Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative C V/C	Alternative C LOS	Impact
Intersection 78	I-405 NB Ramps at La Tijera	AM	N/A	0.828	D	1.027	F	Yes
		PM	N/A	0.941	E	0.867	D	No
		AP	N/A	0.626	B	0.449	A	No
Intersection 79	I-405 SB Ramps at La Tijera	AM	N/A	0.745	C	0.801	D	Yes
		PM	N/A	0.939	E	0.953	E	Yes
		AP	N/A	0.422	A	0.611	B	No
Intersection 81	Lincoln at La Tijera	AM	N/A	0.509	A	0.877	D	Yes
		PM	N/A	0.556	A	1.229	F	Yes
		AP	N/A	0.422	A	0.971	E	No
Intersection 83	Sepulveda at La Tijera	AM	N/A	0.889	D	1.284	F	Yes
		PM	N/A	0.910	E	1.749	F	Yes
		AP	N/A	0.485	A	0.827	D	No
Intersection 87	Lincoln at 83rd	AM	N/A	1.131	F	1.245	F	Yes
		PM	N/A	1.482	F	1.588	F	Yes
		AP	N/A	1.517	F	1.540	F	No
Intersection 88	Lincoln at Manchester	AM	N/A	0.792	C	1.015	F	Yes
		PM	N/A	1.543	F	1.732	F	Yes
		AP	N/A	0.921	E	1.241	F	No
Intersection 94	Lincoln at Teale	AM	N/A	0.620	B	0.785	C	Yes
		PM	N/A	0.640	B	0.652	B	No
		AP	N/A	0.458	A	0.487	A	No
Intersection 98	Pershing at Manchester	AM	N/A	0.482	A	0.406	A	No
		PM	N/A	0.610	B	0.748	C	Yes
		AP	N/A	0.366	A	0.218	A	No
Intersection 99	Sepulveda at Manchester	AM	N/A	1.008	F	1.113	F	Yes
		PM	N/A	1.085	F	1.033	F	No
		AP	N/A	0.888	D	0.836	D	No
Intersection 100	Sepulveda at Mariposa	AM	N/A	0.801	D	0.908	E	Yes
		PM	N/A	1.084	F	1.484	F	Yes
		AP	N/A	1.204	F	1.615	F	No
Intersection 101	Pershing at Westchester Pkwy	AM	N/A	0.331	A	0.633	B	No
		PM	N/A	0.299	A	0.863	D	Yes
		AP	N/A	0.138	A	0.509	A	No
Intersection 103	Sepulveda at Rosecrans	AM	N/A	1.645	F	1.643	F	No
		PM	N/A	1.692	F	1.733	F	Yes
		AP	N/A	1.888	F	1.936	F	No
Intersection 106	Sepulveda at 76th/77th	AM	N/A	0.762	C	0.868	D	Yes
		PM	N/A	0.666	B	0.640	B	No
		AP	N/A	0.722	C	0.651	B	No
Intersection 307	I-405 NB Off-ramp at Century	AM	N/A	0.729	C	0.795	C	Yes
		PM	N/A	0.604	B	0.648	B	No
		AP	N/A	0.395	A	0.451	A	No
Link 1	Lincoln s/o Venice Blvd.	AM	NB/EB	0.748	C	0.765	C	No
			SB/WB	0.909	E	0.936	E	Yes
		PM	NB/EB	0.977	E	0.996	E	No
			SB/WB	0.915	E	0.945	E	Yes
		AP	NB/EB	0.749	C	0.782	C	No
			SB/WB	0.808	D	0.797	C	No
Link 2	Centinela s/o Venice	AM	NB/EB	0.922	E	0.954	E	Yes
			SB/WB	0.645	B	0.665	B	No
		PM	NB/EB	0.837	D	0.855	D	No
			SB/WB	0.898	D	0.929	E	Yes
		AP	NB/EB	0.739	C	0.771	C	No
			SB/WB	0.875	D	0.875	D	No
Link 4	Sepulveda s/o Venice	AM	NB/EB	0.870	D	0.874	D	No
			SB/WB	0.734	C	0.759	C	No
		PM	NB/EB	1.063	F	1.076	F	No
			SB/WB	0.933	E	0.966	E	Yes
		AP	NB/EB	0.827	D	0.833	D	No
			SB/WB	0.982	E	0.995	E	No

Table F4.3.2-13

Year 2015 Alternative C Levels of Service
(Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direc.	Adj. Env. V/C	Adj. Env. LOS	Alternative C V/C	Alternative C LOS	Impact
Link 5	Overland s/o Venice	AM	NB/EB	0.876	D	0.915	E	Yes
			SB/WB	0.962	E	0.982	E	Yes
		PM	NB/EB	0.903	E	0.904	E	No
			SB/WB	1.165	F	1.192	F	Yes
		AP	NB/EB	0.877	D	0.892	D	No
			SB/WB	1.024	F	1.038	F	No
Link 20	Jefferson e/o Lincoln	AM	NB/EB	0.782	C	0.753	C	No
			SB/WB	0.335	A	0.349	A	No
		PM	NB/EB	0.476	A	0.521	A	No
			SB/WB	0.927	E	0.948	E	Yes
		AP	NB/EB	0.274	A	0.251	A	No
			SB/WB	0.299	A	0.293	A	No
Link 21	Lincoln s/o Jefferson	AM	NB/EB	0.829	D	1.054	F	Yes
			SB/WB	0.410	A	0.385	A	No
		PM	NB/EB	0.911	E	0.909	E	No
			SB/WB	0.675	B	0.700	B	No
		AP	NB/EB	0.611	B	0.650	B	No
			SB/WB	0.639	B	0.635	B	No
Link 26	Sepulveda s/o Slauson	AM	NB/EB	0.901	E	0.957	E	Yes
			SB/WB	0.399	A	0.400	A	No
		PM	NB/EB	0.742	C	0.742	C	No
			SB/WB	0.828	D	0.845	D	No
		AP	NB/EB	0.540	A	0.514	A	No
			SB/WB	0.515	A	0.501	A	No
Link 27	Centinela w/o Sepulveda	AM	NB/EB	0.405	A	0.461	A	No
			SB/WB	0.945	E	0.962	E	No
		PM	NB/EB	0.864	D	0.865	D	No
			SB/WB	0.692	B	0.775	C	Yes
		AP	NB/EB	0.546	A	0.570	A	No
			SB/WB	0.809	D	0.796	C	No
Link 28	El Segundo w/o Hawthorne	AM	NB/EB	0.193	A	0.208	A	No
			SB/WB	0.518	A	0.523	A	No
		PM	NB/EB	0.794	C	0.808	D	No
			SB/WB	0.397	A	0.410	A	No
		AP	NB/EB	0.696	B	0.694	B	No
			SB/WB	0.888	D	0.902	E	No

N/A = Not Applicable.

Source: Barton-Aschman Associates, Inc.

Of the original 61 study intersections, 24 intersections would be affected during the a.m. peak hour by 2015. During the p.m. peak hour, 20 intersections would be affected by 2015.

No Action/No Project Alternative Comparison

Compared to the future traffic conditions that would occur under the No Action/No Project Alternative, 25 facilities would be significantly affected in 2015. This is summarized in **Table F4.3.2-9** and **Table F4.3.2-14**, Alternative C Affected Intersections (2015 - Compared to No Action/No Project Alternative). All of these facilities would experience impacts as compared to the Adjusted Environmental Baseline and would be subject to mitigation.

Table F4.3.2-14

Alternative C Affected Intersections
(2015 - Compared to No Action/No Project Alternative)

Intersection Number[1, 2]	Intersection Name
8	Arbor Vitae St. and La Cienega Blvd.
11	Aviation Blvd. and Century Blvd.
13	Aviation Blvd. and Imperial Hwy.
18	Centinela Ave. and Jefferson Blvd.
26	Century Blvd. and La Cienega Blvd.
44	Sepulveda Blvd. and Howard Hughes Pkwy.
48	I-105 Fwy WB Off/Nash at Nash
50	Imperial Hwy. and Sepulveda Blvd.
71	La Cienega Blvd and Lennox Blvd.
78	I-405 NB Ramps at La Tijera Blvd.
81	La Tijera Blvd and Lincoln Blvd.
83	La Tijera Blvd and Sepulveda Blvd.
87	Lincoln Blvd. and 83rd St.
94	Lincoln Blvd and Teale St.
100	Mariposa Ave. and Sepulveda Blvd.
101	Pershing Dr and Westchester Pkwy.
106	Sepulveda Blvd. and 76th/77th St.

[1] Based on LOS comparison with the No Action/No Project Alternative.
[2] Corresponds to Figure F4.3.2-1.

Source: Barton-Aschman Associates, Inc. - PTG, 2000.

Consistency with Regional and Local Transportation Plans

Alternative C was reviewed for consistency with the following transportation plans:

- Southern California Association of Governments (SCAG) Regional Transportation Plan.
- Los Angeles County Congestion Management Program.
- City of Los Angeles General Plan, Transportation Element.
- Coastal Transportation Corridor Specific Plan, administered by the City of Los Angeles.
- Transportation Improvement and Mitigation Program for South Central Los Angeles Community Plan Area.
- City of El Segundo General Plan.
- City of Hawthorne Circulation Element.

Few policies in the reviewed transportation plans apply to the surface transportation element of the LAX Master Plan. Of those policies that do, no surface transportation component of Alternative C conflicts with these policies. However, some plans may require amendments to reflect increased airport demand.

4.3.2.6.1.3 Alternative D - Enhanced Safety and Security Plan

A complete description of the facilities associated with Alternative D is provided in Chapter 3, *Alternatives*. The features of Alternative D that are relevant to the analysis of off-airport surface transportation are summarized herein.

The primary landside (i.e., lands outside of the LAX airfield operations area) components of Alternative D are different from Alternatives A, B, and C in several important aspects. Unlike the other alternatives, Alternative D does not incorporate a West Terminal complex. It also does not include an LAX Expressway or a ring road to transport motorists to the west. However, because Alternative D incorporates a GTC and an ITC on the east side of the airport, it relies upon, and proposes or anticipates substantial improvements to the roadway system to the east.

In addition to the on-airport landside improvements discussed in Section 4.3.1, *On-Airport Surface Transportation*, Alternative D also proposes the following arterial street improvements:

- One northbound lane would be added to La Cienega Boulevard from 111th Street to Arbor Vitae Street
- One southbound lane would be added to La Cienega Boulevard from Arbor Vitae Street to 104th Street
- One lane in each direction would be added to Arbor Vitae Street between Aviation Boulevard and La Cienega Boulevard
- One lane in each direction would be added to 111th Street between Aviation Boulevard and La Cienega Boulevard
- One lane in each direction would be added to Aviation Boulevard between Arbor Vitae Street and Imperial Highway
- The intersection of La Cienega Boulevard and Lennox Boulevard would be designed to restrict traffic from traveling between Lennox Boulevard and the proposed on-airport roadways

These street improvements are strategically designed to improve those intersections that would experience the primary increase in traffic as a result of the alternative.

The number of vehicle trips associated with each alternative is summarized in **Table F4.3.2-4**. As stated previously, the traffic forecasts during the peak hour are based on the O&D demand that occurs during the peak hour of the peak month/average day. The peak hour trips generated by Alternative D are different from those of the No Action/No Project Alternative, even though the MAP volumes for the two scenarios are comparable. This is due to the respective differences in O&D demand characteristics between the two scenarios.

Similar to the analyses of Alternatives A, B, and C, several important measures of effectiveness were reviewed under Alternative D conditions, including the average speed on freeways, the number of lane-miles on area freeways and arterial streets that operate at LOS F, and the hours of travel experienced by vehicles inside the Tier 1 study area. These measures are summarized in **Table F4.3.2-6**.

Alternative D also incorporates new FlyAway locations patterned after the successful Van Nuys FlyAway station at Van Nuys Airport. These stations would be located throughout the metropolitan area. Combined with higher level of service resulting from the FlyAway's exclusive public use of the CTA in Alternative D, these FlyAways should provide a convenient and attractive alternative for passengers who would otherwise use the GTC.

Adjusted Environmental Baseline Comparison

As with the other alternatives, the LOS of each facility (i.e., intersection, street link, freeway segment, and freeway ramp) under Alternative D was compared to its corresponding LOS in the Adjusted Environmental Baseline to reveal the number of facilities that would be significantly affected in 2015. This is shown in **Table F4.3.2-7**.

In reviewing the results of the base analysis, where the same facilities were evaluated for all alternatives, Alternative D would result in the greatest number of significantly affected facilities of any of the build alternatives. Of the original 61 study intersections, 25 intersections would be affected during the a.m. peak hour by 2015. During the p.m. peak hour, 32 intersections would be affected by 2015.

In the analysis of the 14 additional intersections evaluated for both Alternative C and Alternative D, Alternative D would significantly affect 10 of the subject intersections, whereas Alternative C would impact only 8. In the analysis of the 10 other additional intersections that are particular to Alternative D (i.e., intersections located east of I-405 that would not be notably affected by Alternatives A, B, and C, because vehicle trips associated with those alternative would occur primarily west of I-405), 6 of the subject intersections would be significantly affected.

Table F4.3.2-15, Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison), shows the detailed LOS comparisons of each analyzed intersection, link and ramp. Significantly impacted facilities associated with Alternative D are indicated by an X on the far right hand side of the table. The number of significantly affected surface transportation facilities under Alternative D

versus the Adjusted Environmental Baseline is an important measure of the effect the airport's continued operation and growth have on the local transportation system. These effects, if significant, must be mitigated under CEQA.

Table F4.3.2-15

Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C[1]	Alternative D LOS[2]	Significant Impact
	ORIGINAL 61 INTERSECTIONS							
Intersection 3	Airport and Arbor Vitae	AM	N/A[3]	0.587	A	0.700	B	
		PM	N/A	0.929	E	0.767	C	
		AP[4]	N/A	0.959	E	0.822	D	
Intersection 4	Airport and Century	AM	N/A	0.456	A	0.494	A	
		PM	N/A	0.656	B	0.660	B	
		AP	N/A	0.736	C	0.726	C	
Intersection 5	Airport and La Tijera	AM	N/A	0.554	A	0.669	B	
		PM	N/A	0.586	A	0.688	B	
		AP	N/A	0.671	B	0.709	C	
Intersection 6	Airport and Manchester	AM	N/A	0.695	B	0.745	C	X
		PM	N/A	0.813	D	0.791	C	
		AP	N/A	0.944	E	0.898	D	
Intersection 7	Aviation and Arbor Vitae	AM	N/A	0.651	B	0.709	C	X
		PM	N/A	0.915	E	0.811	D	
		AP	N/A	0.875	D	0.799	C	
Intersection 8	La Cienega and Arbor Vitae	AM	N/A	0.855	D	1.031	F	X
		PM	N/A	0.899	D	1.069	F	X
		AP	N/A	0.921	E	1.014	F	X
Intersection 10	Aviation and 111th St	AM	N/A	0.323	A	0.629	B	
		PM	N/A	0.418	A	0.761	C	X
		AP	N/A	0.821	D	0.830	D	
Intersection 11	Aviation and Century	AM	N/A	0.803	D	0.893	D	X
		PM	N/A	1.022	F	1.109	F	X
		AP	N/A	1.630	F	1.078	F	
Intersection 12	Aviation and El Segundo	AM	N/A	1.031	F	1.018	F	
		PM	N/A	1.025	F	1.134	F	X
		AP	N/A	1.009	F	1.027	F	X
Intersection 13	Aviation and Imperial	AM	N/A	0.750	C	0.868	D	X
		PM	N/A	1.131	F	1.173	F	
		AP	N/A	1.273	F	1.045	F	
Intersection 14	Aviation and Manchester	AM	N/A	1.052	F	1.112	F	X
		PM	N/A	0.994	E	1.115	F	X
		AP	N/A	1.591	F	1.412	F	
Intersection 15	Aviation and Rosecrans	AM	N/A	1.114	F	1.109	F	
		PM	N/A	1.194	F	1.210	F	X
		AP	N/A	1.234	F	1.300	F	X
Intersection 18	Centinela and Jefferson	AM	N/A	0.945	E	0.934	E	
		PM	N/A	1.103	F	1.130	F	X
		AP	N/A	0.723	C	0.736	C	
Intersection 22	Sepulveda and Centinela	AM	N/A	1.211	F	1.361	F	X
		PM	N/A	1.254	F	1.180	F	
		AP	N/A	0.953	E	1.002	F	
Intersection 26	La Cienega and Century	AM	N/A	0.726	C	1.358	F	X
		PM	N/A	0.798	C	1.151	F	X
		AP	N/A	0.546	A	1.369	F	X
Intersection 27	Sepulveda and Century	AM	N/A	0.722	C	0.837	D	X
		PM	N/A	0.845	D	0.897	D	X
		AP	N/A	0.675	B	0.659	B	
Intersection 28	Culver and Jefferson	AM	N/A	0.705	C	0.695	B	
		PM	N/A	1.209	F	1.209	F	
		AP	N/A	0.691	B	0.725	C	

Table F4.3.2-15

Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C[1]	Alternative D LOS[2]	Significant Impact
Intersection 33	Vista del Mar and Culver	AM	N/A	0.670	B	0.568	A	
		PM	N/A	0.473	A	0.480	A	
		AP	N/A	0.422	A	0.388	A	
Intersection 34	Douglas and Imperial	AM	N/A	0.449	A	0.393	A	
		PM	N/A	0.638	B	0.867	D	X
		AP	N/A	0.566	A	0.494	A	
Intersection 35	Sepulveda and El Segundo	AM	N/A	1.209	F	1.232	F	
		PM	N/A	1.222	F	1.302	F	X
		AP	N/A	1.081	F	1.130	F	X
Intersection 36	Vista del Mar and Grand	AM	N/A	0.888	D	0.913	E	X
		PM	N/A	0.488	A	0.439	A	
		AP	N/A	0.569	A	0.489	A	
Intersection 40	La Cienega and Florence	AM	N/A	0.798	C	0.941	E	X
		PM	N/A	1.119	F	1.244	F	X
		AP	N/A	1.608	F	1.732	F	X
Intersection 43	Highland/Vista del Mar and Rosecrans	AM	N/A	1.211	F	1.258	F	X
		PM	N/A	1.316	F	1.337	F	X
		AP	N/A	0.916	E	0.927	E	X
Intersection 44	Sepulveda and Howard Hughes Pkwy	AM	N/A	0.641	B	0.563	A	
		PM	N/A	0.860	D	0.916	E	X
		AP	N/A	0.616	B	0.573	A	
Intersection 45	I-105 Fwy/Continental City Dr. and Imperial	AM	N/A	0.624	B	1.601	F	X
		PM	N/A	0.647	B	1.450	F	X
		AP	N/A	0.690	B	2.580	F	X
Intersection 46	I-405 Fwy NB[5] Ramps at Imperial	AM	N/A	0.273	A	0.543	A	
		PM	N/A	0.302	A	0.639	B	
		AP	N/A	0.648	B	0.999	E	X
Intersection 47	Main and Imperial	AM	N/A	0.619	B	0.699	B	X
		PM	N/A	1.035	F	1.120	F	X
		AP	N/A	0.562	A	0.616	B	
Intersection 48	I-105 Fwy WB off-ramp At Nash St./Imperial Hwy.	AM	N/A	1.005	F	0.795	C	
		PM	N/A	0.572	A	0.678	B	
		AP	N/A	0.420	A	0.448	A	
Intersection 49	Pershing and Imperial	AM	N/A	0.987	E	1.069	F	X
		PM	N/A	0.781	C	0.809	D	X
		AP	N/A	0.498	A	0.595	A	
Intersection 50	Sepulveda and Imperial	AM	N/A	1.032	F	0.827	D	
		PM	N/A	1.107	F	1.251	F	X
		AP	N/A	0.809	D	0.917	E	X
Intersection 51	Vista del Mar and Imperial	AM	N/A	0.909	E	0.959	E	X
		PM	N/A	0.634	B	0.711	C	X
		AP	N/A	0.656	B	0.586	A	
Intersection 52	La Cienega and Imperial	AM	N/A	0.659	B	0.764	C	X
		PM	N/A	0.547	A	0.738	C	X
		AP	N/A	0.544	A	0.856	D	X
Intersection 54	I-405 NB Ramps and Jefferson	AM	N/A	0.853	D	0.826	D	
		PM	N/A	0.853	D	0.856	D	
		AP	N/A	0.691	B	0.652	B	
Intersection 55	I-405 SB Ramps and Jefferson	AM	N/A	0.652	B	0.625	B	
		PM	N/A	0.773	C	0.619	B	
		AP	N/A	0.536	A	0.536	A	
Intersection 57	Lincoln and Jefferson	AM	N/A	1.158	F	1.000	E	
		PM	N/A	1.035	F	1.286	F	X
		AP	N/A	0.761	C	0.799	C	
Intersection 67	La Cienega and 111th	AM	N/A	0.223	A	0.634	B	
		PM	N/A	0.218	A	0.468	A	
		AP	N/A	0.593	A	1.062	F	X
Intersection 68	La Cienega and I-405 Ramps S/O[6] Century	AM	N/A	0.354	A	0.549	A	
		PM	N/A	0.506	A	0.527	A	
		AP	N/A	0.565	A	0.563	A	

Table F4.3.2-15

Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C[1]	Alternative D LOS[2]	Significant Impact
Intersection 69	La Cienega and I-405 Ramps SB N/O[8] Imperial	AM	N/A	0.297	A	0.245	A	
		PM	N/A	0.207	A	0.287	A	
		AP	N/A	0.335	A	0.508	A	
Intersection 71	La Cienega and Lennox	AM	N/A	0.398	A	0.343	A	
		PM	N/A	0.586	A	0.819	D	X
		AP	N/A	0.741	C	0.709	C	
Intersection 72	La Cienega and Manchester	AM	N/A	0.732	C	0.778	C	X
		PM	N/A	0.791	C	0.852	D	X
		AP	N/A	1.196	F	1.285	F	X
Intersection 78	I-405 NB Ramps at La Tijera	AM	N/A	0.823	D	0.669	B	
		PM	N/A	0.898	D	0.741	C	
		AP	N/A	0.646	B	0.521	A	
Intersection 79	I-405 SB Ramps at La Tijera	AM	N/A	0.725	C	0.605	B	
		PM	N/A	0.937	E	0.767	C	
		AP	N/A	0.515	A	0.443	A	
Intersection 81	Lincoln and La Tijera	AM	N/A	0.478	A	0.490	A	
		PM	N/A	0.502	A	0.693	B	
		AP	N/A	0.350	A	0.390	A	
Intersection 82	La Tijera and Manchester	AM	N/A	0.619	B	0.611	B	
		PM	N/A	0.720	C	0.800	C	X
		AP	N/A	0.647	B	0.594	A	
Intersection 83	Sepulveda and La Tijera	AM	N/A	0.902	E	0.880	D	X
		PM	N/A	0.868	D	0.825	D	X
		AP	N/A	0.426	A	0.438	A	
Intersection 87	Lincoln and 83rd	AM	N/A	1.024	F	1.104	F	X
		PM	N/A	1.128	F	1.280	F	X
		AP	N/A	0.904	E	0.885	D	
Intersection 88	Lincoln and Manchester	AM	N/A	0.795	C	0.934	E	X
		PM	N/A	1.165	F	1.371	F	X
		AP	N/A	0.789	C	0.966	E	X
Intersection 93	Sepulveda and Lincoln	AM	N/A	0.498	A	0.602	B	
		PM	N/A	0.539	A	0.653	B	
		AP	N/A	0.362	A	0.361	A	
Intersection 94	Lincoln and Teale	AM	N/A	0.732	C	0.797	C	X
		PM	N/A	0.907	E	1.052	F	X
		AP	N/A	0.588	A	0.654	B	
Intersection 98	Pershing and Manchester	AM	N/A	0.390	A	0.433	A	
		PM	N/A	0.515	A	0.569	A	
		AP	N/A	0.267	A	0.204	A	
Intersection 99	Sepulveda and Manchester	AM	N/A	0.871	D	0.832	D	
		PM	N/A	1.031	F	1.174	F	X
		AP	N/A	0.774	C	0.643	B	
Intersection 100	Sepulveda and Mariposa	AM	N/A	0.772	C	0.946	E	X
		PM	N/A	1.132	F	1.126	F	
		AP	N/A	1.193	F	1.199	F	
Intersection 101	Pershing and Westchester	AM	N/A	0.306	A	0.245	A	
		PM	N/A	0.270	A	0.313	A	
		AP	N/A	0.113	A	0.085	A	
Intersection 103	Sepulveda and Rosecrans	AM	N/A	1.327	F	1.310	F	
		PM	N/A	1.623	F	1.674	F	X
		AP	N/A	1.231	F	1.257	F	X
Intersection 105	Sepulveda and I-105 ramp N/O Imperial	AM	N/A	1.345	F	1.251	F	
		PM	N/A	1.021	F	1.153	F	X
		AP	N/A	1.016	F	0.953	E	
Intersection 106	Sepulveda and 76th/77th	AM	N/A	0.712	C	0.673	B	
		PM	N/A	0.677	B	0.722	C	X
		AP	N/A	0.678	B	0.666	B	
Intersection 109	Sepulveda and Westchester	AM	N/A	0.883	D	0.721	C	
		PM	N/A	0.986	E	0.897	D	
		AP	N/A	0.490	A	0.466	A	

Table F4.3.2-15

Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C[1]	Alternative D LOS[2]	Significant Impact
Intersection 111	La Cienega and I-405 Ramps N/O Century	AM	N/A	0.706	C	0.764	C	X
		PM	N/A	0.570	A	0.447	A	
		AP	N/A	0.734	C	0.917	E	X
Intersection 307	I-405 NB Ramp and Century	AM	N/A	0.727	C	0.676	B	
		PM	N/A	0.598	A	0.642	B	
		AP	N/A	0.409	A	0.484	A	
Intersection 312	La Cienega and El Segundo	AM	N/A	0.632	B	0.724	C	X
		PM	N/A	0.667	B	0.695	B	
		AP	N/A	0.461	A	0.574	A	
Intersection 313	La Cienega and 120th	AM	N/A	0.309	A	0.450	A	
		PM	N/A	0.453	A	0.461	A	
		AP	N/A	0.455	A	0.422	A	
Intersection 16[9]	Lincoln and Bali	AM	N/A	0.554	A	0.547	A	
		PM	N/A	0.826	D	0.922	E	X
		AP	N/A	0.477	A	0.577	A	
Intersection 17[9]	Centinela and Culver	AM	N/A	0.903	E	0.927	E	X
		PM	N/A	0.889	D	0.982	E	X
		AP	N/A	0.668	B	0.694	B	
Intersection 20[9]	La Cienega and Centinela	AM	N/A	1.128	F	1.237	F	X
		PM	N/A	1.136	F	1.160	F	X
		AP	N/A	1.000	E	1.159	F	X
Intersection 39[9]	Lincoln and Fiji	AM	N/A	0.586	A	0.707	C	X
		PM	N/A	0.770	C	0.823	D	X
		AP	N/A	0.621	B	0.588	A	
Intersection 70[9]	La Cienega and La Tijera	AM	N/A	0.725	C	0.743	C	
		PM	N/A	1.107	F	0.861	D	
		AP	N/A	0.678	B	0.572	A	
Intersection 89[9]	Lincoln and Marina Expy	AM	N/A	0.942	E	0.956	E	X
		PM	N/A	1.050	F	1.068	F	X
		AP	N/A	0.622	B	0.760	C	X
Intersection 90[9]	Lincoln and Maxella	AM	N/A	0.838	D	0.782	C	
		PM	N/A	0.978	E	0.981	E	
		AP	N/A	0.819	D	0.839	D	X
Intersection 91[9]	Lincoln and Mindanoa	AM	N/A	0.964	E	0.951	E	
		PM	N/A	1.178	F	0.992	E	
		AP	N/A	0.853	D	0.936	E	X
Intersection 95[9]	Lincoln and Venice	AM	N/A	0.907	E	0.787	C	
		PM	N/A	1.005	F	0.938	E	
		AP	N/A	0.926	E	0.838	D	
Intersection 96[9]	Lincoln and Washington	AM	N/A	1.046	F	1.046	F	
		PM	N/A	1.022	F	1.065	F	X
		AP	N/A	0.881	D	0.762	C	
Intersection 118[9]	Centinela and Route 90 EB[10]	AM	N/A	0.354	A	0.360	A	
		PM	N/A	0.520	A	0.517	A	
		AP	N/A	0.643	B	0.645	B	
Intersection 119[9]	Centinela and Route 90 WB[11]	AM	N/A	0.494	A	0.550	A	
		PM	N/A	0.396	A	0.545	A	
		AP	N/A	0.365	A	0.490	A	
Intersection 136[9]	Sepulveda and 79th/80th	AM	N/A	0.679	B	0.671	B	
		PM	N/A	0.731	C	0.904	E	X
		AP	N/A	0.433	A	0.565	A	
Intersection 137[9]	Sepulveda and 83rd	AM	N/A	0.780	C	0.721	C	
		PM	N/A	0.833	D	0.983	E	X
		AP	N/A	0.439	A	0.405	A	
Intersection 42[12]	Hawthorne and Imperial	AM	N/A	0.668	B	0.715	C	X
		PM	N/A	0.889	D	0.891	D	
		AP	N/A	0.916	E	1.058	F	X
Intersection 309[12]	Hawthorne and Lennox	AM	N/A	0.816	D	0.838	D	X
		PM	N/A	1.069	F	1.042	F	
		AP	N/A	1.136	F	1.191	F	X

Table F4.3.2-15

Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Adj. Env.		Alternative D		Significant Impact
				V/C[1]	LOS[2]	V/C[1]	LOS[2]	
Intersection 310[12]	Inglewood and Lennox	AM	N/A	0.904	E	0.921	E	X
		PM	N/A	1.143	F	1.148	F	
		AP	N/A	1.115	F	1.251	F	X
Intersection 502[12]	Inglewood and Arbor Vitae	AM	N/A	0.780	C	0.833	D	X
		PM	N/A	0.831	D	0.903	E	X
		AP	N/A	0.829	D	0.922	E	X
Intersection 503[12]	Inglewood and Century	AM	N/A	0.711	C	0.727	C	
		PM	N/A	0.800	C	0.797	C	
		AP	N/A	0.907	E	0.894	D	
Intersection 505[12]	Inglewood and Imperial	AM	N/A	0.936	E	0.853	D	
		PM	N/A	1.093	F	1.083	F	
		AP	N/A	0.990	E	0.994	E	
Intersection 506[12]	La Brea and Arbor Vitae	AM	N/A	0.697	B	0.719	C	
		PM	N/A	0.712	C	0.715	C	
		AP	N/A	0.903	E	0.926	E	X
Intersection 25[12]	La Brea and Century	AM	N/A	0.855	D	0.876	D	X
		PM	N/A	0.974	E	0.935	E	
		AP	N/A	0.979	E	0.988	E	
Intersection 0[12]	La Cienega and 104th	AM	N/A	0.479	A	0.370	A	
		PM	N/A	0.603	B	0.245	A	
		AP	N/A	0.846	D	0.629	B	
Intersection 510[12]	Prairie and Lennox	AM	N/A	1.029	F	0.976	E	
		PM	N/A	1.323	F	1.253	F	
		AP	N/A	1.280	F	1.277	F	
Link 1[12]	Lincoln S/O Venice	AM	NB/EB	0.743	C	0.806	D	X
			SB/WB	0.886	D	0.945	E	X
		PM	NB/EB	0.950	E	1.024	F	X
			SB/WB	0.891	D	0.969	E	X
		AP	NB/EB	0.743	C	0.804	D	X
			SB/WB	0.781	C	0.829	D	X
Link 2[12]	Centinela S/O Venice	AM	NB/EB	0.914	E	0.991	E	X
			SB/WB	0.649	B	0.691	B	
		PM	NB/EB	0.832	D	0.892	D	X
			SB/WB	0.882	D	0.961	E	X
		AP	NB/EB	0.728	C	0.788	C	
			SB/WB	0.837	D	0.886	D	X
Link 3[12]	Sawtelle S/O Venice	AM	NB/EB	0.527	A	0.591	A	
			SB/WB	0.609	B	0.647	B	
		PM	NB/EB	0.495	A	0.535	A	
			SB/WB	0.788	C	0.854	D	X
		AP	NB/EB	0.543	A	0.633	B	
			SB/WB	0.749	C	0.810	D	X
Link 4[12]	Sepulveda S/O Venice	AM	NB/EB	0.890	D	0.962	E	X
			SB/WB	0.707	C	0.765	C	
		PM	NB/EB	1.093	F	1.185	F	X
			SB/WB	0.925	E	1.005	F	X
		AP	NB/EB	0.877	D	0.949	E	X
			SB/WB	0.965	E	1.042	F	X
Link 5[12]	Overland S/O Venice	AM	NB/EB	0.857	D	0.941	E	X
			SB/WB	0.953	E	1.052	F	X
		PM	NB/EB	0.888	D	0.961	E	X
			SB/WB	1.165	F	1.252	F	X
		AP	NB/EB	0.851	D	0.946	E	X
			SB/WB	1.033	F	1.095	F	X
Link 6[12]	Stocker E/O[13] La Brea	AM	NB/EB	0.485	A	0.505	A	
			SB/WB	0.503	A	0.504	A	
		PM	NB/EB	0.636	B	0.629	B	
			SB/WB	0.486	A	0.498	A	
		AP	NB/EB	0.569	A	0.585	A	
			SB/WB	0.561	A	0.567	A	

Table F4.3.2-15

Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Adj. Env.		Alternative D		Significant Impact
				V/C[1]	LOS[2]	V/C[1]	LOS[2]	
Link 7[12]	Slauson E/O La Brea	AM	NB/EB	0.425	A	0.439	A	
			SB/WB	0.716	C	0.720	C	
		PM	NB/EB	0.671	B	0.666	B	
			SB/WB	0.488	A	0.494	A	
		AP	NB/EB	0.382	A	0.391	A	
			SB/WB	0.373	A	0.376	A	
Link 8[12]	Centinela E/O La Brea	AM	NB/EB	0.459	A	0.481	A	
			SB/WB	0.963	E	0.987	E	X
		PM	NB/EB	0.745	C	0.749	C	
			SB/WB	1.215	F	1.210	F	
		AP	NB/EB	0.790	C	0.795	C	
			SB/WB	0.621	B	0.608	B	
Link 9[12]	La Cienega S/O Slauson	AM	NB/EB	0.537	A	0.548	A	
			SB/WB	0.562	A	0.572	A	
		PM	NB/EB	0.654	B	0.662	B	
			SB/WB	0.594	A	0.606	B	
		AP	NB/EB	0.391	A	0.406	A	
			SB/WB	0.429	A	0.440	A	
Link 10[12]	Manchester W/O[14] La Brea	AM	NB/EB	0.489	A	0.507	A	
			SB/WB	0.548	A	0.565	A	
		PM	NB/EB	0.633	B	0.649	B	
			SB/WB	0.623	B	0.618	B	
		AP	NB/EB	0.472	A	0.468	A	
			SB/WB	0.530	A	0.537	A	
Link 11[12]	Arbor Vitae W/O La Brea	AM	NB/EB	0.385	A	0.395	A	
			SB/WB	0.281	A	0.285	A	
		PM	NB/EB	0.395	A	0.406	A	
			SB/WB	0.459	A	0.522	A	
		AP	NB/EB	0.582	A	0.638	B	
			SB/WB	0.352	A	0.381	A	
Link 12[12]	Century W/O La Brea	AM	NB/EB	0.444	A	0.465	A	
			SB/WB	0.511	A	0.503	A	
		PM	NB/EB	0.642	B	0.631	B	
			SB/WB	0.489	A	0.434	A	
		AP	NB/EB	0.510	A	0.492	A	
			SB/WB	0.456	A	0.471	A	
Link 13[12]	Imperial W/O La Brea	AM	NB/EB	0.292	A	0.331	A	
			SB/WB	0.378	A	0.395	A	
		PM	NB/EB	0.590	A	0.599	A	
			SB/WB	0.348	A	0.398	A	
		AP	NB/EB	0.476	A	0.756	C	X
			SB/WB	0.667	B	0.789	C	X
Link 14[12]	Aviation N/O Rosecrans	AM	NB/EB	0.687	B	0.681	B	
			SB/WB	0.238	A	0.242	A	
		PM	NB/EB	0.458	A	0.486	A	
			SB/WB	0.759	C	0.758	C	
		AP	NB/EB	0.409	A	0.457	A	
			SB/WB	0.316	A	0.361	A	
Link 15[12]	Sepulveda N/O Rosecrans	AM	NB/EB	0.938	E	0.952	E	
			SB/WB	0.268	A	0.267	A	
		PM	NB/EB	0.471	A	0.495	A	
			SB/WB	0.873	D	0.877	D	
		AP	NB/EB	0.515	A	0.529	A	
			SB/WB	0.541	A	0.548	A	
Link 16[12]	Pacific Avenue S/O Venice	AM	NB/EB	0.305	A	0.348	A	
			SB/WB	0.560	A	0.599	A	
		PM	NB/EB	0.322	A	0.364	A	
			SB/WB	0.493	A	0.537	A	
		AP	NB/EB	0.438	A	0.484	A	
			SB/WB	0.534	A	0.574	A	

Table F4.3.2-15

Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Adj. Env.		Alternative D		Significant Impact
				V/C[1]	LOS[2]	V/C[1]	LOS[2]	
Link 17[12]	Washington E/O Lincoln	AM	NB/EB	0.663	B	0.716	C	
			SB/WB	0.413	A	0.425	A	
		PM	NB/EB	0.591	A	0.659	B	
			SB/WB	0.464	A	0.506	A	
		AP	NB/EB	0.341	A	0.355	A	
			SB/WB	0.492	A	0.530	A	
Link 18[12]	Marina Fwy E/O Lincoln	AM	NB/EB	0.267	A	0.289	A	
			SB/WB	0.271	A	0.290	A	
		PM	NB/EB	0.327	A	0.337	A	
			SB/WB	0.296	A	0.316	A	
		AP	NB/EB	0.348	A	0.376	A	
			SB/WB	0.312	A	0.334	A	
Link 19[12]	Culver E/O Lincoln	AM	NB/EB	0.633	B	0.627	B	
			SB/WB	0.074	A	0.079	A	
		PM	NB/EB	0.331	A	0.336	A	
			SB/WB	0.426	A	0.428	A	
		AP	NB/EB	0.431	A	0.428	A	
			SB/WB	0.450	A	0.446	A	
Link 20[12]	Jefferson E/O Lincoln	AM	NB/EB	0.762	C	0.845	D	X
			SB/WB	0.458	A	0.556	A	
		PM	NB/EB	0.492	A	0.554	A	
			SB/WB	1.091	F	1.167	F	X
		AP	NB/EB	0.279	A	0.298	A	
			SB/WB	0.412	A	0.432	A	
Link 21[12]	Lincoln S/O Jefferson	AM	NB/EB	0.763	C	0.861	D	X
			SB/WB	0.393	A	0.422	A	
		PM	NB/EB	0.911	E	1.019	F	X
			SB/WB	0.652	B	0.735	C	X
		AP	NB/EB	0.572	A	0.645	B	
			SB/WB	0.572	A	0.609	B	
Link 22[12]	Culver W/O Jefferson	AM	NB/EB	0.731	C	0.763	C	
			SB/WB	0.292	A	0.333	A	
		PM	NB/EB	0.519	A	0.573	A	
			SB/WB	0.894	D	0.956	E	X
		AP	NB/EB	0.427	A	0.453	A	
			SB/WB	0.490	A	0.530	A	
Link 23[12]	Vista del Mar S/O Culver	AM	NB/EB	0.413	A	0.419	A	
			SB/WB	0.183	A	0.193	A	
		PM	NB/EB	0.259	A	0.271	A	
			SB/WB	0.459	A	0.490	A	
		AP	NB/EB	0.319	A	0.302	A	
			SB/WB	0.280	A	0.302	A	
Link 24[12]	La Brea S/O Slauson	AM	NB/EB	0.675	B	0.693	B	
			SB/WB	0.463	A	0.491	A	
		PM	NB/EB	0.657	B	0.659	B	
			SB/WB	0.629	B	0.632	B	
		AP	NB/EB	0.525	A	0.544	A	
			SB/WB	0.596	A	0.605	B	
Link 25[12]	Jefferson N/O Rodeo	AM	NB/EB	0.409	A	0.421	A	
			SB/WB	0.861	D	0.868	D	
		PM	NB/EB	0.580	A	0.576	A	
			SB/WB	0.530	A	0.528	A	
		AP	NB/EB	0.149	A	0.157	A	
			SB/WB	0.687	B	0.695	B	
Link 26[12]	Sepulveda S/O Slauson	AM	NB/EB	0.909	E	0.909	E	
			SB/WB	0.408	A	0.465	A	
		PM	NB/EB	0.738	C	0.728	C	
			SB/WB	0.830	D	0.838	D	
		AP	NB/EB	0.539	A	0.517	A	
			SB/WB	0.497	A	0.493	A	

Table F4.3.2-15

Year 2015 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C[1]	Alternative D LOS[2]	Significant Impact
Link 27[12]	Centinela W/O Sepulveda	AM	NB/EB	0.401	A	0.452	A	
			SB/WB	0.956	E	0.939	E	
		PM	NB/EB	0.873	D	0.888	D	
			SB/WB	0.680	B	0.720	C	
		AP	NB/EB	0.603	B	0.615	B	
			SB/WB	0.816	D	0.803	D	
Link 28[12]	El Segundo W/O Hawthorne	AM	NB/EB	0.194	A	0.190	A	
			SB/WB	0.518	A	0.532	A	
		PM	NB/EB	0.794	C	0.822	D	
			SB/WB	0.398	A	0.420	A	
		AP	NB/EB	0.706	C	0.736	C	
			SB/WB	0.891	D	0.935	E	X
Link 29[12]	Inglewood N/O Rosecrans	AM	NB/EB	0.489	A	0.506	A	
			SB/WB	0.380	A	0.400	A	
		PM	NB/EB	0.505	A	0.580	A	
			SB/WB	0.829	D	0.842	D	
		AP	NB/EB	0.509	A	0.559	A	
			SB/WB	0.341	A	0.386	A	
Link 30[12]	Vista del Mar S/O Grand	AM	NB/EB	0.857	D	0.858	D	
			SB/WB	0.155	A	0.161	A	
		PM	NB/EB	0.220	A	0.221	A	
			SB/WB	0.584	A	0.585	A	
		AP	NB/EB	0.317	A	0.315	A	
			SB/WB	0.223	A	0.225	A	
Ramp 19[12]	I-405 NB on-ramp and Century EB	AM	N/A	0.285	N/A	0.667	N/A	
		PM	N/A	0.573	N/A	1.037	N/A	
		AP	N/A	0.157	N/A	0.721	N/A	X
Ramp 26[12]	I-405 SB on-ramp and El Segundo	AM	N/A	0.187	N/A	0.308	N/A	
		PM	N/A	0.993	N/A	1.061	N/A	X
		AP	N/A	0.288	N/A	0.311	N/A	
Ramp 35[12]	I-105 WB off-ramp and Nash	AM	N/A	1.136	N/A	1.181	N/A	X
		PM	N/A	0.217	N/A	0.243	N/A	
		AP	N/A	0.515	N/A	0.689	N/A	

[1] Volume to Capacity ratio.
[2] Level of Service. Range: A (good) - F (breakdown).
[3] N/A = Not Applicable.
[4] AP = Airport peak hour.
[5] NB = Northbound.
[6] S/O = South of.
[7] SB = Southbound.
[8] N/O = North of.
[9] Intersections analyzed for Alternatives C and D only.
[10] EB = Eastbound.
[11] WB = Westbound.
[12] Intersections analyzed for Alternative D only.
[13] E/O = East of.
[14] W/O = West of.

Source: Barton-Aschman Associates, Inc., 2002.

The unmitigated Alternative D plan uses existing connections to the regional highway system (I-405 and I-105) to connect to the future east side surface transportation centers (the GTC and the ITC). The analysis shows that trying to use the existing freeway ramps would result in a large demand for airport-related vehicles to use the limited-capacity entrance and exit ramps on I-405 between Arbor Vitae Street and El Segundo Boulevard, as well as on I-105 between I-405 and Nash Street. The resulting project impacts on the I-405 northbound on-ramp at Century Boulevard, the I-405 southbound on-ramp at El Segundo Boulevard, and the I-105 westbound off-ramp at Nash Street are an indication of this problem. It is also reflected in the CMP analysis of freeways and regional arterials, which is summarized later in

this section. Combined with the poor traffic conditions that already exist on the I-405 and I-105 mainlines, the excess congestion on these highway ramps would tend to encourage airport traffic to divert onto surface streets upstream of LAX.

It is important that Alternative D include a mitigation strategy that would help to alleviate this issue. Effective methods of encouraging airport traffic to stay on the freeway system rather than divert to surface streets would include the construction of direct and non-stop access ramps to and from the I-405 and I-105 Freeways. Therefore, the mitigation plan, which is discussed in more detail in subsection 4.3.2.8, *Mitigation Measures*, includes an interchange with I-405 that would provide non-stop airport access to and from this critical freeway, as well as direct ramps to and from the east on I-105. Analysis shows that these two important mitigation components would be effective in encouraging airport traffic to stay on the freeway system, instead of using adjacent surface streets as an alternative route.

Congestion Management Plan (CMP) Analysis

The CMP analysis completed for Alternative D examined potential impacts at specific arterial roadway links and freeway monitoring stations designated as CMP facilities. These facilities are identified in **Table F4.3.2-16,** CMP Facilities Evaluated for Alternative D.

Table F4.3.2-16

CMP Facilities Evaluated for Alternative D

CMP Arterials:

1. Lincoln Boulevard – between I-10 on the north and Sepulveda Boulevard on the south
2. Sepulveda Boulevard - between Lincoln Boulevard on the north and Artesia Boulevard on the south
3. Venice Boulevard - between Lincoln Boulevard on the west and La Cienega Boulevard on the east
4. La Cienega Boulevard - between Venice Boulevard on the north and I-405 on the south
5. Manchester Avenue - between Lincoln Boulevard on the west and I-110 on the east
6. Artesia Boulevard - between Pacific Coast Highway on the west and I-110 on the east

CMP Freeway Monitoring Stations:

1. I-5 (Golden State Freeway) Post Mile R55.48, n/o Jct Route 126 West
2. I-5 (Golden State Freeway) Post Mile R46.55, n/o Route 14
3. I-10 (Santa Monica Freeway) Post Mile R2.17 at Lincoln Boulevard
4. I-10 (Santa Monica Freeway) Post Mile R6.75 e/o Overland Avenue
5. I-10 (Santa Monica Freeway) Post Mile R10.71 e/o La Brea Avenue
6. I-105 (Glenn Anderson Freeway) Post Mile R1.00 e/o Sepulveda Boulevard
7. I-105 (Glenn Anderson Freeway) Post Mile R5.50 e/o Crenshaw Boulevard
8. I-105 (Glenn Anderson Freeway) Post Mile R12.60, e/o Harris Avenue
9. I-405 (San Diego Freeway) Post Mile R8.02, at Santa Fe Avenue
10. I-405 (San Diego Freeway) Post Mile R11.90 s/o Route 110
11. I-405 (San Diego Freeway) Post Mile R18.63 n/o Inglewood Boulevard
12. I-405 (San Diego Freeway) Post Mile R24.27 n/o La Tijera Boulevard
13. I-405 (San Diego Freeway) Post Mile R28.30 n/o Venice Boulevard
14. I-405 (San Diego Freeway) Post Mile R35.81, s/o Mulholland Drive
15. I-405 (San Diego Freeway) Post Mile R44.27, n/o Roscoe Boulevard

Source: Parsons Transportation Group, 2003.

Based on the number of CMP freeway segments, the interrelationship between the CMP arterials and the CMP monitoring stations (intersections), and the various directions of traffic movements (i.e., northbound, southbound, westbound, and eastbound), a total of 122 regional arterial and freeway segments were evaluated in the impacts analysis. Of these 122 segments, 42 were impacted during either the a.m. or p.m. peak hours at levels that exceed the CMP thresholds of significance. **Table F4.3.2-17**, Alternative D CMP Impacts on Regional Arterial and Freeway Segments, provides a breakdown of those impacted segments, while Attachment G of Technical Report S-2b, *Supplemental Off-Airport Surface Transportation Technical Report,* provides a detailed delineation of the location and extent of these impacts.

Table F4.3.2-17

Alternative D CMP Impacts on Regional Arterial and Freeway Segments

	No. Studied	AM Peak Hour	PM Peak Hour
Northbound/Eastbound			
Arterial Segments	46	10	7
Freeway Segments	15	0	2
Southbound/Westbound			
Arterial Segments	46	4	17
Freeway Segments	15	1	1
Total All Segments	**122**	**15**	**27**

Source: Parsons Transportation Group, 2003.

No Action/No Project Alternative Comparison

The peak hour trips generated by Alternative D are compared with the Adjusted Environmental Baseline condition and future traffic conditions that would occur under the No Action/No Project Alternative in **Table F4.3.2-4**. This table shows that the number of trips generated by Alternative D would be less than those of the No Action/No Project Alternative. In fact, the Alternative D trips would be considerably less during the a.m. and p.m. peak hours, primarily because of the more stringent trip cap for the LAX Northside property proposed as part of Alternative D. During the airport peak hour, the trips generated by Alternative D would be similar to the No Action/No Project Alternative, although the net total trips would be more than 1,800 fewer because of a reduction in trips caused by land acquisition in Alternative D.

With Alternative D, average speeds on freeways would be faster than under No Action/No Project Alternative conditions, although speeds would not be as great as if the LAX Expressway and ring road were constructed under Alternatives A, B, and C. Similarly, the freeway and arterial lane-miles operating at LOS F would also be improved compared to the No Action/No Project Alternative conditions, although Alternative D conditions would not be as good as with other build alternatives.

Locations of the impacted facilities associated with Alternative D as compared to the No Action/No Project Alternative are shown in **Table F4.3.2-18**, Alternative D Affected Intersections (2015 - Compared to No Action/No Project Alternative). Alternative D would result in 32 impacted intersections when compared to the No Action/No Project Alternative. This is fewer than the impacts resulting from comparison to the Adjusted Environmental Baseline, due to the increasing levels of traffic expected to occur under the No Action/No Project Alternative.

Table F4.3.2-18

Alternative D Affected Intersections
(2015 - Compared to No Action/No Project Alternative)

Intersection Number[1,2]	Intersection Name
	Original Study Intersections
4	Airport Blvd. and Century Blvd.
8	Arbor Vitae St. and La Cienega Blvd.
10	Aviation Blvd. and 111th St.
13	Aviation Blvd. and Imperial Hwy.
26	Century Blvd and La Cienega Blvd.
27	Century Blvd. and Sepulveda Blvd.
34	Douglas St. and Imperial Hwy.
40	Florence Ave. and La Cienega Blvd.
46	I-405 Northbound Ramps and Imperial Hwy.
50	Imperial Hwy. and Sepulveda Blvd.
52	Imperial Hwy. And La Cienega Blvd.
67	La Cienega Blvd. and 111th St.
71	La Cienega Blvd. and Lennox Blvd.
72	La Cienega Blvd. and Manchester Blvd.
81	La Tijera Blvd and La Cienega Blvd.
88	Lincoln Blvd. and Manchester Ave.
94	Lincoln Blvd. and Teale St.
99	Manchester Ave. and Sepulveda Blvd.
100	Mariposa Ave. and Sepulveda Blvd.
105	Sepulveda Blvd. and I-105 Off-Ramp North of Imperial Hwy.
106	Sepulveda Blvd. and 76th/77th St.
111	La Cienega Blvd. and I-405 SB Ramps North of Century Blvd.
	Intersections Analyzed for Alternatives C and D Only
16	Bali Way and Lincoln Blvd.
20	Centinela Ave and La Cienega Blvd.
89	Lincoln Blvd. and Marina Expy.
90	Lincoln Blvd. and Maxella Ave.
96	Lincoln Blvd. and Washington Blvd.
137	Sepulveda Blvd. and 83rd St.
	Intersections Analyzed for Alternative D Only
42	Hawthorne Blvd and Imperial Hwy.
309	Hawthorne Blvd. and Lennox Blvd.
310	Inglewood Ave. and Lennox Blvd.
502	Inglewood Ave. and Arbor Vitae St.

Note: Intersection Numbers correspond to **Figure F4.3.2-1**.

Source: Barton-Aschman Associates, Inc. - PTG.

Consistency with Regional and Local Transportation Plans

Alternative D was reviewed for consistency with the following transportation plans:

- SCAG Regional Transportation Plan
- Los Angeles County Congestion Management Program
- City of Los Angeles General Plan, Transportation Element
- Coastal Transportation Corridor Specific Plan, administered by the City of Los Angeles
- Transportation Improvement and Mitigation Program for South Central Los Angeles Community Plan Area
- City of El Segundo General Plan
- City of Hawthorne Circulation Element

Few policies in these transportation plans apply to the surface transportation element of the LAX Master Plan. Of those policies that do, no surface transportation component of Alternative D conflicts with these policies.

4.3.2.6.2 Construction Impacts

4.3.2.6.2.1 No Action/No Project Alternative

The No Action/No Project Alternative includes the LAX Northside and Continental City developments - both substantial generators of construction traffic. Because these projects are both major development projects, it is anticipated that they would potentially generate substantial numbers of truck trips for materials delivery, removal of spoil materials, and other construction functions. Furthermore, a large construction work force would be required, which would also generate substantial traffic. It is likely that many of the same haul routes that are anticipated for the LAX Master Plan would also be used for the LAX Northside and Continental City projects, including Arbor Vitae Street, Westchester Parkway, Sepulveda Boulevard, and Imperial Highway. Because there are no adopted policies for those projects that would control traffic generation during peak periods, it is likely that substantial traffic would be generated during peak periods of the day, compounding the existing traffic congestion around the airport.

4.3.2.6.2.2 Alternatives A, B, and C

For Alternatives A, B, and C, it is estimated that construction at LAX and throughout the surrounding area would be spread across many years. During this period, the most intensive period is estimated to occur during the 3rd and 4th years. As individual projects are underway, impacts would likely be felt in the immediate area around such sites.

Three of the most critical issues surrounding the potential traffic impacts of these construction activities are:

- Maintenance of traffic in the immediate construction zones
- Deliveries (and movement within the site) of various construction materials
- Provision of labor to the construction sites

The general construction concept is to have many of the transportation improvements completed within the first five years after construction begins. The phasing for the street and highway projects generally is expected to proceed as shown in **Table F4.3.2-19,** Road Improvements Phasing Plan for Alternatives A, B, and C.

Table F4.3.2-19

Road Improvements Phasing Plan for Alternatives A, B, and C

Years	Major Street and Highway Improvements
1-2	Sepulveda (north of Century); northwestern and northern portions of the ring road (Westchester Parkway), including interchanges; and a temporary road north of Imperial Highway (south side of the airport). Begin property acquisition.
2-4	Pershing; western and southwestern portions of the ring road; and improvements at Sepulveda and Century interchange. Complete property acquisition.
5-Buildout	Additional improvements to the west side of the ring road, removal of the temporary road north of Imperial (south side of the airport), and Aviation/Arbor Vitae interchange and Aviation between Imperial and Arbor Vitae. LAX Expressway and northeastern portion of the ring road from I-405 to Sepulveda.

Source: Bechtel Corporation, 2000.

Many other improvement projects are also planned for various streets and highways in the surrounding area, including restriping, upgrading traffic signal equipment, adding traffic lanes and enhancing transit services.

In order to minimize the traffic impacts related to these construction projects, a series of commitments have been developed to address the vast majority of traffic-related construction impacts. These

commitments are included in subsection 4.3.2.5, *Master Plan Commitments*, and were developed to address all projects, but especially the large construction projects listed above. These commitments would be implemented through the use of contract specifications and construction monitoring.

Over the multi-year construction period planned to implement the Master Plan improvements, truck trips and construction employment levels were estimated for each yearly quarter (13-week period). The peak truck and labor levels would be experienced during the 3rd and 4th years (9th through the 14th quarters) after construction begins.

Truck Traffic

The highest levels of truck traffic would be experienced specifically during the 9th through 12th quarters at approximately 199,000 trucks per quarter. Of that amount, approximately 131,000 trucks would be traveling from off-site. During this period, work on the western portion of the ring road and the West Terminal Area would be underway. In order to develop a "worst case" scenario, the following conservative conditions were assumed.

- Work would be generally concentrated on the western portion of the ring road and the West Terminal Area.
- Access would be gained generally through Westchester Parkway (or temporary parallel haul route) and through an entrance at a point north of the intersection of Main Street and Imperial Highway on the south side of the airport.
- Staging and stock-pile locations would be in four locations: (1) west of Sepulveda and north of Westchester Parkway; (2) near Westchester and Pershing; (3) between the runways, halfway between the CTA (existing) terminals and the West Terminal Area (new); and (4) east end of the south runways.
- Construction activities would occur 6 days per week and 10 hours per day (although 7 days per week and 22 hours per day deliveries are possible).

If this scenario were implemented and if a work week was 10 hours per day over 6 days, then truck deliveries from off-site would be made at a rate of about 2.8 trips per minute. If these deliveries were evenly spread to four staging locations, the average delivery rate would be about 0.7 truck trips per minute per site throughout the day.

However, if the work week were extended to 7 days per week (in three shifts per day), as proposed in Master Plan Commitment ST-14, Construction Employee Shift Hours (Alternatives A, B, C, and D), and the truck deliveries were made 7 days per week, 20 hours per day (avoiding the peak traffic hours), then the truck delivery rate would be 1.2 trips per minute. If these deliveries were evenly spread to four (4) staging locations, the average delivery rate would be about 0.3 truck trips per minute per site throughout the day.

Therefore, traffic impacts should be reduced by implementing Master Plan commitments that would establish multiple staging/stock pile locations, extend the work periods to include weekends, and use multiple work shifts. It should be emphasized that this rate of truck deliveries would occur for four to five quarters. During the vast majority of the multi-year construction period, truck traffic is estimated to be at much lower levels.

Construction Employee Traffic

For the issue of construction employee-related traffic, the highest levels would be experienced specifically during the 7th through 14th quarters for the "first shift." The highest period would be during the 12th quarter. Based upon procedures outlined below, traffic impacts would not be compounded at the change of shifts. For example, employees coming to work for the 2nd shift would be arriving prior to the end of the 1st shift, and those leaving after the 1st shift would leave after the beginning of the 2nd shift.

During the peak construction period, work on the western portion ring road and the West Terminal Area would be underway. In addition to the assumptions identified previously, in order to develop a "worst case" scenario for employee traffic, it was assumed that all employees would drive to the airport for work. This is a conservative assumption (i.e., results in more project impacts).

The number of employees arriving during this peak work quarter (12th quarter) would be approximately 4,520 employees for the first shift. If these employees were to arrive from different directions and the

start and end of the "first shift" was offset from the traffic peak-period, then the traffic impact at the airport and on the surrounding areas would be substantially reduced or eliminated. As part of Master Plan Commitment ST-13, Construction Employee Parking Locations (Alternatives A, B, and C), several employee parking areas along the east end of the airport and other similar locations would be established with shuttle buses to the actual construction sites. This procedure would aid in minimizing congestion and maintaining airport safety/security requirements. In addition, remote parking locations, such as LAWA airports at Palmdale, Van Nuys, and Ontario would be established as part of Master Plan Commitment ST-13, and shuttle bus service would be provided to the LAX construction sites.

Maintenance of Traffic During Construction

With the multitude of construction projects that would be underway during the life of construction at LAX, it is important to note that, in many cases, there are few roadway alternatives to the existing facilities. Some of these facilities would be modified or even replaced as part of the off-site improvements. LAWA would strive to maintain traffic in these same corridors with roadway capacities similar to existing facilities. Closures of key roadways and intersections could cause significant impacts, except if done for short durations during periods of very low volumes.

It should also be noted that in some construction areas, three activities would have to be accommodated at the same time, in the same corridor: (1) airport traffic; (2) construction haul routes; and (3) construction of new facilities. Each should be fully separated from the others, to the extent possible. Therefore, additional physical space in these corridors may be required during construction.

By implementing Master Plan Commitments ST-9 through ST-19, traffic impacts would be minimized or eliminated and the following objectives would be achieved:

- Construction deliveries (and related traffic) during the peak traffic periods can be virtually eliminated.
- Construction traffic during all other times can be managed and would not have a significant peak hour traffic impact on the airport or surrounding areas.
- Construction employee traffic can be minimized through the use of remote parking locations and establishing start/quit times different than the traffic peak periods.
- Traffic patterns around the airport for the general public would be largely maintained through the use of existing facilities, construction haul routes and other techniques.

However, even with these commitments in place, the project would still cause sufficient construction-related traffic to cause noticeable disruption of normal traffic flows near the airport. This would result in a significant and temporary unavoidable impact to the off-airport surface transportation system.

4.3.2.6.2.3 Alternative D - Enhanced Safety and Security Plan

The Ground Access Plan would include a phased improvement plan to address interim impacts (i.e., temporary construction-related impacts) as they occur. The phasing plan would primarily revolve around the construction and implementation of the ITC, which would be developed north of Imperial Highway and east of Aviation Boulevard. That facility would be a replacement facility for the close-in parking that currently exists in the CTA. When the ITC comes on-line, the existing CTA parking would close and all "close-in" parking activity would take place at the ITC, with shuttle service to the CTA.

When the ITC comes on-line, there is expected to be a substantial shift in airport traffic patterns, as much of the CTA traffic shifts to the ITC. This traffic shift would result in significant impacts to various roadway intersections and ramps, as discussed below. As much as possible, it is important that the mitigation of these impacts be in place prior to opening the ITC, so that the corresponding traffic shifts can be adequately accommodated.

The other major surface transportation element that would come on-line in Alternative D would be the GTC. That facility is not expected to be opened until after 2008, at which time most of the final mitigation plan should be in place. The openings of these two facilities are the drivers for the surface transportation mitigation plan discussed below, although some specific improvements would be in place at other years. The timing of these other improvements would be determined through both the peak construction year traffic impact analysis and ongoing program management of the LAX Master Plan construction.

Determination of Peak Construction Year for Impacts Analysis

Based on a construction activity analysis completed for Alternative D, which estimates on a quarterly calendar basis the nature, location, and equipment/work force associated with construction activities underway at that specific time, the year with the highest construction workforce and truck demand for Alternative D is Year 2008. During that peak construction year, there would be an average daily employment of 5,125 workers and an average of 1,064 truck trips per day.

Year 2008 Levels of Service

Similar to the analysis of Year 2015 conditions, Year 2008 conditions were analyzed to determine potential significant impacts of off-airport surface transportation facilities during the a.m., p.m., and airport peak hours of the peak construction year. The procedures outlined in subsection 4.3.2.2, *General Approach and Methodology* were used. Construction traffic for the three primary peak hours and the two peak construction hours were analyzed for the 2008 peak construction year. The project would be managed to ensure that there would not be any notable construction-related traffic generated by the project during those critical hours. As a result, the impacts during the a.m., p.m., and airport peak hour do account for all types of traffic. Those impacts are summarized in **Table F4.3.2-20**, Year 2008 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison), which shows the detailed LOS comparisons of each analyzed intersection. Significantly affected facilities are shown with an X on the far right hand side of the table.

Table F4.3.2-20

Year 2008 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direc.	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C	Alternative D LOS	Significant Impact
Intersection 3	Airport and Arbor Vitae	AM	N/A[3]	0.502	A	0.751	C	X
		PM	N/A	0.801	D	0.749	C	
		AP[4]	N/A	0.874	D	0.789	C	
Intersection 4	Airport and Century	AM	N/A	0.384	A	0.634	B	
		PM	N/A	0.519	A	0.555	A	
		AP	N/A	0.680	B	0.432	A	
Intersection 5	Airport and La Tijera	AM	N/A	0.448	A	0.452	A	
		PM	N/A	0.465	A	0.437	A	
		AP	N/A	0.596	A	0.572	A	
Intersection 6	Airport and Manchester	AM	N/A	0.705	C	0.712	C	
		PM	N/A	0.719	C	0.635	B	
		AP	N/A	0.829	D	0.804	D	
Intersection 7	Aviation and Arbor Vitae	AM	N/A	0.977	E	0.835	D	
		PM	N/A	0.772	C	0.609	B	
		AP	N/A	0.774	C	0.891	D	X
Intersection 8	La Cienega and Arbor Vitae	AM	N/A	1.003	F	0.928	E	
		PM	N/A	0.749	C	0.919	E	X
		AP	N/A	0.795	C	0.839	D	X
Intersection 10	Aviation and 111th	AM	N/A	0.355	A	0.573	A	
		PM	N/A	0.435	A	0.609	B	
		AP	N/A	0.847	D	1.103	F	X
Intersection 11	Aviation and Century	AM	N/A	0.926	E	0.746	C	
		PM	N/A	1.129	F	0.907	E	
		AP	N/A	1.419	F	0.947	E	
Intersection 12	Aviation and El Segundo	AM	N/A	0.922	E	0.932	E	X
		PM	N/A	0.933	E	0.972	E	X
		AP	N/A	0.869	D	0.904	E	X
Intersection 13	Aviation and Imperial	AM	N/A	0.797	C	0.963	E	X
		PM	N/A	1.107	F	1.090	F	
		AP	N/A	1.317	F	1.109	F	
Intersection 14	Aviation and Manchester	AM	N/A	1.103	F	1.034	F	
		PM	N/A	0.851	D	0.820	D	
		AP	N/A	1.484	F	1.332	F	
Intersection 15	Aviation and Rosecrans	AM	N/A	0.982	E	0.972	E	
		PM	N/A	0.989	E	0.983	E	
		AP	N/A	0.971	E	1.017	F	X

Table F4.3.2-20

Year 2008 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direc.	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C	Alternative D LOS	Significant Impact
Intersection 18	Centinela and Jefferson	AM	N/A	0.955	E	0.935	E	
		PM	N/A	0.993	E	1.025	F	X
		AP	N/A	0.757	C	0.790	C	
Intersection 22	Sepulveda and Centinela	AM	N/A	1.091	F	1.104	F	X
		PM	N/A	0.948	E	0.957	E	
		AP	N/A	0.819	D	0.859	D	X
Intersection 26	La Cienega and Century	AM	N/A	0.742	C	0.657	B	
		PM	N/A	0.731	C	0.758	C	
		AP	N/A	0.587	A	0.550	A	
Intersection 27	Sepulveda and Century	AM	N/A	0.699	B	1.247	F	X
		PM	N/A	0.793	C	1.123	F	X
		AP	N/A	0.627	B	1.622	F	X
Intersection 28	Culver and Jefferson	AM	N/A	0.794	C	0.799	C	
		PM	N/A	0.903	E	0.890	D	
		AP	N/A	0.660	B	0.655	B	
Intersection 33	Vista del Mar and Culver	AM	N/A	0.561	A	0.560	A	
		PM	N/A	0.386	A	0.371	A	
		AP	N/A	0.371	A	0.346	A	
Intersection 34	Douglas and Imperial	AM	N/A	0.339	A	0.367	A	
		PM	N/A	0.509	A	0.770	C	X
		AP	N/A	0.478	A	0.522	A	
Intersection 35	Sepulveda and El Segundo	AM	N/A	1.102	F	1.157	F	X
		PM	N/A	1.092	F	1.079	F	
		AP	N/A	0.952	E	1.055	F	X
Intersection 36	Vista del Mar and Grand	AM	N/A	0.821	D	0.823	D	
		PM	N/A	0.487	A	0.473	A	
		AP	N/A	0.479	A	0.476	A	
Intersection 40	La Cienega and Florence	AM	N/A	0.714	C	0.775	C	X
		PM	N/A	1.008	F	1.023	F	X
		AP	N/A	1.461	F	1.517	F	X
Intersection 43	Highland/Vista del Mar and Rosecrans	AM	N/A	1.146	F	1.128	F	
		PM	N/A	1.240	F	1.233	F	
		AP	N/A	0.860	D	0.874	D	
Intersection 44	Sepulveda and Howard Hughes	AM	N/A	0.546	A	0.593	A	
		PM	N/A	0.693	B	0.715	C	
		AP	N/A	0.542	A	0.582	A	
Intersection 45	I-105 Fwy/Continental City and Imperial	AM	N/A	0.823	D	0.676	B	
		PM	N/A	0.680	B	0.750	C	X
		AP	N/A	0.760	C	0.707	C	
Intersection 46	I-105 Fwy Northbound Ramp and Imperial	AM	N/A	0.323	A	0.548	A	
		PM	N/A	0.353	A	0.710	C	X
		AP	N/A	0.826	D	0.846	D	X
Intersection 47	Main and Imperial	AM	N/A	0.630	B	0.612	B	
		PM	N/A	0.892	D	0.881	D	
		AP	N/A	0.503	A	0.511	A	
Intersection 48	I-105 Fwy Westbound off Nash and Imperial	AM	N/A	1.247	F	0.988	E	
		PM	N/A	0.481	A	0.559	A	
		AP	N/A	0.416	A	0.362	A	
Intersection 49	Pershing and Imperial	AM	N/A	0.775	C	0.754	C	
		PM	N/A	0.598	A	0.606	B	
		AP	N/A	0.442	A	0.428	A	
Intersection 50	Sepulveda and Imperial	AM	N/A	0.645	B	0.838	D	X
		PM	N/A	0.937	E	1.148	F	X
		AP	N/A	0.760	C	1.057	F	X
Intersection 51	Vista del Mar and Imperial	AM	N/A	0.750	C	0.741	C	
		PM	N/A	0.553	A	0.565	A	
		AP	N/A	0.532	A	0.490	A	
Intersection 52	La Cienega and Imperial	AM	N/A	0.558	A	0.566	A	
		PM	N/A	0.435	A	0.488	A	
		AP	N/A	0.494	A	0.544	A	
Intersection 54	I-405 NB Ramp and Jefferson	AM	N/A	0.860	D	0.852	D	
		PM	N/A	0.963	E	0.943	E	
		AP	N/A	0.696	B	0.623	B	

Table F4.3.2-20

Year 2008 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direc.	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C	Alternative D LOS	Significant Impact
Intersection 55	I-405 SB Ramp and Jefferson	AM	N/A	0.584	A	0.573	A	
		PM	N/A	0.719	C	0.708	C	
		AP	N/A	0.430	A	0.398	A	
Intersection 57	Lincoln and Jefferson	AM	N/A	0.940	E	0.971	E	X
		PM	N/A	1.440	F	1.444	F	
		AP	N/A	0.903	E	0.932	E	X
Intersection 67	La Cienega and 111th	AM	N/A	0.171	A	0.729	C	X
		PM	N/A	0.175	A	0.651	B	
		AP	N/A	0.547	A	1.170	F	X
Intersection 68	La Cienega and I-405 Ramp South of Century	AM	N/A	0.307	A	0.401	A	
		PM	N/A	0.427	A	0.481	A	
		AP	N/A	0.574	A	0.371	A	
Intersection 69	La Cienega and I-405 Fwy Southbound North of Imperial	AM	N/A	0.235	A	0.273	A	
		PM	N/A	0.216	A	0.318	A	
		AP	N/A	0.382	A	0.355	A	
Intersection 71	La Cienega and Lennox	AM	N/A	0.379	A	0.263	A	
		PM	N/A	0.636	B	0.413	A	
		AP	N/A	0.895	D	0.564	A	
Intersection 72	La Cienega and Manchester	AM	N/A	0.690	B	0.721	C	
		PM	N/A	0.812	D	0.807	D	
		AP	N/A	1.082	F	1.136	F	X
Intersection 78	I-405 NB Ramp and La Tijera	AM	N/A	0.988	E	0.979	E	
		PM	N/A	1.023	F	1.028	F	
		AP	N/A	0.628	B	0.616	B	
Intersection 79	I-405 Southbound Ramp and La Tijera	AM	N/A	0.833	D	0.820	D	
		PM	N/A	0.985	E	0.978	E	
		AP	N/A	0.538	A	0.520	A	
Intersection 81	Lincoln and La Tijera	AM	N/A	0.512	A	0.600	A	
		PM	N/A	0.654	B	0.766	C	X
		AP	N/A	0.342	A	0.435	A	
Intersection 82	La Tijera and Manchester	AM	N/A	0.619	B	0.590	A	
		PM	N/A	0.651	B	0.642	B	
		AP	N/A	0.563	A	0.571	A	
Intersection 83	Sepulveda and La Tijera	AM	N/A	0.628	B	0.803	D	X
		PM	N/A	0.669	B	0.913	E	X
		AP	N/A	0.354	A	0.465	A	
Intersection 87	Lincoln and 83rd	AM	N/A	0.896	D	0.923	E	X
		PM	N/A	1.175	F	1.214	F	X
		AP	N/A	1.225	F	1.279	F	X
Intersection 88	Lincoln and Manchester	AM	N/A	1.075	F	0.821	D	
		PM	N/A	1.376	F	1.244	F	
		AP	N/A	1.038	F	0.903	E	
Intersection 93	Sepulveda and Lincoln	AM	N/A	0.528	A	0.592	A	
		PM	N/A	0.498	A	0.658	B	
		AP	N/A	0.341	A	0.351	A	
Intersection 94	Lincoln and Teale	AM	N/A	0.511	A	0.570	A	
		PM	N/A	0.747	C	0.798	C	X
		AP	N/A	0.558	A	0.559	A	
Intersection 98	Pershing and Manchester	AM	N/A	0.341	A	0.333	A	
		PM	N/A	0.441	A	0.442	A	
		AP	N/A	0.248	A	0.185	A	
Intersection 99	Sepulveda and Manchester	AM	N/A	0.681	B	0.757	C	X
		PM	N/A	0.805	D	0.827	D	X
		AP	N/A	0.647	B	0.705	C	X
Intersection 100	Sepulveda and Mariposa	AM	N/A	0.725	C	0.809	D	X
		PM	N/A	0.958	E	1.014	F	X
		AP	N/A	1.076	F	1.097	F	X
Intersection 101	Pershing and Westchester	AM	N/A	0.275	A	0.187	A	
		PM	N/A	0.193	A	0.198	A	
		AP	N/A	0.090	A	0.078	A	
Intersection 103	Sepulveda and Rosecrans	AM	N/A	1.177	F	1.218	F	X
		PM	N/A	1.501	F	1.526	F	X
		AP	N/A	1.236	F	1.207	F	

Table F4.3.2-20

Year 2008 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direc.	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C	Alternative D LOS	Significant Impact
Intersection 105	Sepulveda and I-105 Off Ramp North of Imperial	AM	N/A	1.224	F	1.317	F	X
		PM	N/A	0.966	E	1.167	F	X
		AP	N/A	0.964	E	1.170	F	X
Intersection 106	Sepulveda and 76th	AM	N/A	0.566	A	0.671	B	
		PM	N/A	0.572	A	0.597	A	
		AP	N/A	0.661	B	0.650	B	
Intersection 109	Sepulveda and Westchester	AM	N/A	0.663	B	0.706	C	X
		PM	N/A	0.863	D	0.761	C	
		AP	N/A	0.417	A	0.468	A	
Intersection 111	La Cienega and I-405 Southbound Ramp North of Century	AM	N/A	0.603	B	0.657	B	
		PM	N/A	0.608	B	0.421	A	
		AP	N/A	0.787	C	0.669	B	
Intersection 307	I-405 Northbound Off Ramp and Century	AM	N/A	0.739	C	0.685	B	
		PM	N/A	0.558	A	0.573	A	
		AP	N/A	0.513	A	0.581	A	
Intersection 312	La Cienega and El Segundo	AM	N/A	0.525	A	0.557	A	
		PM	N/A	0.592	A	0.604	B	
		AP	N/A	0.429	A	0.446	A	
Intersection 313	La Cienega and 120th	AM	N/A	0.245	A	0.237	A	
		PM	N/A	0.386	A	0.385	A	
		AP	N/A	0.382	A	0.294	A	
Intersection 16[5]	Lincoln and Bali	AM	N/A	0.595	A	0.529	A	
		PM	N/A	0.908	E	0.909	E	
		AP	N/A	0.742	C	0.744	C	
Intersection 17[5]	Centinela and Culver	AM	N/A	0.901	E	0.909	E	
		PM	N/A	0.939	E	0.947	E	
		AP	N/A	0.639	B	0.659	B	
Intersection 20[5]	La Cienega and Centinela	AM	N/A	1.046	F	1.007	F	
		PM	N/A	1.142	F	1.163	F	X
		AP	N/A	1.128	F	1.147	F	X
Intersection 39[5]	Lincoln and Fiji	AM	N/A	0.796	C	0.725	C	
		PM	N/A	1.181	F	1.101	F	
		AP	N/A	0.831	D	0.810	D	
Intersection 70[5]	La Cienega and La Tijera	AM	N/A	0.721	C	0.660	B	
		PM	N/A	0.778	C	0.784	C	
		AP	N/A	0.541	A	0.543	A	
Intersection 89[5]	Lincoln and Marina	AM	N/A	0.880	D	0.828	D	
		PM	N/A	0.888	D	0.894	D	
		AP	N/A	1.043	F	1.039	F	
Intersection 90[5]	Lincoln and Maxella	AM	N/A	0.727	C	0.667	B	
		PM	N/A	0.764	C	0.775	C	
		AP	N/A	0.800	C	0.800	C	
Intersection 91[5]	Lincoln and Mindanao	AM	N/A	1.003	F	0.967	E	
		PM	N/A	0.918	E	0.920	E	
		AP	N/A	0.824	D	0.838	D	
Intersection 95	Lincoln and Venice	AM	N/A	0.786	C	0.731	C	
		PM	N/A	0.840	D	0.851	D	
		AP	N/A	0.721	C	0.725	C	
Intersection 96[5]	Lincoln and Washington	AM	N/A	0.905	E	0.846	D	
		PM	N/A	0.974	E	0.997	E	X
		AP	N/A	0.566	A	0.572	A	
Intersection 118[5]	Centinela and Route 90 Eastbound	AM	N/A	0.345	A	0.280	A	
		PM	N/A	0.479	A	0.479	A	
		AP	N/A	0.576	A	0.603	B	
Intersection 119	Centinela and Route 90 Westbound	AM	N/A	0.567	A	0.486	A	
		PM	N/A	0.464	A	0.463	A	
		AP	N/A	0.395	A	0.398	A	
Intersection 136[5]	Sepulveda and 79th/80th	AM	N/A	0.610	B	0.659	B	
		PM	N/A	0.703	C	0.723	C	
		AP	N/A	0.569	A	0.581	A	
Intersection 137[5]	Sepulveda and 83rd	AM	N/A	0.774	C	0.790	C	
		PM	N/A	0.721	C	0.737	C	
		AP	N/A	0.493	A	0.501	A	

Table F4.3.2-20

Year 2008 Alternative D Levels of Service (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direc.	Adj. Env. V/C[1]	Adj. Env. LOS[2]	Alternative D V/C	Alternative D LOS	Significant Impact
Intersection 42[6]	Hawthorne and Imperial	AM	N/A	0.578	A	0.578	A	
		PM	N/A	0.807	D	0.812	D	
		AP	N/A	0.787	C	0.858	D	X
Intersection 309[6]	Hawthorne and Lennox	AM	N/A	0.703	C	0.546	A	
		PM	N/A	0.975	E	0.711	C	
		AP	N/A	1.056	F	0.782	C	
Intersection 310[6]	Inglewood and Lennox	AM	N/A	0.798	C	0.662	B	
		PM	N/A	1.016	F	0.776	C	
		AP	N/A	1.049	F	0.779	C	
Intersection 502[6]	Inglewood and Arbor Vitae	AM	N/A	0.803	D	0.823	D	
		PM	N/A	0.805	D	0.815	D	
		AP	N/A	0.737	C	0.773	C	
Intersection 503[6]	Inglewood and Century	AM	N/A	0.706	C	0.669	B	
		PM	N/A	0.826	D	0.859	D	X
		AP	N/A	0.886	D	0.872	D	
Intersection 505[6]	Inglewood and Imperial	AM	N/A	0.837	D	0.749	C	
		PM	N/A	1.028	F	1.037	F	
		AP	N/A	0.805	D	0.829	D	X
Intersection 506[6]	La Brea and Arbor Vitae	AM	N/A	0.674	B	0.690	B	
		PM	N/A	0.693	B	0.692	B	
		AP	N/A	0.887	D	0.883	D	
Intersection 25[6]	La Brea and Century	AM	N/A	0.781	C	0.788	C	
		PM	N/A	0.909	E	0.925	E	X
		AP	N/A	0.916	E	0.909	E	
Intersection 0[6]	La Cienega and 104th	AM	N/A	0.378	A	0.045	A	
		PM	N/A	0.318	A	0.092	A	
		AP	N/A	0.500	A	0.234	A	
Intersection 510[6]	Prairie and Lennox	AM	N/A	0.903	E	0.731	C	
		PM	N/A	1.283	F	0.962	E	
		AP	N/A	1.169	F	0.870	D	

1 Volume to Capacity ratio.
2 Level of Service. Range: A (good) - F (breakdown).
3 N/A = Not Applicable.
4 AP = Airport peak hour.
5 Intersections added for Alternatives C and D.
6 Intersections added for Alternative D only.

Source: Barton-Aschman Associates, Inc., 2002.

To ensure that construction-related traffic would not significantly impact any other hour of the day, construction traffic and background traffic were also determined for the off-peak hours. That analysis is summarized below.

Estimation of Hourly Construction Traffic

Hourly trip generation estimates were prepared for construction employee and construction truck trips, as summarized in **Table F4.3.2-21**, Summary of 2008 Airport Construction Trip Generation. As shown, no construction-related trips between LAX construction sites and off-airport locations would occur during the peak commute hours of 8:00 to 9:00 a.m. and 5:00 to 6:00 p.m. Also, few vehicle trips would occur during the airport peak hour of 11:00 a.m. to noon. This is designed to minimize traffic impacts from construction activity.

Table F4.3.2-21

Summary of 2008 Airport Construction Trip Generation

	Hourly Vehicle Trips (Passenger Car Equivalents)					Peaking Factors		
Hour	Emp In[1]	Emp Out	Trucks In	Trucks Out	Total Constr.	Emp	Trucks	Total
12:00-01:00	0	342	25	25	392	5.7%	0.9%	3.5%
01:00-02:00	0	0	25	25	50	0.0%	0.9%	0.4%
02:00-03:00	0	0	25	25	50	0.0%	0.9%	0.4%
03:00-04:00	0	0	25	25	50	0.0%	0.9%	0.4%
04:00-05:00	0	0	25	25	50	0.0%	0.9%	0.4%
05:00-06:00	0	0	25	25	50	0.0%	0.9%	0.4%
06:00-07:00	2,449	0	15	15	2,479	41.2%	0.6%	22.0%
07:00-08:00	0	185	0	0	185	3.1%	0.0%	1.6%
08:00-09:00	0	0	0	0	0	0.0%	0.0%	0.0%
09:00-10:00	0	0	0	0	0	0.0%	0.0%	0.0%
10:00-11:00	0	0	0	0	0	0.0%	0.0%	0.0%
11:00-12:00	0	0	488	488	975	0.0%	18.3%	8.7%
12:00-13:00	0	0	488	488	975	0.0%	18.3%	8.7%
13:00-14:00	0	0	488	488	975	0.0%	18.3%	8.7%
14:00-15:00	171	0	488	488	1,146	2.9%	18.3%	10.2%
15:00-16:00	171	1,225	240	240	1,876	23.5%	9.0%	16.6%
16:00-17:00	0	1,225	0	0	1,225	20.6%	0.0%	10.9%
17:00-18:00	0	0	0	0	0	0.0%	0.0%	0.0%
18:00-19:00	0	0	0	0	0	0.0%	0.0%	0.0%
19:00-20:00	0	0	63	63	125	0.0%	2.3%	1.1%
20:00-21:00	0	0	63	63	125	0.0%	2.3%	1.1%
21:00-22:00	0	0	60	60	120	0.0%	2.3%	1.1%
22:00-23:00	0	0	60	60	120	0.0%	2.3%	1.1%
23:00-24:00	185	0	60	60	305	3.1%	2.3%	2.7%
Total Daily	**2,976**	**2,977**	**2,663**	**2,663**	**11,273**	**100.1%**	**99.7%**	**100.0%**

[1] EMP = Employee.
[2] The schedule of mid-day trucks shown represents a worst-case scenario for the peak hours analyzed. Mid-day construction trucks could arrive as early as 9:30 AM and depart as late at 4:30 PM.

Source: Parsons Transportation Group (PTG), 2002.

Estimation of Off-Peak Highway Volumes

The hours of maximum construction vehicle trip generation are 6:00 to 7:00 a.m. and 3:00 to 4:00 p.m. To determine if any construction-related impacts would occur outside the three primary peak hours, an analysis of estimated traffic conditions on select roadways during the two construction peak hours was conducted. This is shown in **Table F4.3.2-22**, Hourly Total Traffic Volumes On Select Streets - 2008.

Table F4.3.2-22

Hourly Total Traffic Volumes On Select Streets - 2008

Roadway/Trip Category	6:00-7:00 AM	8:00-9:00 AM	11:00 AM-12:00 Noon	3:00-4:00 PM	5:00-6:00 PM
Without Construction Traffic					
I-405 N/O H Hughes					
Airport	2,684	2,588	3,549	3,479	2,612
Background	10,480	15,295	13,451	13,704	15,236
Total	13,164	17,883	17,000	17,183	17,848
I-405 S/O Rosecrans					
Airport	3,940	3,452	4,924	5,406	3,591
Background	8,152	12,331	12,167	10,297	13,477
Total	12,092	15,783	17,091	15,783	17,068

Table F4.3.2-22

Hourly Total Traffic Volumes On Select Streets - 2008

Roadway/Trip Category	6:00-7:00 AM	8:00-9:00 AM	11:00 AM-12:00 Noon	3:00-4:00 PM	5:00-6:00 PM
I-105 E/O Hawthorne					
Airport	2,493	2,151	3,396	3,251	2,478
Background	5,014	7,799	3,613	6,548	7,961
Total	7,507	9,950	7,009	9,799	10,439
Sepulveda N/O Arbor Vitae					
Airport	1,354	1,462	951	1,552	1,807
Background	1,000	2,055	470	1,520	1,956
Total	2,354	3,517	1,421	3,072	3,763
Lincoln N/O Westchester Pkwy					
Airport	809	715	1,164	993	842
Background	1,998	3,430	1,642	2,671	3,700
Total	2,807	4,145	2,806	3,664	4,542
Sepulveda S/O El Segundo					
Airport	950	872	1,016	1,261	1,016
Background	3,425	6,310	5,268	4,450	5,268
Total	4,375	7,182	6,284	5,711	6,284
Sepulveda S/O Century					
Airport	3,978	3,475	6,033	4,607	4,013
Background	2,235	5,781	3,798	3,503	5,949
Total	6,213	9,256	9,831	8,110	9,962
Century E/O Sepulveda					
Airport	2,286	2,262	2,773	2,686	2,265
Background	--[4]	1,275	629	273	1,195
Total	2,286	3,537	3,402	2,959	3,460
Aviation S/O Century					
Airport	777	642	1,055	1,121	757
Background	443	925	721	471	1,474
Total	1,220	1,567	1,776	1,592	2,231
With Construction Traffic					
I-405 N/O H Hughes					
Airport	3,517	2,588	3,919	4,130	2,612
Background	10,480	15,295	13,451	13,704	15,236
Total	13,997	17,883	17,370	17,834	17,848
I-405 N/O H Hughes					
Airport	3,517	2,588	3,919	4,130	2,612
Background	10,480	15,295	13,451	13,704	15,236
Total	13,997	17,883	17,370	17,834	17,848
I-405 S/O Rosecrans					
Airport	4,902	3,452	5,194	6,162	3,591
Background	8,152	12,331	12,167	10,297	13,477
Total	13,054	15,783	17,361	16,459	17,068
I-105 E/O Hawthorne					
Airport	3,957	2,151	3,666	3,871	2,478
Background	5,014	7,799	3,613	6,548	7,961
Total	8,371	9,950	7,279	10,419	10,439
Sepulveda N/O Arbor Vitae					
Airport	2,147	1,462	956	2,006	1,807
Background	1,000	2,055	470	1,520	1,956
Total	3,147	3,517	1,426	3,526	3,763
Lincoln N/O Westchester Pkwy					
Airport	1,233	715	1,229	1,266	842
Background	1,998	3,430	1,642	2,671	3,700
Total	3,231	4,145	2,871	3,937	4,542

Table F4.3.2-22

Hourly Total Traffic Volumes On Select Streets - 2008

Roadway/Trip Category	6:00-7:00 AM	8:00-9:00 AM	11:00 AM-12:00 Noon	3:00-4:00 PM	5:00-6:00 PM
Sepulveda S/O El Segundo					
Airport	1,275	892	1,016	1,447	1,016
Background	3,425	6,310	5,268	4,450	5,268
Total	4,700	7,182	6,284	5,897	6,284
Sepulveda S/O Century					
Airport	6,298	3,475	6,184	6,003	4,013
Background	2,235	5,781	3,798	3,503	5,949
Total	8,533	9,256	9,982	9,506	9,962
Century E/O Sepulveda					
Airport	3,575	2,262	3,119	3,585	2,265
Background	--[4]	1,275	629	273	1,195
Total	3,575	3,537	3,748	3,858	3,460
Aviation S/O Century					
Airport	920	642	1,095	1,221	757
Background	443	925	721	471	1,474
Total	1,363	1,567	1,816	1,692	2,231

[1] N/O = North of.
[2] S/O = South of.
[3] E/O = East of.
[4] -- = negligible traffic volume.

Source: Parsons Transportation Group, 2002.

As shown, total traffic at every roadway analyzed except one is higher during the morning commuter peak hour (8:00 a.m. to 9:00 a.m.) than during the construction peak hour of 6:00 a.m. to 7:00 a.m. Similarly, the evening commuter peak hour (5:00 p.m. to 6:00 p.m.) has higher traffic volumes than the afternoon construction peak hour of 3:00 p.m. to 4:00 p.m. at every location except one.

The only exception in both cases is Century Boulevard east of Sepulveda Boulevard, where the with-construction volume is higher during the a.m. and p.m. construction peak hours than during the morning and evening commuter peak hours. During the a.m. construction peak hour, the number of background trips (i.e., non-airport trips) on this section of Century Boulevard is negligible -- almost all of the traffic on this section of Century Boulevard is airport-related traffic. Therefore, the only trips impacted by airport construction traffic are airport-related trips. During the p.m. construction peak hour, there are only 273 background trips on this section of Century Boulevard -- less than 10 percent of the total traffic on this link. In this case, more than 90 percent of the trips impacted by airport construction traffic are airport-related trips. Therefore, although this meets the threshold criteria for a significant impact, the circumstance should be temporary. As a result, this is a temporary and significant impact. No other additional significant traffic impacts are introduced by airport construction traffic that are not already included in the analysis of the morning commuter, evening commuter, and airport peak hours.

This analysis demonstrates that the three peak hours studied in detail capture the hours with the greatest total traffic levels (construction, passenger-related, and non-airport) and resulting project impacts. The addition of construction traffic would not cause the total traffic during any other hour to exceed the traffic volumes during the three peak hours except on Century Boulevard. Therefore, it is concluded that the off-airport surface transportation project impacts identified in this Final EIS/EIR for the three primary peak hours address the worst-case impacts, even when considering construction traffic. As a result, with the exception of Century Boulevard, the mitigation measures identified below in subsection 4.3.2.8, *Mitigation Measures*, adequately mitigate all project impacts, including construction impacts.

4.3.2.7 Cumulative Impacts

The methodology used in the off-airport surface transportation analysis was cumulative by its nature. That is, it accounted for future regional, non-airport projects and their corresponding traffic growth as background traffic in all alternatives. The background traffic conditions used in the analysis also account for all roadway improvement projects that have been approved by local and regional transportation

agencies, even if those projects are scheduled to be constructed some time in the future. Therefore, the impacts discussed in subsection 4.3.2.6, *Environmental Consequences*, represent cumulative conditions.

Even so, cumulative impacts of construction traffic were further reviewed qualitatively, since there is the potential for other area development projects, such as Playa Vista, to generate construction traffic and cause disruption on the same routes at the same time as the Master Plan. This impact could be significant, particularly since the Villages at Playa Vista development project, a major mixed-use project approximately two miles north of LAX, may be under construction concurrently with the LAX Master Plan.

Another of the more notable projects that are anticipated in the vicinity of LAX are the El Segundo Corporate Campus, a mixed-use development project located at 700-800 Nash Street in El Segundo. It will include approximately 405 retail employees and 6,604 non-retail employees.

For the future Playa Vista development, the analyses of Alternatives A, B, and C presented in the Draft EIS/EIR used the future generated trips that are included in the actual Environmental Impact Report (EIR) prepared for the Playa Vista development. Subsequent to the completion of the traffic analyses presented in the Draft EIS/EIR and subsequent to the initiation of the traffic analysis for Alternative D, the second phase portion of the Playa Vista development project was substantially reduced from the original proposal that was assumed in the cumulative impacts traffic analysis for the LAX Master Plan project. The Second Phase project for Playa Vista previously included 9,839 dwelling units, approximately 2 million square feet of retail development, and approximately 1.8 million square feet of non-retail (i.e., office, community serving, etc.) development.

On November 14, 2002, the City of Los Angeles Planning Department published a Notice of Preparation for the Villages at Playa Vista Project, which supersedes and replaces the previously proposed Playa Vista Second Phase Project. The Villages at Playa Vista proposes 2,600 dwelling units, 150,000 square feet of retail development, and 215,000 square feet of non-retail development (175,000 square feet of office space and 40,000 square feet of community-serving uses). In order to maintain consistency in the related-projects (cumulative projects) assumptions for the traffic analysis of Alternative D, as compared with the other alternatives, the previous assumptions for the larger Playa Vista Second Phase Project were not changed. As such, the impact analyses (including cumulative impacts) for all of the alternatives is considered to be very conservative.

It is likely that the LAX Master Plan and developments such as the Playa Vista project would share many of the same haul routes, such as Sepulveda Boulevard and I-405, and may generate construction truck trips and employee trips at the same time. Establishment of the traffic coordination office proposed as Master Plan Commitment C-1, Establishment of a Ground Transportation/Construction Coordination Office (Alternatives A, B, C, and D), would minimize the impacts of cumulative construction on area roads; however, the cumulative impacts from construction activities on the off-airport surface transportation system would still be significant and temporary.

4.3.2.8 Mitigation Measures

The following mitigation measures are applicable only to the extent that the use of airport revenue to fund such measures is permissible under federal law and policies.

4.3.2.8.1 Project Impacts - Alternatives A, B, and C

The mitigation measures for Alternatives A, B, and C are listed below. The specific improvements under Alternatives A and B are identified in **Table F4.3.2-23**, Year 2015 Alternative A Mitigation Plan (Adjusted Environmental Baseline Comparison), and **Table F4.3.2-24,** Year 2015 Alternative B Mitigation Plan (Adjusted Environmental Baseline Comparison). For Alternative C, a preliminary mitigation plan was developed and presented to the Los Angeles Department of Transportation (LADOT). LADOT then refined the modeling basis of the plan and performed a more detailed analysis that included a review of 14 additional intersections. The final analysis is summarized for the morning, evening, and airport peak hours in **Table F4.3.2-25**, Level of Service Analysis, Alternative C 2015. This table includes a comparison of the Alternative C LOS to the Adjusted Environmental Baseline LOS, for purposes of determining significance and mitigation under CEQA.

Table F4.3.2-23

Year 2015 Alternative A Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Improvement	Final V/C	Final LOS
Intersection 4	Airport and Century	AM	N/A	Restripe SB approach to add second RT lane	0.598	A
		PM	N/A		0.616	B
		AP	N/A		0.539	A
Intersection 6	Airport and Manchester	AM	N/A	Add a RT lane on the EB approach	0.735	C
		PM	N/A		0.755	C
		AP	N/A		0.895	D
Intersection 8	Arbor Vitae and La Cienega	AM	N/A	Add a RT lane to EB approach; Add a second LT lane on NB approach, add a free-flow RT lane on SB approach;	0.967	E
		PM	N/A	Upgrade signal to ATCS or equivalent.	0.989	E
		AP	N/A	Intersection remains unmitigated.	0.814	D
Intersection 11	Aviation and Century	AM	N/A	Add right- turn lane to SB, EB, and WB approaches;	0.900	D
		PM	N/A	Upgrade signal to ATCS	0.994	E
		AP	N/A		1.099	F
Intersection 12	Aviation and El Segundo	AM	N/A	Add RT lane to SB approach;	0.963	E
		PM	N/A	Upgrade signal to ATCS or equivalent	0.982	E
		AP	N/A		1.029	F
Intersection 13	Aviation and Imperial Hwy	AM	N/A	Restripe NB approach to convert TH/RT to RT only;	0.923	E
		PM	N/A	Upgrade signal to ATCS or equivalent	0.990	E
		AP	N/A		1.232	F
Intersection 15	Aviation and Rosecrans	AM	N/A	Upgrade signal to ATSAC or equivalent	1.273	F
		PM	N/A		1.642	F
		AP	N/A		1.623	F
Intersection 22	Centinela and Sepulveda	AM	N/A	Upgrade signal to ATSAC or equivalent	1.378	F
		PM	N/A		1.243	F
		AP	N/A		0.946	E
Intersection 26	Century and La Cienega	AM	N/A	Add second LT lane on EB approach;	0.795	C
		PM	N/A	Convert 2 SB RT lanes into a free-flow RT lane.	0.831	D
		AP	N/A	Intersection remains unmitigated.	0.553	A
Intersection 35	El Segundo and Sepulveda	AM	N/A	Upgrade signal to ATCS or equivalent	0.979	E
		PM	N/A		1.136	F
		AP	N/A		0.966	E
Intersection 40	Florence and La Cienega	AM	N/A	None	0.766	C
		PM	N/A		1.030	F
		AP	N/A		1.345	F
Intersection 44	Howard Hughes and Sepulveda	AM	N/A	Add 4th TH lane on NB approach	0.693	B
		PM	N/A		0.796	C
		AP	N/A		0.635	B
Intersection 45	I-105/Continental City and Imperial	AM	N/A	Upgrade signal to ATSAC	0.641	B
		PM	N/A		0.754	C
		AP	N/A		0.758	C
Intersection 46	I-105 NB Ramps at Imperial	AM	N/A	None	0.271	A
		PM	N/A		0.313	A
		AP	N/A		0.670	B
Intersection 50	Imperial and Sepulveda	AM	N/A	Add second LT lane on NB approach; change RT lane on	0.814	D
		PM	N/A	EB approach to a free-flow lane	1.041	F
		AP	N/A		0.713	C
Intersection 52	Imperial and La Cienega	AM	N/A	Restripe SB TH/RT lane as RT lane; Provide SB RT overlap	0.733	C
		PM	N/A	phasing; Upgrade signal to ATCS or equivalent	0.557	A
		AP	N/A		0.613	B
Intersection 57	Jefferson and Lincoln	AM	N/A	Convert NB RT lane to a free-flow lane;	1.051	F
		PM	N/A	Upgrade signal to ATCS or equivalent.	1.179	F
		AP	N/A	Intersection remains unmitigated.	0.831	D
Intersection 71	La Cienega and Lennox	AM	N/A	Restripe 1 WB LT lane to shared LT/RT lane	0.421	A
		PM	N/A		0.560	A
		AP	N/A		0.804	C
Intersection 72	La Cienega and Manchester	AM	N/A	Upgrade signal to ATSAC	0.661	B
		PM	N/A		0.723	C
		AP	N/A		1.015	F
Intersection 78	I-405 NB Ramps at La Tijera	AM	N/A	Add second LT lane on EB approach	0.818	D
		PM	N/A		0.705	C
		AP	N/A		0.365	A

Table F4.3.2-23

Year 2015 Alternative A Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Improvement	Final V/C	Final LOS
Intersection 79	I-405 SB Ramps at La Tijera	AM	N/A	None	0.736	C
		PM	N/A		0.912	E
		AP	N/A		0.483	A
Intersection 81	La Tijera and	AM	N/A	Add 2 TH lanes on SB approach, add 1 TH lane on NB approach; Modify signal phasing to provide E-W permissive LT and EB RT overlap;	0.557	A
	Lincoln	PM	N/A	Upgrade signal to ATCS or equivalent	0.736	C
		AP	N/A		0.696	B
Intersection 83	La Tijera and Sepulveda	AM	N/A	Add second LT lane on NB approach; add TH lane each on NB and SB approaches; Install NB LT phasing; Restripe WB approach to provide 2 LT, 1 LT/TH, 1 TH/RT; Change EB/WB to split phase;	0.835	D
		PM	N/A	Upgrade signal to ATCS.	0.915	E
		AP	N/A	Intersection remains unmitigated.	0.385	A
Intersection 87	Lincoln and 83rd	AM	N/A	Add second LT lane on SB approach;	1.137	F
		PM	N/A	Upgrade signal to ATCS	1.480	F
		AP	N/A		1.377	F
Intersection 88	Lincoln and Manchester	AM	N/A	Add second LT lane on EB and WB approaches; add LT phasing for E-W movement with WB RT overlap; Add a separate RT lane on NB approach; Add TH lane on EB & WB approaches; Upgrade signal to ATCS	0.800	C
		PM	N/A		1.377	F
		AP	N/A		0.954	E
Intersection 94	Lincoln and Teale	AM	N/A	Add second SB LT lane; Upgrade signal to ATCS	0.729	C
		PM	N/A	or equivalent. Intersection remains unmitigated.	0.594	A
		AP	N/A		0.425	A
Intersection 98	Manchester and Pershing	AM	N/A	Add second LT lane on SB approach; Convert E-W split phasing	0.367	A
		PM	N/A	to permissive; Upgrade signal to ATCS	0.727	C
		AP	N/A		0.188	A
Intersection 99	Manchester and Sepulveda	AM	N/A	Restripe WB approach to add a separate RT lane	1.017	F
		PM	N/A		1.038	F
		AP	N/A		0.891	D
Intersection 100	Mariposa and Sepulveda	AM	N/A	Add second LT lane on NB approach; Add separate RT	0.765	C
		PM	N/A	lane on EB approach; Upgrade signal to ATSAC or equivalent	1.046	F
		AP	N/A		1.009	F
Intersection 103	Rosecrans and Sepulveda	AM	N/A	Upgrade signal to ATSAC or equivalent	1.563	F
		PM	N/A		1.647	F
		AP	N/A		1.873	F
Intersection 106	Sepulveda and 76th/77th	AM	N/A	Add a separate RT lane on WB approach;	0.790	C
		PM	N/A	Upgrade signal to ATCS	0.567	A
		AP	N/A		0.586	A
Intersection 111	La Cienega at I-405 SB Ramps N/O Century	AM	N/A	None	0.535	A
		PM	N/A		0.660	B
		AP	N/A		0.739	C
Intersection 307	La Cienega at I-405 NB Off-Ramp at Century	AM	N/A	Upgrade signal to ATCS or equivalent	0.738	C
		PM	N/A		0.585	A
		AP	N/A		0.361	A
Intersection 312	El Segundo and La Cienega	AM	N/A	None	0.677	B
		PM	N/A		0.690	B
		AP	N/A		0.500	A
Link 1	Lincoln s/o Venice	AM	NB/EB	None	0.765	C
			SB/WB		0.928	E
		PM	NB/EB		0.974	E
			SB/WB		0.932	E
		AP	NB/EB		0.784	C
			SB/WB		0.802	C
Link 2	Centinela s/o Venice	AM	NB/EB	None	0.946	E
			SB/WB		0.667	B
		PM	NB/EB		0.846	D
			SB/WB		0.932	E
		AP	NB/EB		0.774	C
			SB/WB		0.954	E

Table F4.3.2-23

Year 2015 Alternative A Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Improvement	Final V/C	Final LOS
Link	Sepulveda s/o Venice	AM	NB/EB	Upgrade signal at Sepulveda Blvd & Venice Blvd to	0.849	D
4			SB/WB	ATCS or equivalent; Upgrade signal at Sepulveda Blvd &	0.719	C
		PM	NB/EB	I-405 Freeway Ramps to ATCS or equivalent	1.053	F
			SB/WB		0.912	E
		AP	NB/EB		0.809	D
			SB/WB		1.040	F
Link	Overland s/o Venice	AM	NB/EB	Upgrade signals at Overland & Venice and at Overland &	0.888	D
5			SB/WB	Washington to ATCS or equivalent	0.962	E
		PM	NB/EB		0.874	D
			SB/WB		1.161	F
		AP	NB/EB		0.856	D
			SB/WB		1.094	F
Link	Aviation n/o	AM	NB/EB	None	0.693	B
14	Rosecrans		SB/WB		0.263	A
		PM	NB/EB		0.474	A
			SB/WB		0.797	C
		AP	NB/EB		0.438	A
			SB/WB		0.346	A
Link	Lincoln s/o Jefferson	AM	NB/EB	Upgrade signals at Jefferson & Lincoln and at	0.998	E
21			SB/WB	Lincoln & Teale to ATCS or equivalent	0.357	A
		PM	NB/EB		0.879	D
			SB/WB		0.675	B
		AP	NB/EB		0.616	B
			SB/WB		0.609	B
Link	Sepulveda s/o	AM	NB/EB	Upgrade signal at Sepulveda Blvd & Slauson Ave to	0.920	E
26	Slauson		SB/WB	ATSAC or equivalent	0.364	A
		PM	NB/EB		0.699	B
			SB/WB		0.806	D
		AP	NB/EB		0.472	A
			SB/WB		0.437	A
Link	Centinela w/o	AM	NB/EB	Upgrade signal at Centinela Ave and Sepulveda Blvd to ATSAC or equivalent	0.423	A
27	Sepulveda		SB/WB		0.922	E
		PM	NB/EB		0.838	D
			SB/WB		0.745	C
		AP	NB/EB		0.571	A
			SB/WB		0.763	C
Link	El Segundo w/o	AM	NB/EB	Upgrade signal at El Segundo Blvd & Hawthorne	0.168	A
28	Hawthorne		SB/WB	Blvd to ATSAC or equivalent	0.489	A
		PM	NB/EB		0.781	C
			SB/WB		0.385	A
		AP	NB/EB		0.675	B
			SB/WB		0.880	D

N/A = Not Applicable.

[1] AP = Airport peak hour. Significant impacts occur in the airport peak hour only when total airport peak-hour traffic volumes exceed AM and PM peak-hour volumes and the criteria for significant impacts are met.

Source: Barton-Aschman Associates, Inc.

Table F4.3.2-24

Year 2015 Alternative B Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Improvements	Final V/C	Final LOS
Intersection 8	Arbor Vitae and La Cienega	AM	N/A	Upgrade signal to ATCS	0.936	E
		PM	N/A	Intersection remains unmitigated.	0.909	E
		AP	N/A		1.104	F
Intersection 11	Aviation and Century	AM	N/A	Add RT lane on EB, WB and NB approaches;	0.813	D
		PM	N/A	Add second LT lane on WB approach;	1.008	F
		AP	N/A	Upgrade signal to ATCS or equivalent	1.237	F
Intersection 12	Aviation and El Segundo	AM	N/A	None	1.041	F
		PM	N/A		1.076	F
		AP	N/A		1.143	F
Intersection 13	Aviation at Imperial	AM	N/A	Restripe one WB TH lane as TH/RT lane;	1.039	F
		PM	N/A	Restripe NB TH/RT lane for RT only lane;	1.186	F
		AP	N/A	Upgrade signal to ATCS	1.164	F
Intersection 14	Aviation and Manchester	AM	N/A	Upgrade signal to ATSAC or equivalent	0.863	D
		PM	N/A		1.007	F
		AP	N/A		1.423	F
Intersection 15	Aviation and Rosecrans	AM	N/A	Upgrade signal to ATSAC or equivalent	1.275	F
		PM	N/A		1.604	F
		AP	N/A		1.609	F
Intersection 22	Centinela and Sepulveda	AM	N/A	Upgrade signal to ATCS or equivalent	1.341	F
		PM	N/A		1.191	F
		AP	N/A		0.915	E
Intersection 26	Century and La Cienega	AM	N/A	Provide second LT lane for EB and NB approaches;	0.776	C
		PM	N/A	Upgrade signal to ATCS or equivalent	0.787	C
		AP	N/A	Intersection remains unmitigated.	0.519	A
Intersection 40	Florence and La Cienega	AM	N/A	None	0.760	C
		PM	N/A		1.060	F
		AP	N/A		1.441	F
Intersection 44	Howard Hughes and Sepulveda	AM	N/A	Add TH lane on NB approach	0.676	B
		PM	N/A		0.764	C
		AP	N/A		0.585	A
Intersection 45	I-105/Continental City At Imperial	AM	N/A	Upgrade signal to ATSAC	0.774	C
		PM	N/A		0.658	B
		AP	N/A		0.491	A
Intersection 48	I-105 WB Off/Nash at Imperial	AM	N/A	Upgrade signal to ATCS or equivalent	1.273	F
		PM	N/A		0.585	A
		AP	N/A		0.401	A
Intersection 50	Imperial and Sepulveda	AM	N/A	Add second LT lane on NB approach; Convert EB	0.700	B
		PM	N/A	RT lane to a free-flow lane; Upgrade signal to ATCS	1.001	E
		AP	N/A		0.654	B
Intersection 52	Imperial and La Cienega	AM	N/A	Restripe SB TH/RT as second RT lane;	0.727	C
		PM	N/A	Upgrade signal to ATCS or equivalent	0.469	A
		AP	N/A		0.628	B
Intersection 54	I-405 NB Ramps at Jefferson	AM	N/A	None	0.843	D
		PM	N/A		0.886	D
		AP	N/A		0.698	B
Intersection 57	Jefferson and Lincoln	AM	N/A	Restripe one NB TH lane as TH/RT lane; Restripe one WB TH lane as LT/TH lane; Change E/W phasing to split phase.	1.115	F
		PM	N/A		1.195	F
		AP	N/A	Intersection remains unmitigated.	0.773	C
Intersection 72	La Cienega and Manchester	AM	N/A	None	0.684	B
		PM	N/A		0.769	C
		AP	N/A		1.092	F
Intersection 78	I-405 NB Ramps at La Tijera	AM	N/A	Restripe EB approach to provide second LT lane	0.806	D
		PM	N/A		0.673	B
		AP	N/A		0.416	A
Intersection 81	La Tijera and Lincoln	AM	N/A	Add TH lane on SB approach; Add third LT lane on NB approach; Add second RT lane on EB approach;	0.735	C
		PM	N/A	Modify SB, EB and WB LT phasing to permissive;	0.677	B
		AP	N/A	Upgrade signal to ATCS or equivalent	0.510	A
Intersection 82	La Tijera and Manchester	AM	N/A	None	0.539	A
		PM	N/A		0.726	C
		AP	N/A		0.563	A

Table F4.3.2-24

Year 2015 Alternative B Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Improvements	Final V/C	Final LOS
Intersection 83	La Tijera and Sepulveda	AM	N/A	Add second LT lane and a RT lane on NB approach; Add second LT lane and restripe TH lane as LT/TH on WB approach;	0.897	D
		PM	N/A	Add TH/RT lane on EB approach; Split-phase EB and WB	0.845	D
		AP	N/A	Intersection remains unmitigated.	0.373	A
Intersection 87	Lincoln and 83rd	AM	N/A	Add second LT lane on SB approach;	1.135	F
		PM	N/A	Upgrade signal to ATCS	1.457	F
		AP	N/A		1.351	F
Intersection 88	Lincoln and Manchester	AM	N/A	Add RT lane on NB approach; Add TH lane	0.802	D
		PM	N/A	on WB approach; Add second LT lane on SB approach;	1.268	F
		AP	N/A	Convert WB RT lane to free-flow; Upgrade signal to ATCS	0.901	E
Intersection 94	Lincoln and Teale	AM	N/A	Upgrade signal to ATCS or equivalent	0.735	C
		PM	N/A	Intersection remains unmitigated.	0.619	B
		AP	N/A		0.456	A
Intersection 98	Manchester and Pershing	AM	N/A	Add second LT lane on SB approach	0.446	A
		PM	N/A		0.727	C
		AP	N/A		0.223	A
Intersection 99	Manchester and Sepulveda	AM	N/A	Restripe WB approach to install RT lane;	1.006	F
		PM	N/A	Add second LT lane on EB approach; Add third TH lane on	1.026	F
		AP	N/A	WB approach	0.835	D
Intersection 100	Mariposa and Sepulveda	AM	N/A	Add second LT lane on NB approach;	0.734	C
		PM	N/A	Add separate RT lane on EB approach;	1.067	F
		AP	N/A	Upgrade signal to ATSAC or equivalent	1.113	D
Intersection 101	Pershing and Westchester Pkwy	AM	N/A	None	0.547	A
		PM	N/A		0.623	B
		AP	N/A		0.415	A
Intersection 106	Sepulveda and 76th/77th	AM	N/A	Add separate RT lane on WB approach;	0.780	C
		PM	N/A	Upgrade signal to ATCS	0.544	A
		AP	N/A		0.610	B
Intersection 111	La Cienega at I-405 SB ramps n/o Century	AM	N/A	Add second LT lane on SB approach;	0.663	B
		PM	N/A	Add RT lane on WB approach	0.669	B
		AP	N/A		0.706	C
Intersection 307	I-405 NB Off-ramp at Century	AM	N/A	Upgrade signal to ATSAC or equivalent	0.740	C
		PM	N/A		0.582	A
		AP	N/A		0.361	A
Link 2	Centinela s/o Venice	AM	NB/EB	None	0.946	E
			SB/WB		0.663	B
		PM	NB/EB		0.839	D
			SB/WB		0.922	E
		AP	NB/EB		0.773	C
			SB/WB		0.935	E
Link 4	Sepulveda s/o Venice	AM	NB/EB	Upgrade signal at Sepulveda Blvd and Venice Blvd to	0.843	D
			SB/WB	ATCS or equivalent; Upgrade signal at Sepulveda	0.714	C
		PM	NB/EB	Blvd and I-405 Freeway Ramps to ATCS or equivalent	1.046	F
			SB/WB		0.919	E
		AP	NB/EB		0.792	C
			SB/WB		1.032	F
Link 5	Overland s/o Venice	AM	NB/EB	Upgrade signal at Overland Blvd and Venice Blvd to	0.874	D
			SB/WB	ATCS or equivalent; Upgrade signal at Overland	0.947	E
		PM	NB/EB	Ave and Washington Boulevard to ATCS or equivalent	0.868	D
			SB/WB		1.167	F
		AP	NB/EB		0.872	D
			SB/WB		1.064	F
Link 21	Lincoln s/o Jefferson	AM	NB/EB	Upgrade signal at Jefferson Blvd and Lincoln	0.990	E
			SB/WB	Blvd to ATCS or equivalent; Upgrade signal at Lincoln	0.354	A
		PM	NB/EB	Blvd and Teale Street to ATCS or equivalent	0.871	D
			SB/WB		0.668	B
		AP	NB/EB		0.616	B
			SB/WB		0.605	B

Table F4.3.2-24

Year 2015 Alternative B Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour[1]	Direc.	Improvements	Final V/C	Final LOS
Link 26	Sepulveda s/o Slauson	AM	NB/EB	Upgrade signal at Sepulveda Blvd and Slauson Ave to ATSAC or equivalent	0.913	E
			SB/WB		0.338	A
		PM	NB/EB		0.689	B
			SB/WB		0.809	D
		AP	NB/EB		0.461	A
			SB/WB		0.421	A
Link 28	El Segundo w/o Hawthorne	AM	NB/EB	None	0.194	A
			SB/WB		0.514	A
		PM	NB/EB		0.798	C
			SB/WB		0.408	A
		AP	NB/EB		0.702	C
			SB/WB		0.906	E

N/A = Not Applicable.

[1] AP = Airport peak hour. Significant impacts occur in the airport peak hour only when total traffic volumes in the airport peak hour exceeds AM and PM peak hour volumes and the criteria for significant impacts are met.

Source: Barton-Aschman Associates, Inc.

Table F4.3.2-25

Level of Service Analysis, Alternative C 2015

			Existing (1996)		Env. Base (2015)		Alt C (2015)			Alt C w/ Mitigation		
N/S	E/W	No.[1]	V/C	LOS	V/C	LOS	V/C	LOS	Impact	V/C	LOS	Impact
AM Peak Hour												
Airport	Arbor Vitae	3	0.361	A	0.617	B	----	----	N/A	----	----	N/A
Airport	Century	4	0.441	A	0.486	A	0.454	A	-0.032	0.454	A	-0.032
Airport	La Tijera	5	0.521	A	0.565	A	0.506	A	-0.059	0.506	A	-0.059
Airport	Manchester	6	0.579	A	0.725	C	0.735	C	0.010	0.735	C	0.010
Aviation	111th	10	0.460	A	0.353	A	----	----	N/A	----	----	N/A
Aviation	Arbor Vitae	7	0.454	A	0.681	B	0.557	A	-0.124	0.557	A	-0.124
Aviation	Arbor Vitae (with project)	7A	----	----	----	----	0.741	C	N/A	0.741	C	N/A
Aviation	Century	11	0.689	B	0.842	D	1.183	F	0.341	0.814	D	-0.028
Aviation	El Segundo	12	0.835	D	1.097	F	1.113	F	0.016	0.865	F	-0.232
Aviation	Imperial	13	0.533	A	0.919	E	0.901	E	-0.018	0.901	E	-0.018
Aviation	Manchester	14	0.712	C	1.052	F	0.726	C	-0.326	0.726	C	-0.326
Aviation	Rosecrans	15	1.121	F	1.164	F	1.171	F	0.007	1.171	F	0.007
Centinela	Jefferson	18	0.593	A	0.945	E	0.888	D	-0.057	0.888	D	-0.057
Culver	Jefferson	28	0.654	B	0.515	A	0.491	A	-0.024	0.491	A	-0.024
Culver	Vista del Mar	33	0.668	B	0.706	C	0.414	A	-0.292	0.414	A	-0.292
Douglas	Imperial	34	0.321	A	0.479	A	0.440	A	-0.039	0.440	A	-0.039
Highland/Vista del Mar	Rosecrans	43	1.069	F	1.211	F	0.947	E	-0.264	0.947	E	-0.264
I-105 Fwy/Continental	Imperial	45	0.434	A	0.724	C	0.659	B	-0.065	0.659	B	-0.065
I-105 WB off/Nash	Imperial	48	0.491	A	1.035	F	1.032	F	-0.003	1.032	F	-0.003
I-405 NB off-ramp	Century	307	0.645	B	0.733	C	0.769	C	0.036	0.769	C	0.036
I-405 NB ramps	Imperial	46	0.239	A	0.273	A	0.254	A	-0.019	0.254	A	-0.019
I-405 NB ramps	Jefferson	54	0.597	A	0.853	D	0.852	D	-0.001	0.852	D	-0.001
I-405 NB ramps	La Tijera	78	0.964	E	1.218	F	1.085	F	-0.133	1.085	F	-0.133
I-405 SB ramps	Jefferson	55	0.467	A	0.652	B	0.596	A	-0.056	0.596	A	-0.056
I-405 SB ramps	La Tijera	79	0.820	D	1.112	F	0.804	D	-0.308	0.804	D	-0.308
La Cienega	111th St	67	0.197	A	0.253	A	----	----	N/A	----	----	N/A
La Cienega	120th	313	0.237	A	0.309	A	0.317	A	0.008	0.317	A	0.008
La Cienega	Arbor Vitae	8	0.537	A	0.885	D	1.263	F	0.378	1.012	F	0.127
La Cienega	Century	26	0.680	B	0.756	C	1.065	F	0.309	0.866	D	0.110
La Cienega	El Segundo	312	0.552	A	0.632	B	0.646	B	0.014	0.646	B	0.014
La Cienega	Florence	40	0.749	C	0.798	C	0.804	D	0.006	0.804	D	0.006
La Cienega	I-405 SB ramps N/O Century	111	0.644	B	0.736	C	0.691	B	-0.045	0.691	B	-0.045
La Cienega	I-405 SB ramps N/O Imperial	69	0.267	A	0.326	A	0.281	A	-0.045	0.281	A	-0.045
La Cienega	I-405 SB ramps S/O Century	68	0.221	A	0.384	A	0.310	A	-0.074	0.310	A	-0.074
La Cienega	Imperial	52	0.321	A	0.689	B	0.726	C	0.037	0.726	C	0.037
La Cienega	Lennox	71	0.371	A	0.398	A	0.465	A	0.067	0.465	A	0.067
La Cienega	Manchester	72	0.684	B	0.732	C	0.699	B	-0.033	0.699	B	-0.033
La Tijera	Manchester	82	0.585	A	0.649	B	0.597	A	-0.052	0.597	A	-0.052

Table F4.3.2-25

Level of Service Analysis, Alternative C 2015

N/S	E/W	No.[1]	Existing (1996) V/C	Existing (1996) LOS	Env. Base (2015) V/C	Env. Base (2015) LOS	Alt C (2015) V/C	Alt C (2015) LOS	Alt C (2015) Impact	Alt C w/ Mitigation V/C	Alt C w/ Mitigation LOS	Alt C w/ Mitigation Impact
Lincoln	83rd St	87	0.892	D	1.054	F	1.237	F	0.183	1.044	F	-0.010
Lincoln	Jefferson	57	0.710	C	1.064	F	1.160	F	0.096	1.160	F	0.096
Lincoln	La Tijera	81	0.429	A	0.508	A	0.863	D	0.355	0.716	C	0.208
Lincoln	Manchester	88	0.712	C	0.825	D	1.037	F	0.212	0.923	E	0.098
Lincoln	Teale	94	0.902	E	0.746	C	0.797	C	0.051	0.797	C	0.051
Main	Imperial	47	0.833	D	0.778	C	0.498	A	-0.280	0.498	A	-0.280
Main	Imperial	47A	----	----	----	----	0.492	A	N/A	0.492	A	N/A
Pershing	Imperial	49	0.795	C	1.017	F	----	----	N/A	----	----	N/A
Pershing	Manchester	98	0.478	A	0.420	A	0.422	A	0.002	0.422	A	0.002
Pershing	Westchester Pkwy	101	0.186	A	0.336	A	0.430	A	0.094	0.430	A	0.094
Sepulveda	76th/77th St	106	0.698	B	0.742	C	0.849	D	0.107	0.691	B	-0.051
Sepulveda	Centinela	22	0.945	E	1.305	F	1.338	F	0.033	1.115	F	-0.190
Sepulveda	Century	27	0.679	B	0.813	D	0.542	A	-0.271	0.542	A	-0.271
Sepulveda	El Segundo	35	0.869	D	1.190	F	1.231	F	0.041	1.161	F	-0.029
Sepulveda	Howard Hughes Pkwy	44	0.715	C	0.680	B	0.719	C	0.039	0.719	C	0.039
Sepulveda	I-105 WB off-ramp	105	1.134	F	1.387	F	1.251	F	-0.136	1.251	F	-0.136
Sepulveda	Imperial	50	1.018	F	1.132	F	1.209	F	0.077	0.943	E	-0.189
Sepulveda	La Tijera	83	0.694	B	0.878	D	1.079	F	0.201	0.890	D	0.012
Sepulveda	Lincoln	93	0.582	A	0.528	A	----	----	N/A	----	----	N/A
Sepulveda	Manchester	99	0.787	C	0.779	C	0.796	C	0.017	0.796	C	0.017
Sepulveda	Mariposa	100	0.730	C	0.772	C	0.908	E	0.136	0.803	D	0.031
Sepulveda	Rosecrans	103	1.220	F	1.275	F	1.243	F	-0.032	1.243	F	-0.032
Sepulveda	Westchester Pkwy	109	0.585	A	0.923	E	0.656	B	-0.267	0.656	B	-0.267
Sepulveda	Westchester Pkwy (w/ project)	109A	----	----	----	----	0.713	C	N/A	0.713	C	N/A
Vista del Mar	Grand	36	0.749	C	0.918	E	0.729	C	-0.189	0.729	C	-0.189
Vista del Mar	Imperial	51	0.465	A	1.098	F	0.903	E	-0.195	0.903	E	-0.195
Centinela	Culver	A	0.585	A	0.749	C	0.731	C	-0.018	0.731	C	-0.018
Centinela	Rte. 90 EB ramps	B	0.416	A	0.354	A	0.379	A	0.025	0.379	A	0.025
Centinela	Rte. 90 WB ramps	C	0.555	A	0.494	A	0.501	A	0.007	0.501	A	0.007
La Cienega	Centinela	D	1.001	F	1.067	F	1.158	F	0.091	1.052	F	-0.015
La Cienega	La Tijera	E	0.759	C	0.765	C	0.745	C	-0.020	0.745	C	-0.020
Lincoln	Bali	F	0.524	A	0.554	A	0.557	A	0.003	0.536	A	-0.018
Lincoln	Fiji	G	0.558	A	0.586	A	0.584	A	-0.002	0.584	A	-0.002
Lincoln	Marina Expwy	H	0.793	C	0.942	E	0.964	E	0.022	1.033	F	0.091
Lincoln	Maxella	I	0.595	A	0.837	D	0.865	D	0.028	0.817	D	-0.020
Lincoln	Mindanao	J	0.807	D	0.868	D	0.876	D	0.008	0.789	C	-0.079
Lincoln	Venice	K	0.891	D	0.927	E	0.925	E	-0.002	0.896	E	-0.031
Lincoln	Washington	L	0.833	D	1.045	F	1.043	F	-0.002	1.043	F	-0.002
Sepulveda	79th/80th	M	0.641	B	0.709	C	0.840	D	0.131	0.670	B	-0.039
Sepulveda	83rd St	N	0.672	B	0.690	B	0.797	C	0.107	0.710	C	0.020

Table F4.3.2-25

Level of Service Analysis, Alternative C 2015

N/S	E/W	No.[1]	Existing (1996) V/C	Existing (1996) LOS	Env. Base (2015) V/C	Env. Base (2015) LOS	Alt C (2015) V/C	Alt C (2015) LOS	Alt C (2015) Impact	Alt C w/ Mitigation V/C	Alt C w/ Mitigation LOS	Alt C w/ Mitigation Impact
Airport Peak Hours												
Airport	Arbor Vitae	3	0.634	B	0.989	E	----	----	N/A	----	----	N/A
Airport	Century	4	0.782	C	0.766	C	0.428	A	-0.338	0.428	A	-0.338
Airport	La Tijera	5	0.573	A	0.701	C	0.657	B	-0.044	0.657	B	-0.044
Airport	Manchester	6	0.737	C	0.974	E	0.807	D	-0.167	0.807	D	-0.167
Aviation	111th	10	0.889	D	0.851	D	----	----	N/A	----	----	N/A
Aviation	Arbor Vitae	7	0.717	C	0.905	E	0.773	C	-0.132	0.773	C	-0.132
Aviation	Arbor Vitae (with project)	7A	----	----	----	----	0.861	D	N/A	0.861	D	N/A
Aviation	Century	11	1.502	F	1.660	F	1.720	F	0.060	1.327	F	-0.333
Aviation	El Segundo	12	0.645	B	1.072	F	1.270	F	0.198	0.891	D	-0.181
Aviation	Imperial	13	0.903	E	1.303	F	1.178	F	-0.125	1.178	F	-0.125
Aviation	Manchester	14	1.159	F	1.591	F	1.231	F	-0.360	1.231	F	-0.360
Aviation	Rosecrans	15	1.172	F	1.415	F	1.478	F	0.063	1.408	F	-0.007
Centinela	Jefferson	18	0.658	B	0.723	C	0.723	C	0.000	0.723	C	0.000
Culver	Jefferson	28	0.450	A	0.659	B	0.605	B	-0.054	0.605	B	-0.054
Culver	Vista del Mar	33	0.372	A	0.452	A	0.379	A	-0.073	0.379	A	-0.073
Douglas	Imperial	34	0.521	A	0.595	A	0.546	A	-0.049	0.546	A	-0.049
Highland/Vista del Mar	Rosecrans	43	0.813	D	0.916	E	0.912	E	-0.004	0.912	E	-0.004
I-105 Fwy/Continental	Imperial	45	0.661	B	0.789	C	0.716	C	-0.073	0.716	C	-0.073
I-105 WB off/Nash	Imperial	48	1.074	F	0.450	A	0.412	A	-0.038	0.412	A	-0.038
I-405 NB off-ramp	Century	307	0.443	A	0.409	A	0.463	A	0.054	0.463	A	0.054
I-405 NB ramps	Imperial	46	0.579	A	0.648	B	0.649	B	0.001	0.649	B	0.001
I-405 NB ramps	Jefferson	54	0.573	A	0.721	C	0.679	B	-0.042	0.679	B	-0.042
I-405 NB ramps	La Tijera	78	0.563	A	0.773	B	0.761	C	-0.012	0.761	C	-0.012
I-405 SB ramps	Jefferson	55	0.414	A	0.566	A	0.552	A	-0.014	0.552	A	-0.014
I-405 SB ramps	La Tijera	79	0.387	A	0.545	A	0.638	B	0.093	0.638	B	0.093
La Cienega	111th St	67	0.683	B	0.623	B	0.241	A	-0.382	0.241	A	-0.382
La Cienega	120th	313	0.263	A	0.455	A	0.527	A	0.072	0.527	A	0.072
La Cienega	Arbor Vitae	8	0.727	C	0.951	E	1.369	F	0.418	1.045	F	0.094
La Cienega	Century	26	0.572	A	0.576	B	0.866	D	0.290	0.776	C	0.200
La Cienega	El Segundo	312	0.403	A	0.461	A	0.512	A	0.051	0.512	A	0.051
La Cienega	Florence	40	1.437	F	1.608	F	1.515	F	-0.093	1.515	F	-0.093
La Cienega	I-405 SB ramps N/O Century	111	0.711	C	0.764	C	0.739	C	-0.025	0.739	C	-0.025
La Cienega	I-405 SB ramps N/O Imperial	69	0.457	A	0.365	A	0.348	A	-0.017	0.348	A	-0.017
La Cienega	I-405 SB ramps S/O Century	68	0.614	B	0.595	A	0.585	A	-0.010	0.585	A	-0.010
La Cienega	Imperial	52	0.474	A	0.574	A	0.579	A	0.005	0.579	A	0.005
La Cienega	Lennox	71	0.689	B	0.741	C	0.832	D	0.091	0.720	C	-0.021
La Cienega	Manchester	72	1.056	F	1.196	F	1.137	F	-0.059	1.137	F	-0.059
La Tijera	Manchester	82	0.530	A	0.677	B	0.579	A	-0.098	0.579	A	-0.098
Lincoln	83rd St	87	0.725	B	1.443	F	1.457	F	0.014	1.124	F	-0.319
Lincoln	Jefferson	57	0.630	B	0.791	C	0.795	C	0.004	0.795	C	0.004

Table F4.3.2-25

Level of Service Analysis, Alternative C 2015

N/S	E/W	No.[1]	Existing (1996) V/C	Existing (1996) LOS	Env. Base (2015) V/C	Env. Base (2015) LOS	Alt C (2015) V/C	Alt C (2015) LOS	Alt C (2015) Impact	Alt C w/ Mitigation V/C	Alt C w/ Mitigation LOS	Alt C w/ Mitigation Impact
Lincoln	La Tijera	81	0.221	A	0.379	A	1.063	F	0.684	0.707	C	0.328
Lincoln	Manchester	88	0.599	A	0.819	D	1.008	F	0.189	0.827	D	0.008
Lincoln	Teale	94	0.549	A	0.619	B	0.647	B	0.028	0.647	B	0.028
Main	Imperial	47	0.547	A	0.592	A	0.377	A	-0.215	0.377	A	-0.215
Pershing	Imperial	49	0.478	A	0.528	A	----	----	N/A	----	----	N/A
Pershing	Manchester	98	0.231	A	0.297	A	0.237	A	-0.060	0.237	A	-0.060
Pershing	Westchester Pkwy	101	0.095	A	0.143	A	0.246	A	0.103	0.246	A	0.103
Sepulveda	76th/77th St	106	0.670	B	0.708	C	0.653	B	-0.055	0.653	B	-0.055
Sepulveda	Centinela	22	0.682	B	1.108	F	1.050	F	-0.058	1.050	F	-0.058
Sepulveda	Century	27	0.571	A	0.709	C	0.270	A	-0.439	0.270	A	-0.439
Sepulveda	El Segundo	35	0.896	D	1.039	F	1.124	F	0.085	1.038	F	-0.001
Sepulveda	Howard Hughes Pkwy	44	0.558	A	0.646	B	0.628	B	-0.018	0.628	B	-0.018
Sepulveda	I-105 WB off-ramp	105	0.769	C	1.016	F	0.934	E	-0.082	0.934	E	-0.082
Sepulveda	Imperial	50	1.095	F	0.839	D	0.982	E	0.143	0.982	E	0.143
Sepulveda	La Tijera	83	0.301	A	0.474	A	0.565	A	0.091	0.565	A	0.091
Sepulveda	Lincoln	93	0.499	A	0.392	A	----	----	N/A	----	----	N/A
Sepulveda	Manchester	99	0.603	B	0.801	D	0.710	C	-0.091	0.710	C	-0.091
Sepulveda	Mariposa	100	0.788	C	1.193	F	1.608	F	0.415	1.396	F	0.203
Sepulveda	Rosecrans	103	1.436	F	1.398	F	1.445	F	0.047	1.375	F	-0.023
Sepulveda	Westchester Pkwy	109	0.453	A	0.545	A	0.465	A	-0.080	0.465	A	-0.080
Sepulveda	Westchester Pkwy (w/ project)	109A	----	----	----	----	0.455	A	N/A	0.455	A	N/A
Vista del Mar	Grand	36	0.357	A	0.599	A	0.807	D	0.208	0.551	A	-0.048
Vista del Mar	Imperial	51	0.541	A	1.058	F	0.725	C	-0.333	0.725	C	-0.333
Centinela	Culver	A	0.382	A	0.668	B	0.678	B	0.01	0.678	B	0.010
Centinela	Rte. 90 EB ramps	B	0.261	A	0.642	B	0.633	B	-0.009	0.633	B	-0.009
Centinela	Rte. 90 WB ramps	C	0.292	A	0.365	A	0.345	A	-0.02	0.345	A	-0.020
La Cienega	Centinela	D	0.699	B	1.030	F	1.107	F	0.077	0.974	E	-0.056
La Cienega	La Tijera	E	0.519	A	0.708	C	0.648	B	-0.06	0.648	B	-0.060
Lincoln	Bali	F	0.408	A	0.477	A	0.487	A	0.01	0.432	A	-0.045
Lincoln	Fiji	G	0.495	A	0.621	B	0.626	B	0.005	0.626	B	0.005
Lincoln	Marina Expwy	H	0.522	A	0.622	B	0.638	B	0.016	0.747	C	0.125
Lincoln	Maxella	I	0.487	A	0.819	D	0.833	D	0.014	0.776	C	-0.043
Lincoln	Mindanao	J	0.625	B	0.853	D	0.851	D	-0.002	0.758	C	-0.095
Lincoln	Venice	K	0.780	C	0.926	E	0.930	E	0.004	0.833	D	-0.093
Lincoln	Washington	L	0.702	C	0.881	D	0.889	D	0.008	0.795	C	-0.086
Sepulveda	79th/80th	M	0.393	A	0.463	A	0.411	A	-0.052	0.341	A	-0.122
Sepulveda	83rd St	N	0.338	A	0.447	A	0.430	A	-0.017	0.321	A	-0.126
PM Peak Hours												
Airport	Arbor Vitae	3	0.549	A	0.959	E	----	----	N/A	----	----	N/A
Airport	Century	4	0.509	A	0.686	B	0.620	B	-0.066	0.620	B	-0.066

Table F4.3.2-25

Level of Service Analysis, Alternative C 2015

N/S	E/W	No.[1]	Existing (1996) V/C	Existing (1996) LOS	Env. Base (2015) V/C	Env. Base (2015) LOS	Alt C (2015) V/C	Alt C (2015) LOS	Alt C (2015) Impact	Alt C w/ Mitigation V/C	Alt C w/ Mitigation LOS	Alt C w/ Mitigation Impact
Airport	La Tijera	5	0.411	A	0.574	A	0.595	A	0.021	0.595	A	0.021
Airport	Manchester	6	0.635	B	0.843	D	0.647	B	-0.196	0.647	B	-0.196
Aviation	111th	10	0.432	A	0.448	A	----	----	N/A	----	----	N/A
Aviation	Arbor Vitae	7	0.684	B	0.945	E	0.799	C	-0.146	0.799	C	-0.146
Aviation	Arbor Vitae (with project)	7A	----	----	----	----	0.720	C	N/A	0.720	C	N/A
Aviation	Century	11	0.747	C	1.051	F	1.293	F	0.242	1.007	F	-0.044
Aviation	El Segundo	12	0.917	E	1.082	F	1.097	F	0.015	0.947	F	-0.135
Aviation	Imperial	13	0.621	B	1.161	F	1.068	F	-0.093	1.068	F	-0.093
Aviation	Manchester	14	0.667	B	0.994	F	0.952	E	-0.042	0.952	E	-0.042
Aviation	Rosecrans	15	1.304	F	1.295	F	1.311	F	0.016	1.241	F	-0.054
Centinela	Jefferson	18	0.599	A	1.103	F	1.063	F	-0.040	1.063	F	-0.040
Culver	Jefferson	28	0.721	C	0.719	C	0.747	C	0.028	0.747	C	0.028
Culver	Vista del Mar	33	0.550	A	0.518	A	0.505	A	-0.013	0.505	A	-0.013
Douglas	Imperial	34	0.380	A	0.668	B	0.541	A	-0.127	0.541	A	-0.127
Highland/Vista del Mar	Rosecrans	43	1.244	F	1.316	F	1.208	F	-0.108	1.208	F	-0.108
I-105 Fwy/Continental	Imperial	45	0.660	B	0.747	C	0.734	C	-0.013	0.734	C	-0.013
I-105 WB off/Nash	Imperial	48	0.254	A	0.602	B	0.709	C	0.107	0.679	B	0.077
I-405 NB off-ramp	Century	307	0.540	A	0.615	B	0.655	B	0.040	0.655	B	0.040
I-405 NB ramps	Imperial	46	0.279	A	0.302	A	0.285	A	-0.017	0.285	A	-0.017
I-405 NB ramps	Jefferson	54	0.701	C	0.853	D	0.828	D	-0.025	0.828	D	-0.025
I-405 NB ramps	La Tijera	78	1.026	F	1.125	F	0.936	E	-0.189	0.936	E	-0.189
I-405 SB ramps	Jefferson	55	0.533	A	0.773	C	0.699	B	-0.074	0.699	B	-0.074
I-405 SB ramps	La Tijera	79	0.904	E	1.230	F	1.166	F	-0.064	1.166	F	-0.064
La Cienega	111th St	67	0.255	A	0.248	A	----	----	N/A	----	----	N/A
La Cienega	120th	313	0.303	A	0.453	A	0.408	A	-0.045	0.408	A	-0.045
La Cienega	Arbor Vitae	8	0.637	B	0.929	E	1.415	F	0.486	1.072	F	0.143
La Cienega	Century	26	0.692	B	0.827	D	1.078	F	0.251	1.009	F	0.182
La Cienega	El Segundo	312	0.575	A	0.667	B	0.670	B	0.003	0.670	B	0.003
La Cienega	Florence	40	0.957	E	1.119	F	1.047	F	-0.072	1.047	F	-0.072
La Cienega	I-405 SB ramps N/O Century	111	0.663	B	0.600	A	0.715	C	0.115	0.685	B	0.085
La Cienega	I-405 SB ramps N/O Imperial	69	0.232	A	0.237	A	0.239	A	0.002	0.239	A	0.002
La Cienega	I-405 SB ramps S/O Century	68	0.432	A	0.536	A	0.476	A	-0.060	0.476	A	-0.060
La Cienega	Imperial	52	0.308	A	0.577	A	0.613	B	0.036	0.613	B	0.036
La Cienega	Lennox	71	0.216	A	0.586	A	0.561	A	-0.025	0.561	A	-0.025
La Cienega	Manchester	72	0.769	C	0.791	C	0.748	C	-0.043	0.748	C	-0.043
La Tijera	Manchester	82	0.532	A	0.750	C	0.746	C	-0.004	0.746	C	-0.004
Lincoln	83rd St	87	0.641	B	1.158	F	1.328	F	0.170	1.123	F	-0.035
Lincoln	Jefferson	57	0.713	C	1.075	F	1.219	F	0.144	1.249	F	0.174
Lincoln	La Tijera	81	0.435	A	0.532	A	1.195	F	0.663	1.046	F	0.514
Lincoln	Manchester	88	0.777	C	1.195	F	1.262	F	0.067	1.142	F	-0.053
Lincoln	Teale	94	0.825	D	0.946	E	1.026	F	0.080	1.026	F	0.080

Table F4.3.2-25

Level of Service Analysis, Alternative C 2015

N/S	E/W	No.[1]	Existing (1996) V/C	Existing (1996) LOS	Env. Base (2015) V/C	Env. Base (2015) LOS	Alt C (2015) V/C	Alt C (2015) LOS	Alt C (2015) Impact	Alt C w/ Mitigation V/C	Alt C w/ Mitigation LOS	Alt C w/ Mitigation Impact
Main	Imperial	47	0.945	E	1.065	F	0.561	A	-0.504	0.561	A	-0.504
Main	Imperial	47A	----	----	----	----	0.533	A	N/A	0.533	A	N/A
Pershing	Imperial	49	0.627	B	0.811	D	----	----	N/A	----	----	N/A
Pershing	Manchester	98	0.521	A	0.545	A	0.839	D	0.294	0.620	B	0.075
Pershing	Westchester Pkwy	101	0.148	A	0.300	A	0.597	A	0.297	0.597	A	0.297
Sepulveda	76th/77th St	106	0.594	A	0.707	C	0.597	A	-0.110	0.597	A	-0.110
Sepulveda	Centinela	22	0.917	E	1.288	F	1.230	F	-0.058	1.230	F	-0.058
Sepulveda	Century	27	0.692	B	0.899	D	0.669	B	-0.230	0.669	B	-0.230
Sepulveda	El Segundo	35	1.025	F	1.222	F	1.212	F	-0.010	1.212	F	-0.010
Sepulveda	Howard Hughes Pkwy	44	0.698	B	0.902	E	0.819	D	-0.083	0.819	D	-0.083
Sepulveda	I-105 WB off-ramp	105	0.931	E	1.045	F	0.987	E	-0.058	0.987	E	-0.058
Sepulveda	Imperial	50	1.129	F	1.207	F	1.369	F	0.162	1.208	F	0.001
Sepulveda	La Tijera	83	0.644	B	0.886	D	1.267	F	0.381	1.267	F	0.381
Sepulveda	Lincoln	93	0.594	A	0.569	A	----	----	N/A	----	----	N/A
Sepulveda	Manchester	99	0.837	D	1.073	F	0.921	E	-0.152	0.921	E	-0.152
Sepulveda	Mariposa	100	0.799	C	1.132	F	1.489	F	0.357	1.295	F	0.163
Sepulveda	Rosecrans	103	1.388	F	1.515	F	1.529	F	0.014	1.459	F	-0.056
Sepulveda	Westchester Pkwy	109	0.627	B	1.027	F	0.870	D	-0.157	0.870	D	-0.157
Sepulveda	Westchester Pkwy (w/ project)	109A	----	----	----	----	0.688	B	N/A	0.688	B	0.688
Vista del Mar	Grand	36	0.494	A	0.518	A	0.625	B	0.107	0.625	B	0.107
Vista del Mar	Imperial	51	0.468	A	0.802	D	0.972	E	0.170	0.641	B	-0.161
Centinela	Culver	A	0.755	C	0.736	C	0.731	C	-0.005	0.731	C	-0.005
Centinela	Rte. 90 EB ramps	B	0.483	A	0.520	A	0.456	A	-0.064	0.456	A	-0.064
Centinela	Rte. 90 WB ramps	C	0.693	B	0.396	A	0.478	A	0.082	0.478	A	0.082
La Cienega	Centinela	D	1.025	F	1.166	F	1.217	F	0.051	1.165	F	-0.001
La Cienega	La Tijera	E	0.729	C	1.137	F	1.059	F	-0.078	1.059	F	-0.078
Lincoln	Bali	F	0.749	C	0.826	D	0.859	D	0.033	0.696	B	-0.130
Lincoln	Fiji	G	0.685	B	0.770	C	0.767	C	-0.003	0.767	C	-0.003
Lincoln	Marina Expwy	H	0.704	C	1.050	F	1.074	F	0.024	1.113	F	0.063
Lincoln	Maxella	I	0.643	B	0.978	E	1.003	F	0.025	0.946	E	-0.032
Lincoln	Mindanao	J	0.713	C	1.178	F	1.072	F	-0.106	0.988	F	-0.190
Lincoln	Venice	K	0.883	D	1.005	F	1.030	F	0.025	0.957	E	-0.048
Lincoln	Washington	L	0.829	D	1.022	F	1.037	F	0.015	0.953	E	-0.069
Sepulveda	79th/80th	M	0.671	B	0.761	C	0.721	C	-0.040	0.721	C	-0.040
Sepulveda	83rd St	N	0.603	B	0.811	D	0.770	C	-0.041	0.605	B	-0.206

[1] Corresponds to **Figure F4.3.2-1**.

Source: Los Angeles Department of Transportation.

When applying the threshold of significance criteria identified in subsection 4.3.2.4, *Thresholds of Significance*, 32 intersections were identified as being significantly impacted by 2015. These intersections are listed in **Table F4.3.2-26**, Significantly Impacted Intersections, Year 2015 Alternative C. The mitigation plan for these intersections is summarized in **Table F4.3.2-27**, Mitigation Plan, Year 2015 Alternative C.

Table F4.3.2-26

Significantly Impacted Intersections, Year 2015 Alternative C

Intersection	No.[1]
Original Study Intersections	
Arbor Vitae / La Cienega	8
Aviation / Century	11
Aviation / El Segundo	12
Aviation / Rosecrans	15
Centinela / Sepulveda	22
Century / La Cienega	26
El Segundo / Sepulveda	35
Grand / Vista del Mar	36
I-105 WB off - Nash / Imperial	48
Imperial / Sepulveda	50
Imperial / Vista del Mar	51
Imperial / La Cienega	52
Jefferson / Lincoln	57
La Cienega / Lennox	71
La Tijera / Lincoln	81
La Tijera /Sepulveda	83
Lincoln / 83rd	87
Lincoln / Manchester	88
Lincoln / Teale	94
Manchester / Pershing	98
Mariposa / Sepulveda	100
Rosecrans / Sepulveda	103
Sepulveda / 76th/77th	106
La Cienega / I-405 SB ramps (N/O Century)	111
Intersections Analyzed For Alts. C & D Only	
Centinela / La Cienega	D
Bali / Lincoln	F
Lincoln / Marina Expwy (Rte. 90)	H
Lincoln / Maxella	I
Lincoln / Venice	K
Lincoln / Washington	L
Sepulveda / 79th/80th	M
Sepulveda / 83rd	N

[1] Facility Number/Letter which corresponds to **Figure F4.3.2-1**.

Source: Los Angeles Department of Transportation.

Table F4.3.2-27

Mitigation Plan, Year 2015 Alternative C

Intersection	No.[1]	Improvement
Arbor Vitae / La Cienega	8	Widen the west side of La Cienega Boulevard to add a second left-turn only lane in the NB direction and a right-turn only lane in the SB direction. Widen Arbor Vitae Street to provide one left-turn-only lane, three through lanes and one right-turn only lane in both the EB and the WB directions. Right-of-way acquisition required. Upgrade signal to ATSAC or equivalent. Impact remains in the AM and PM peak periods.
Aviation / Century	11	Remove the Southern Pacific Railroad bridge structure over Century Boulevard and modify the median on Century Boulevard west of Aviation Boulevard to provide dual left-turn lanes in the EB direction. Widen the north side of Century Boulevard east of Aviation Boulevard to provide for a right-turn only lane in the WB direction. Widen the east side of Aviation Boulevard to provide an addition through lane in the NB direction. Widen the west side of Aviation Boulevard to provide dual right-turn only lanes in the SB direction. Right-of-way acquisition required.
Aviation / El Segundo	12	Remove the Southern Pacific Railroad bridge structure over El Segundo Boulevard and modify the median on the west leg to provide dual left-turn-only lanes in the EB direction. Modify the median on the south leg to provide dual left-turn-only lanes in the NB direction. Upgrade the signal to ATSAC or equivalent. Right-of-way acquisition required.
Aviation / Imperial	13	Widen the north side of Imperial Highway east of Aviation Boulevard to install an additional right-turn only lane
Aviation / Manchester	14	Upgrade signal to ATSAC or equivalent
Aviation / Rosecrans	15	Upgrade the signal to ATSAC or equivalent
Centinela / Sepulveda	22	Remove the traffic island and modify the curb return on the SE corner and restripe to provide a triple left-turn only lane in the NB direction. Widen the south side of Centinela Avenue west of Sepulveda Boulevard to provide three departure lanes in the WB direction to accommodate the NB triple left-turn only lanes.
Century / La Cienega	26	Upgrade the signal to ATCS or equivalent. Restripe the WB approach to provide a left-turn only lane, two through lanes, a through/right lane, and a right-turn only lane. This intersection remains unmitigated.
El Segundo / Sepulveda	35	Provide a WB right-turn overlapping arrow. Upgrade the signal to ATSAC or equivalent.
Grand / Vista del Mar	36	Upgrade signal to ATCS or equivalent. Provide a SB left-turn arrow in conjunction with a WB right-turn overlapping arrow.
Howard Hughes / Sepulveda	44	Upgrade the signal to ATCS or equivalent. LAX Expressway will remove impact.
I-105 WB off - Nash / Imperial	48	Upgrade the signal to ATCS or equivalent.
Imperial / Sepulveda	50	Modify the median island on the NB approach to provide dual left-turn only lanes in the NB direction. Provide for a NB right-turn overlapping arrow. Upgrade signal to ATSAC or equivalent.
Imperial / Vista del Mar	51	Provide for a WB right-turn overlapping arrow. Upgrade signal to ATCS or equivalent.
Imperial / La Cienega	52	Upgrade the signal to ATCS or equivalent.
Jefferson / Lincoln	57	Intersection remains unmitigated.
La Cienega / Lennox	71	Upgrade the signal to ATCS or equivalent. Modify the median on the south leg of La Cienega Boulevard to provide a left-turn only lane in the NB direction. Widen the north side of Lennox Boulevard east of La Cienega Boulevard to install an additional right-turn only lane. Right-of-way acquisition required.
La Cienega / Manchester	72	Upgrade signal to ATSAC or equivalent.
La Tijera / I-405 NB Ramps	78	Provide a fair-share contribution towards the La Tijera Bridge Widening at I-405 Freeway project.
La Tijera / Lincoln	81	Restripe the EB approach to provide a shared left/through and dual right-turn only lanes. Change phasing to provide an overlapping right-turn arrow in the EB direction. Widen the east side of Lincoln Boulevard to provide a fourth NB through lane. Upgrade the signal to ATSAC or equivalent. Right-of-way acquisition required. Impact remains in the PM peak period.
La Tijera / Sepulveda	83	Provide a fair-share contribution towards the Sepulveda Boulevard HOV/Transit Priority Lane project. Impact remains in the PM peak period.
Lincoln / 83rd	87	Widen the north and south sides of 83rd Street west of Lincoln Boulevard to provide dual left-turn only lanes and a through/right lane in the EB direction.
Lincoln / Manchester	88	Modify the median island on the east leg of Manchester Avenue to provide dual left-turn only lanes in the EB and WB directions. Widen the east side of Lincoln Boulevard south of Manchester Avenue to provide a free NB right-turn only lane. Upgrade the signal to ATCS or equivalent. Right-of-way acquisition required. Impact remains in the AM peak period.
Lincoln / Teale	94	Intersection remains unmitigated.
Manchester / Pershing	98	Restripe the SB approach to provide a left-turn only lane, a left/through lane, and a through/right lane. Upgrade the signal to ATCS or equivalent.
Manchester / Sepulveda	99	Upgrade signal to ATCS or equivalent.
Mariposa / Sepulveda	100	Upgrade signal to ATSAC or equivalent.
Rosecrans / Sepulveda	103	Upgrade signal to ATSAC or equivalent.
Sepulveda / 76th/77th	106	Provide a fair-share contribution towards the Sepulveda Boulevard HOV/Transit Priority Lane project.

Table F4.3.2-27

Mitigation Plan, Year 2015 Alternative C

Intersection	No.[1]	Improvement
La Cienega / I-405 SB ramps (N/O Century)	111	Upgrade signal to ATCS or equivalent.
Centinela / La Cienega	D	Widen the north side of Centinela Avenue east of La Cienega Boulevard to install a second left-turn only lane in the WB direction. Right-of-way acquisition required.
Bali / Lincoln	F	Provide a fair-share contribution toward LA County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way.
Lincoln / Marina Expwy (SR-90)	H	Provide a fair-share contribution toward LA County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way. Intersection remains unmitigated.
Lincoln / Maxella	I	Provide a fair-share contribution toward LA County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way.
Lincoln / Venice	K	Widen the east side of Lincoln Boulevard south of Venice Boulevard to install a NB right-turn only lane.
Lincoln / Washington	L	Provide a fair-share contribution toward LA County's Route 90 At-Grade Extension Project from Lincoln Boulevard to Admiralty Way.
Sepulveda / 79th/80th	M	Provide a fair-share contribution towards the Sepulveda Boulevard HOV/Transit Priority Lane project.
Sepulveda / 83rd	N	Restripe the WB approach to provide a left-turn only lane, a through lane, and a right-turn only lane. Provide a fair-share contribution towards the Sepulveda Boulevard HOV/Transit Priority Lane project.
Sepulveda S/O Venice	4	Upgrade signal at Sepulveda Boulevard and Venice Boulevard from ATSAC to ATCS or equivalent; Upgrade signal at Sepulveda Boulevard and I-405 NB Ramps from ATSAC to ATCS or equivalent.
Overland S/O Venice	5	Upgrade signal at Overland Avenue and Venice Boulevard from ATSAC to ATCS or equivalent; Upgrade signal at Overland Avenue and Washington Boulevard from ATSAC to ATCS or equivalent.
Lincoln S/O Jefferson	21	Upgrade signal at Jefferson Boulevard and Lincoln Boulevard from ATSAC to ATCS or equivalent; Upgrade signal at Lincoln Boulevard and Teale Street from ATSAC to ATCS or equivalent.
Sepulveda S/O Slauson	26	Upgrade signal at Sepulveda Boulevard and Slauson Avenue from ATSAC to ATCS or equivalent; Upgrade signal at Sepulveda Boulevard and SR-90 EB Ramps from ATSAC to ATCS or equivalent; Provide a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit to and from LAX. To mitigate the intersection of Sepulveda Boulevard and Slauson Avenue, these enhancements would need to reduce NB through trips by 18 vehicles in the AM peak hour.

[1] Facility Number/Letter which corresponds to **Figure F4.3.2-1**.

The following mitigation measures are recommended for Alternatives A, B, and C:

- **MM-ST-4. Add Right-Turn Off-Ramp to Emerson Street (Alternatives A, B, and C)**.

  A westbound right-turn only off-ramp on the ring road connecting to a one-way northbound extension of Emerson Street near Westchester Parkway shall be added to provide access to the LAX Northside property (Westchester Southside) and reduce the number of northbound left turns at the intersection of Sepulveda Boulevard and La Tijera Boulevard.

- **MM-ST-5. Widen Arbor Vitae Street from Four to Six Lanes (Alternatives A, B, and C)**.

- **MM-ST-6. Add New Traffic Lanes (Alternatives A, B, and C)**.

  Traffic lanes shall be added to select intersections where necessary to the satisfaction of LADOT or other appropriate jurisdiction, sufficient to increase the capacity of the intersection without unnecessarily encroaching on adjacent sidewalks, on-street parking, or other land uses.

- **MM-ST-7. Restripe Existing Facilities (Alternatives A, B, and C)**.

  Existing traffic lanes shall be restriped to the satisfaction of LADOT or other appropriate jurisdiction, so that additional lane capacity will be provided without adding any new pavement to the intersection or road segment.

- **MM-ST-8. Add ATSAC[165] or Equivalent (Alternatives A, B, and C)**.

  Automated Traffic Surveillance and Control (ATSAC) capability shall be added to select intersections as needed, and to the satisfaction of LADOT or other appropriate jurisdiction. These intersections will add to the existing ATSAC system, resulting in more complete and effective ATSAC network.

- **MM-ST-9. Add ATCS[166] or Equivalent (Alternatives A, B, and C)**.

  Adaptive Traffic Control System (ATCS) capability shall be added to select intersections as needed, and to the satisfaction of LADOT or other appropriate jurisdiction. These intersections will add to the existing ATCS system, resulting in a more complete and effective ATCS network.

- **MM-ST-10. Modify Signal Phasing (Alternatives A, B, and C)**.

  The traffic signal phasing of select intersections shall be modified to the satisfaction of LADOT or other appropriate jurisdiction, to allow more efficient use of the intersections, particularly those that will experience a notable change in traffic characteristics as a result of the project.

- **MM-ST-11. Provide A One-Way Southbound Extension of Airport Boulevard Connecting to a Right-Turn-Only On-Ramp to the Ring Road near Westchester Parkway (Alternative B)**.

4.3.2.8.2 Project Impacts - Alternative D

For Alternative D, mitigation plans were prepared to address both impacts projected to occur during the peak construction year - 2008, and impacts projected to occur at project buildout - 2015. The mitigation package for 2008 addresses impacts associated with the combined traffic from project-related construction during that peak construction year and from project-related operations anticipated to occur in 2008. The mitigation measures proposed for the Year 2008 conditions are shown in **Table F4.3.2-28**, Year 2008 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison) and the mitigation measures proposed for 2015 conditions are shown in **Table F4.3.2-29**, Year 2015 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison).

Table F4.3.2-28

Year 2008 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Improvements
Intersection 3	Airport and Arbor Vitae	This intersection is impacted in 2008, but not in 2015. Mitigation for this temporary impact involves restriping to add a northbound right-turn lane, with the option of changing one of the two NB through lanes to a TH/RT lane.
Intersection 7	Arbor Vitae and Aviation	Project Component Improvements call for widening the east side of Aviation Boulevard south of Arbor Vitae Street and widening the south side of Arbor Vitae Street east of Aviation Boulevard to achieve standard City of LA street widths. The traffic mitigation involves additional widening to achieve the following lane configuration: NB - 1 LT, 2 TH, 1 RT; SB - 1 LT, 1 TH, 1 TH/RT; EB - 1 LT, 2 TH, 1 TH/RT; WB - 2 LT, 2 TH, 1 RT.

[165] Automated Traffic Surveillance and Control (ATSAC) is a traffic signal control system that allows manual remote control of traffic signals. ATSAC provides manual monitoring of the conditions at traffic signals, with the option to remotely adjust signal timing at specific intersections based on current conditions.

[166] Adaptive Traffic Control System (ATCS) is a traffic signal control system that continuously and automatically monitors traffic conditions on a traffic signal grid system, and electronically adjusts signal-timing characteristics of signals based on real-time conditions.

Table F4.3.2-28

Year 2008 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Improvements
Intersection 8	Arbor Vitae and La Cienega	The Arbor Vitae Street bridge (east leg of intersection) is proposed to be widened by Caltrans to a width of 103 feet. Project Component Improvements call for widening the south side of Arbor Vitae Street west of La Cienega Blvd. and the west side of La Cienega Blvd. south of Arbor Vitae Street to achieve standard City of LA street widths. The traffic mitigation involves the addition of an eastbound right-turn lane and widening the east side of La Cienega Boulevard by construction of retaining walls in Caltrans right-of-way to provide an additional northbound through lane. Resulting lane configuration is: NB - 1 LT, 1 TH, 1 TH/RT; SB - 1 LT, 1 TH, 1 TH/RT; EB - 1 LT, 3 TH, 1 RT; WB - 1 LT, 2 TH, 1 TH/RT, 1 RT.
Intersection 10	Aviation and 111th	Project Component Improvements call for widening the east side of Aviation Boulevard north and south of 111th Street to achieve standard City of LA street widths. The traffic mitigation involves the addition of a second southbound left-turn lane and a second westbound right-turn lane. Resulting lane configuration is: NB - 1 LT, 3 TH, 1 RT; SB - 2 LT, 2 TH, 1 TH/RT; EB - 1 LT, 1 TH/RT; WB - 1 LT, 1 TH/RT, 2 RT
Intersection 12	Aviation and El Segundo	Intersectional analysis assumed proposed improvement by County of LA is completed as separate project. Mitigation for this impact involves 1) restriping the EB approach from 1 LT, 3 TH, 1 RT to 1 LT, 3 TH, 1 TH/RT, and 2) upgrading the signal to ATSAC[8]/ATCS[9] equivalent.
Intersection 13	Aviation and Imperial	Project Component Improvements calls for widening the east side of Aviation Boulevard north of Imperial Highway to achieve City of LA standard street widths. Mitigation for this impact involves restriping the NB approach from 2 LT, 2 TH, 1 RT to 2 LT, 3 TH, 1 RT.
Intersection 15	Aviation and Rosecrans	Intersectional analysis assumed proposed improvement by the City of Hawthorne is completed. Mitigation for this impact involves changing the NB RTOR[10] from Auto to OLA.
Intersection 18	Centinela and Jefferson	Mitigation for this impact involves changing the southbound RTOR from Auto to OLA.
Intersection 22	Centinela and Sepulveda	Mitigation for this impact involves 1) removing the median island on the east leg from the intersection to the underpass of the I-405 Freeway in order to restripe the WB approach from 2 LT, 1 TH, 1 TH/RT to 2 LT, 2 TH, 1 RT and 2) providing a fair-share contribution to MTA's Metro Rapid Program or other enhancements to benefit transit to and from LAX. These enhancements would need to reduce SB through trips by 36 vehicles during the AM peak hour.
Intersection 27	Century and Sepulveda	Mitigation for this impact involves reconfiguring the west leg of the intersection to allow for authorized vehicles only into the Central Terminal Area and trimming the median island on the north leg of the intersection in order to restripe the WB lanes from 1 LT, 1 LT/TH, 2 RT to 2 LT, 1 LT/TH, 1 RT.
Intersection 34	Douglas and Imperial	Mitigation for this impact involves changing the NB RTOR from Auto to Free. To accommodate this movement, one EB through lane would need to be removed from Imperial Highway between Nash Street and Douglas Street.
Intersection 35	El Segundo and Sepulveda	Mitigation for this impact involves 1) changing the EB RTOR from Auto to OLA[11] and 2) upgrading the signal to ATSAC/ATCS equivalent.
Intersection 40	Florence and La Cienega	Mitigation for this impact involves 1) changing the NB/SB phasing from Split to Prot-Var, 2) restriping the SB lanes from 1 LT, 1 LT/TH, 1 TH, 1 RT to 2 LT, 1 TH, 1 TH/RT and 3) upgrading the signal to ATSAC/ATCS equivalent.
Intersection 45	I-105 Fwy/Continental City at Imperial	Project Component Improvements call for the installation of a north leg of this at-grade intersection. The SB approach will be planned as 3 LT, and 2 RT. Project Component Improvements also call for widening the north side of Imperial Highway west of Continental City Drive in order to install a third WB through lane. The mitigation for this impact involves widening the north and south sides of Imperial Highway east of Continental City Drive in order to install two WB right-turn lanes. The WB lane configuration will be changed from 2 LT, 3 TH to 1 LT, 3 TH, 2 RT.

Table F4.3.2-28

Year 2008 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Improvements
Intersection 46	I-405 Fwy NB Ramp and Imperial	Mitigation for this impact calls for 1) widening the off-ramp to change the northbound lane configuration from 1 LT, 1 RT to 2 LT, 1 LT/RT and 2) upgrading the signal to ATSAC/ATCS equivalent.
Intersection 50	Imperial and Sepulveda	Mitigation for this impact involves changing both the NB and WB RTOR from Auto to OLA. To mitigate the AP[12] period impact, provide fair-share contribution to MTA's[13] Metro Rapid Bus Program or other enhancements to benefit transit to and from LAX. These enhancements would need to reduce SB through trips by 246 vehicles during the airport peak hour.
Intersection 57	Jefferson and Lincoln	Intersectional analysis assumed full build out of the intersection per Playa Vista mitigation plans. Mitigation for this impact involves 1) restriping the NB approach from 1 LT, 3 TH, 1 TH/RT, 1 RT to 1 LT, 4 TH, 1 RT and 2) providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. This intersection remains partially unmitigated during the PM peak hour.
Intersection 67	La Cienega and 111th	Project Component Improvement calls for widening the south side of 111th Street west of La Cienega Blvd. and the removal of the median island on La Cienega Blvd. south of 111th Street. Resulting lane configuration is NB - 2 LT, 3 TH; SB - 3 TH, 1 RT; EB - 2 LT, 2 RT. Mitigation for this intersection involves 1) changing the EB signal phasing from Perm to Split and 2) changing the SB RTOR from Auto to OLA and 3) changing the NB phasing from Perm to Prot-Fix.
Intersection 72	La Cienega and Manchester	Mitigation for this impact involves 1) changing the NB/SB phasing from Split to Prot-Var and 2) restriping La Cienega Boulevard from north of Florence Avenue to south of Olive Street in order to change the SB approach from 1 LT, 1 LT/TH, 1 TH, 1 TH/RT to 2 LT, 1 TH, 1 TH/RT.
Intersection 81	La Tijera and Lincoln	This intersection is impacted in 2008, but not in 2015. The resulting short-term impact is temporary and less than significant.
Intersection 83	La Tijera and Sepulveda	Mitigation for this intersection involves restriping the WB approach from 1 LT, 1 TH, 1 TH/RT to 1 LT, 2 TH, 1 RT. This will require the removal of parking from the north side of La Tijera Boulevard east of Sepulveda Boulevard.
Intersection 87	Lincoln and 83rd	Mitigation for this impact involves 1) widening and restriping the EB approach from 1 LT, 1 TH/RT to 2 LT, 1 TH/RT and 2) changing the WB RTOR from Auto to OLA.
Intersection 94	Lincoln and Teale	Intersectional analysis assumed full build-out of the intersection by Playa Vista mitigation plans already in place. Mitigation for the impact involves 1) changing the NB RTOR from Auto to OLA and 2) providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce NB through trips by 152 vehicles during the AM peak hour and reduce NB through trips by 340 vehicles during the PM peak hour.
Intersection 99	Manchester and Sepulveda	Mitigation for this impact involves 1) restricting parking on the north side of Manchester Avenue during the airport and PM peak periods to allow the WB approach to be restriped as 2 LT, 2 TH, 1 TH/RT during all three peak hours, 2) changing the WB RTOR from Auto to OLA, and 3) providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce WB through trips by 58 vehicles during the AM peak hour and reduce EB through trips by 278 vehicles during the PM peak hour.
Intersection 100	Mariposa and Sepulveda	Mitigation for this impact involves 1) upgrading the signal to ATSAC/ATCS equivalent and 2) providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce NB through trips by 204 vehicles during the AM peak hour.
Intersection 103	Rosecrans and Sepulveda	Mitigation for this impact involves a signal upgrade to ATSAC/ATCS equivalent.

Table F4.3.2-28

Year 2008 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Improvements
Intersection 105	Sepulveda and I-105 Off Ramp N/O Imperial	Mitigation for this impact involves 1) upgrading the signal to ATSAC/ATCS equivalent, and 2) providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce NB through trips by 81 vehicles during the PM peak hour.
Intersection 109	Sepulveda and Westchester	This intersection is impacted in 2008, but not in 2015. The resulting short-term impact is temporary and less than significant.
Intersection 20	Centinela and La Cienega	Mitigation for this impact involves the removal of the median islands on La Cienega Boulevard north and south of Centinela Avenue and restriping the NB & SB lane configurations from 1 LT, 2 TH, 1 TH/RT to 2 LT, 2 TH, 1 TH/RT. The WB lane configuration would be changed from 1 LT, 3 TH, 1 RT to 2 LT, 2 TH, 1 TH/RT.
Intersection 25	Hawthorne/La Brea and Century	Mitigation for this impact involves removal of the raised median islands on La Brea Ave/ Hawthorne Blvd. and installing additional left-turn lanes for NB and SB traffic. The NB lane configuration would change from 1 LT, 3 TH, 1 TH/RT to 2 LT, 3 TH, 1 TH/RT; the SB lane configuration would change from 1 LT, 3 TH, 1 RT to 2 LT, 3 TH, 1 RT.
Intersection 42	Hawthorne and Imperial	Mitigation for this impact involves 1) upgrading the signal to ATSAC/ATCS equivalent, and 2) changing the SB lane configuration from 1 LT, 2 TH, 1 TH/RT to 1 LT, 3 TH, 1 RT. The removal of a short stretch of parking on the west side of Hawthorne Blvd. north of Imperial Hwy is required.
Intersection 96	Lincoln and Washington	Mitigation for this impact involves providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce NB through trips by 57 vehicles during the PM peak hour.
Intersection 503	Century and Inglewood	Upgrade traffic signal to ATSAC/ATCS equivalent.
Intersection 505	Imperial and Inglewood	Mitigation for this impact involves 1) restriping the SB lanes from 1 LT, 1LT/TH to 1 LT, 1 TH, 1 RT and 2) upgrading the signal to ATSAC/ATCS equivalent.
Link 5	Overland s/o Venice	Integration of ATCS plus fair-share contributions to regional transit service will mitigate the impacts of this link.

[1] NB = Northbound.
[2] LT = Left turn.
[3] TH = Through.
[4] RT = Right turn.
[5] SB = Southbound.
[6] EB = Eastbound.
[7] WB = Westbound.
[8] ATAC = Automated Traffic Surveillance and Control.
[9] ATCS = Adaptive Traffic Control System.
[10] RTOR = Right turn on red.
[11] OLA = Overlap allowed.
[12] AP = Airport peak hour.
[13] MTA = Metropolitan Transportation Authority.

Source: Barton-Aschman Associates, Inc., 2002.

Table F4.3.2-29

Year 2015 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

					Conditions After Mitigation	
Facility Number	**Facility Name**	**Peak Hour**	**Direction**	**Improvements**	**V/C[1]**	**LOS[2]**
Intersection 6	Airport and Manchester	AM	N/A	Mitigation for this impact involves restriping the WB lane configuration from 1 LT[8], 2 TH, 1 RT to 1 LT, 3 TH, 1 RT.	0.691	B
		PM	N/A		0.730	C
		AP	N/A		0.893	D
Intersection 7	Arbor Vitae and Aviation	AM	N/A	Mitigation performed in 2008.	0.651	B
		PM	N/A		0.774	C
		AP	N/A		0.781	C
Intersection 8	Arbor Vitae and La Cienega	AM	N/A	Mitigation performed in 2008.	0.754	C
		PM	N/A		0.821	D
		AP	N/A		0.947	E
Intersection 10	Aviation and 111th St	AM	N/A	Mitigation performed in 2008.	0.585	A
		PM	N/A		0.582	A
		AP	N/A		0.742	C
Intersection 11	Aviation and Century	AM	N/A	The impact at this intersection is mitigated through the construction of the proposed Lennox Boulevard interchange.	0.643	A
		PM	N/A		0.739	C
		AP	N/A		0.986	E
Intersection 12	Aviation and El Segundo	AM	N/A	Mitigation performed in 2008.	0.923	E
		PM	N/A		0.941	E
		AP	N/A		0.959	E
Intersection 13	Aviation and Imperial	AM	N/A	Mitigation performed in 2008.	0.767	C
		PM	N/A		0.984	E
		AP	N/A		0.962	E
Intersection 14	Aviation and Manchester	AM	N/A	Mitigation for this impact involves 1) restriping both EB[9] and WB lane configuration from 1 LT, 2 TH, 1 RT to 1 LT, 2 TH, 1 TH/RT, and 2) upgrading the traffic signal to ATSAC[10]/ATCS[11] equivalent. This proposal would require the elimination of parking on the south side of Manchester Blvd. east of Aviation Blvd. and on the north side of Manchester Blvd. west of Aviation Blvd. in order to provide appropriate merging distances.	0.888	D
		PM	N/A		0.893	D
		AP	N/A		1.180	F
Intersection 15	Aviation and Rosecrans	AM	N/A	Mitigation performed in 2008.	1.107	F
		PM	N/A		1.190	F
		AP	N/A		1.183	F
Intersection 18	Centinela and Jefferson	AM	N/A	Mitigation performed in 2008.	0.919	E
		PM	N/A		1.105	F
		AP	N/A		0.736	C
Intersection 22	Centinela and Sepulveda	AM	N/A	Mitigation performed in 2008.	1.227	F
		PM	N/A		1.205	F
		AP	N/A		0.904	E
Intersection 26	Century and La Cienega	AM	N/A	Project Component Improvements call for restriping the intersection to provide the following lane configuration: NB[12] - 1 LT, 2 TH, 1 TH/RT, 1 RT; SB - 1 LT, 3 TH, 1 RT; EB - 1 LT, 3 TH, 2 RT; WB - 1 LT, 3 TH, 1 TH/RT. This intersection is partially mitigated in all three time periods.	1.200	F
		PM	N/A		1.048	F
		AP	N/A		0.981	E
Intersection 27	Century and Sepulveda	AM	N/A	Mitigation performed in 2008.	0.768	C
		PM	N/A		0.755	C
		AP	N/A		0.568	A
Intersection 34	Douglas and Imperial	AM	N/A	Mitigation performed in 2008.	0.300	A
		PM	N/A		0.585	A
		AP	N/A		0.315	A
Intersection 35	Sepulveda and El Segundo	AM	N/A	Mitigation performed in 2008.	1.152	F
		PM	N/A		1.125	F
		AP	N/A		0.992	E

Table F4.3.2-29

Year 2015 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Improvements	Conditions After Mitigation V/C[1]	Conditions After Mitigation LOS[2]
Intersection 36	Grand and Vista del Mar	AM	N/A	Mitigation for this impact involves restriping the WB approach from 1 LT, 1 LT/TH, 1 RT to 1 LT, 1 LTR, 1 RT.	0.819	D
		PM	N/A		0.431	A
		AP	N/A		0.430	A
Intersection 40	Florence and La Cienega	AM	N/A	Mitigation performed in 2008.	0.737	C
		PM	N/A		1.002	F
		AP	N/A		1.412	F
Intersection 43	Highland/Vista del Mar at Rosecrans	AM	N/A	Mitigation for this impact involves changing the WB RTOR[13] from Auto to OLA.[14]	1.145	F
		PM	N/A		1.297	F
		AP	N/A		0.771	C
Intersection 44	Howard Hughes Pkwy and Sepulveda	AM	N/A	Mitigation for this impact involves providing a fair-share contribution to MTA's[15] proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce the NB through trips by 164 vehicles in the PM peak hour.	0.574	A
		PM	N/A		0.908	E
		AP	N/A		0.574	A
Intersection 45	I-105 Fwy/Continental City Dr. and Imperial	AM	N/A	Mitigation performed in 2008.	0.451	A
		PM	N/A		0.534	A
		AP	N/A		0.652	B
Intersection 46	I-405 Fwy NB Ramps at Imperial	AM	N/A	Mitigation performed in 2008.	0.306	A
		PM	N/A		0.425	B
		AP	N/A		0.618	A
Intersection 47	Imperial and Main	AM	N/A	Mitigation for this impact involves changing the WB approach from 1 LT, 2 TH to 2 LT, 2 TH. This will require reducing the width of the median island on the east leg of the intersection.	0.532	A
		PM	N/A		0.824	D
		AP	N/A		0.518	A
Intersection 49	Imperial and Pershing	AM	N/A	Mitigation for this impact involves widening 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. Also, the median is to be narrowed to allow 3 receiving lanes for a SB triple left-turn movement. The SB[16] lane configuration is to be changed from 1 LT, 1 LTR, 1 RT to 2 LT, 1 LT/TH, 1 RT.	0.543	A
		PM	N/A		0.656	B
		AP	N/A		0.363	A
Intersection 50	Imperial and Sepulveda	AM	N/A	Mitigation performed in 2008.	0.854	D
		PM	N/A		1.098	F
		AP	N/A		0.888	D
Intersection 51	Imperial and Vista del Mar	AM	N/A	Mitigation for this impact involves 1) changing the WB phasing from Perm to Split, and 2) changing the NB RTOR from Auto to OLA.	0.906	E
		PM	N/A		0.619	B
		AP	N/A		0.587	A
Intersection 52	Imperial and La Cienega	AM	N/A	This intersection remains unmitigated.	0.662	B
		PM	N/A		0.714	C
		AP	N/A		0.853	D
Intersection 57	Jefferson and Lincoln	AM	N/A	Mitigation performed in 2008.	1.048	F
		PM	N/A		1.146	F
		AP	N/A		0.794	C
Intersection 67	La Cienega and 111th	AM	N/A	Mitigation performed in 2008.	0.316	A
		PM	N/A		0.229	A
		AP	N/A		0.667	B
Intersection 71	La Cienega and Lennox	AM	N/A	The impact of this intersection is mitigated through the construction of the proposed Lennox Boulevard interchange.	N/A	N/A
		PM	N/A		N/A	N/A
		AP	N/A		N/A	N/A
Intersection 72	La Cienega and Manchester	AM	N/A	Mitigation performed in 2008.	0.751	C
		PM	N/A		0.772	C
		AP	N/A		1.179	F

Table F4.3.2-29

Year 2015 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Improvements	Conditions After Mitigation V/C[1]	Conditions After Mitigation LOS[2]
Intersection 82	La Tijera and Manchester	AM	N/A	Mitigation for this impact involves changing the eastbound RT lane to a TH/RT lane on Manchester Avenue. This may require the removal of parking on Manchester Avenue, east of La Tijera Boulevard during the PM peak hour.	0.615	B
		PM	N/A		0.737	C
		AP	N/A		0.565	A
Intersection 83	La Tijera and Sepulveda	AM	N/A	Mitigation performed in 2008.	0.828	D
		PM	N/A		0.828	D
		AP	N/A		0.400	A
Intersection 87	Lincoln and 83rd	AM	N/A	Mitigation performed in 2008.	0.867	D
		PM	N/A		1.057	F
		AP	N/A		0.765	C
Intersection 88	Lincoln and Manchester	AM	N/A	Intersectional analysis assumed Playa Vista development mitigation already in place. Mitigation for this impact involves 1) widening the north and south legs of the intersections to install a NB and SB right-turn only lanes, 2) removing the median island on the east leg of the intersection to install a second WB left-turn lane, and 3) providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce SB through trips by 99 vehicles during the AM peak hour. The lane configurations would be as follows: NB - 1 LT, 4 TH, 1 RT; SB - 1 LT, 3 TH, 1 RT; WB - 2 LT, 2 TH, 1 RT; EB - 2 LT, 2 TH, 1 TH/RT	0.838	D
		PM	N/A		1.169	F
		AP	N/A		0.808	D
Intersection 94	Lincoln and Teale	AM	N/A	Mitigation performed in 2008.	0.798	C
		PM	N/A		0.976	E
		AP	N/A		0.649	B
Intersection 99	Manchester and Sepulveda	AM	N/A	Mitigation performed in 2008.	0.911	E
		PM	N/A		1.141	F
		AP	N/A		0.680	B
Intersection 100	Mariposa and Sepulveda	AM	N/A	Mitigation performed in 2008.	0.836	D
		PM	N/A		0.977	E
		AP	N/A		1.087	F
Intersection 103	Rosecrans and Sepulveda	AM	N/A	Mitigation performed in 2008.	1.211	F
		PM	N/A		1.564	F
		AP	N/A		1.156	F
Intersection 105	Sepulveda and I-105 ramp N/O[17] Imperial	AM	N/A	Mitigation performed in 2008.	1.151	F
		PM	N/A		1.048	F
		AP	N/A		0.841	D
Intersection 106	Sepulveda and 76th/77th	AM	N/A	Mitigation for this impact involves providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce NB through trips by 30 vehicles during the PM peak hour.	0.671	B
			N/A		0.722	C
		PM				
		AP	N/A		0.663	B
Intersection 111	La Cienega and I-405 Ramps N/O Century	AM	N/A	The impact of this intersection is mitigated through the construction of the Lennox Boulevard interchange.	0.685	B
		PM	N/A		0.321	A
		AP	N/A		0.583	A
Intersection 312	El Segundo and La Cienega	AM	N/A	Mitigation for this impact involves an upgrade to the traffic signal to a ATSC/ATCS equivalent.	0.600	A
		PM	N/A		0.625	B
		AP	N/A		0.436	A

Table F4.3.2-29

Year 2015 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Improvements	Conditions After Mitigation V/C[1]	Conditions After Mitigation LOS[2]
Intersection 16	Bali and Lincoln	AM	N/A	Mitigation for this impact involves providing a fair-share contribution to LA County's Route 90 At-Grade Extension Project from Lincoln Blvd. to Admiralty Way.[18]	0.559	A
		PM	N/A		0.726	C
		AP	N/A		0.657	B
Intersection 17	Centinela and Culver	AM	N/A	Mitigation for this impact involves changing the SB lane configuration from 1 LT, 1 TH, 1 TH/RT to 1 LT, 2 TH, 1 RT.	0.848	D
		PM	N/A		0.867	D
		AP	N/A		0.692	B
Intersection 20	Centinela and La Cienega	AM	N/A	Mitigation performed in 2008.	1.062	F
		PM	N/A		1.088	F
		AP	N/A		0.974	E
Intersection 25	Hawthorne/La Brea and Century	AM	N/A	Mitigation performed in 2008.	0.800	C
		PM	N/A		0.900	D
		AP	N/A		0.937	E
Intersection 39	Fiji and Lincoln	AM	N/A	Mitigation for this impact involves providing a fair-share contribution to LA County's Route 90 At-Grade Extension Project from Lincoln Blvd. to Admiralty Way.[18]	0.678	B
		PM	N/A		0.732	C
		AP	N/A		0.457	A
Intersection 42	Hawthorne and Imperial	AM	N/A	Mitigation performed in 2008.	0.613	B
		PM	N/A		0.772	C
		AP	N/A		0.896	D
Intersection 89	Lincoln and Marina Expy.	AM	N/A	Mitigation for this impact involves 1) providing a fair-share contribution to LA County's Route 90 At-Grade Extension Project from Lincoln Blvd. to Admiralty Way[18] and 2) providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce NB through trips by 246 vehicles during the AM peak hour, 354 NB through trips in the airport peak hour, and 201 NB through vehicles in the PM peak hour.	1.011	F
		PM	N/A		1.085	F
		AP	N/A		0.786	C
Intersection 90	Lincoln and Maxella	AM	N/A	Mitigation for this impact involves providing a fair-share contribution to LA County's Route 90 gAt-Grade Extension Project from Lincoln Blvd. to Admiralty Way.[18]	0.693	B
		PM	N/A		0.888	D
		AP	N/A		0.799	C
Intersection 91	Lincoln and Mindanao	AM	N/A	Mitigation for this impact involves providing a fair-share contribution to LA County's Route 90 At-Grade Extension Project from Lincoln Blvd. to Admiralty Way.[18]	0.901	E
		PM	N/A		0.969	E
		AP	N/A		0.814	D
Intersection 96	Lincoln and Washington	AM	N/A	In addition to the mitigation performed in 2008, mitigation for this 2015 impact involves providing a fair-share contribution to LA County's Route 90 At-Grade Extension Project from Lincoln Blvd. to Admiralty Way.[18]	1.054	F
		PM	N/A		0.963	E
		AP	N/A		0.669	B

Table F4.3.2-29

Year 2015 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

					Conditions After Mitigation	
Facility Number	**Facility Name**	**Peak Hour**	**Direction**	**Improvements**	**V/C[1]**	**LOS[2]**
Intersection 136	Sepulveda and 79th/80th	AM	N/A	Mitigation for this intersection involves 1) widening the north side of 79th/80th Street to allow the WB approach to be restriped with 1 LT, 1 TH, 1 TH/RT, and 2) providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce NB through trips by 335 vehicles and SB through trips by 48 vehicles during the PM peak hour.	0.674	B
		PM	N/A		0.845	D
		AP	N/A		0.541	A
Intersection 137	Sepulveda and 83rd	AM	N/A	Mitigation for this intersection involves providing a fair-share contribution to MTA's proposed Metro Rapid Program or other enhancements to benefit transit traveling to and from LAX. These enhancements would need to reduce NB through trips by 264 vehicles during the PM peak hour.	0.727	C
		PM	N/A		0.911	E
		AP	N/A		0.395	A
Intersection 309	Hawthorne and Lennox	AM	N/A	The impact of this intersection is mitigated through the construction of the Lennox Boulevard interchange.	0.502	A
		PM	N/A		0.639	B
		AP	N/A		0.717	C
Intersection 310	Inglewood and Lennox	AM	N/A	The impact of this intersection is mitigated through the construction of the Lennox Boulevard interchange.	0.661	B
		PM	N/A		0.724	C
		AP	N/A		0.658	B
Intersection 502	Arbor Vitae and Inglewood	AM	N/A	Mitigation for this impact involves restriping the SB lane configuration from 1 LTR to 1 LT, 1 TH, 1 RT. This would require the removal of parking on the west side of Inglewood Blvd, north of Arbor Vitae St.	0.703	C
		PM	N/A		0.727	C
		AP	N/A		0.783	C
Intersection 503	Century and Inglewood	AM	N/A	Mitigation performed in 2008.	0.715	C
		PM	N/A		0.729	C
		AP	N/A		0.829	D
Intersection 505	Imperial and Inglewood	AM	N/A	Mitigation performed in 2008.	0.785	C
		PM	N/A		1.016	F
		AP	N/A		0.901	E
Intersection 506	Arbor Vitae and La Brea	AM	N/A	Mitigation for this impact involves an upgrade of the traffic signal to ATSAC/ATCS equivalent.	0.614	B
		PM	N/A		0.650	B
		AP	N/A		0.819	D
Link 1	Lincoln S/O Venice	AM	NB/EB	Fair-share contributions to regional transit service will mitigate the impacts of this link.	0.775	N/A
			SB/WB		0.915	N/A
		PM	NB/EB		0.969	N/A
			SB/WB		0.910	N/A
		AP	NB/EB		0.773	N/A
			SB/WB		0.806	N/A
Link 2	Centinela S/O Venice	AM	NB/EB	Fair-share contributions to regional transit service will mitigate the impacts of this link.	0.933	N/A
			SB/WB		0.661	N/A
		PM	NB/EB		0.859	N/A
			SB/WB		0.901	N/A
		AP	NB/EB		0.762	N/A
			SB/WB		0.858	N/A

Table F4.3.2-29

Year 2015 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

					Conditions After Mitigation	
Facility Number	**Facility Name**	**Peak Hour**	**Direction**	**Improvements**	**V/C[1]**	**LOS[2]**
Link 3	Sawtelle S/O Venice	AM	NB/EB	Fair-share contributions to regional transit service will mitigate the impacts of this link.	0.561	N/A
			SB/WB		0.617	N/A
		PM	NB/EB		0.505	N/A
			SB/WB		0.824	N/A
		AP	NB/EB		0.603	N/A
			SB/WB		0.780	N/A
Link 4	Sepulveda S/O Venice	AM	NB/EB	Fair-share contributions to regional transit service will mitigate the impacts of this link.	0.909	N/A
			SB/WB		0.717	N/A
		PM	NB/EB		1.106	N/A
			SB/WB		0.933	N/A
		AP	NB/EB		0.896	N/A
			SB/WB		0.956	N/A
Link 5	Overland S/O Venice	AM	NB/EB	Fair-share contributions to regional transit service will mitigate the impacts of this link.	N/A	N/A
			SB/WB		N/A	N/A
		PM	NB/EB		N/A	N/A
			SB/WB		N/A	N/A
		AP	NB/EB		N/A	N/A
			SB/WB		N/A	N/A
Link 8	Centinela E/O La Brea	AM	NB/EB	Integration of an ATSAC-equivalent improvement will mitigate the impacts of this link.	0.394	N/A
			SB/WB		0.909	N/A
		PM	NB/EB		0.688	N/A
			SB/WB		1.148	N/A
		AP	NB/EB		0.719	N/A
			SB/WB		0.536	N/A
Link 13	Imperial W/O La Brea	AM	NB/EB	Integration of an ATSAC-equivalent improvement will mitigate the impacts of this link.	0.246	N/A
			SB/WB		0.342	N/A
		PM	NB/EB		0.563	N/A
			SB/WB		0.338	N/A
		AP	NB/EB		0.699	N/A
			SB/WB		0.717	N/A
Link 20	Jefferson E/O Lincoln	AM	NB/EB	Fair-share contributions to regional transit service will mitigate the impacts of this link.	0.799	N/A
			SB/WB		0.508	N/A
		PM	NB/EB		0.539	N/A
			SB/WB		1.110	N/A
		AP	NB/EB		0.287	N/A
			SB/WB		0.440	N/A
Link 21	Lincoln S/O Jefferson	AM	NB/EB	Fair-share contributions to regional transit service will mitigate the impacts of this link.	0.802	N/A
			SB/WB		0.587	N/A
		PM	NB/EB		0.930	N/A
			SB/WB		0.709	N/A
		AP	NB/EB		0.617	N/A
			SB/WB		0.487	N/A
Link 22	Culver W/O Jefferson	AM	NB/EB	Fair-share contributions to regional transit service will mitigate the impacts of this link.	0.720	N/A
			SB/WB		0.309	N/A
		PM	NB/EB		0.555	N/A
			SB/WB		0.913	N/A
		AP	NB/EB		0.432	N/A
			SB/WB		0.505	N/A
Link 28	El Segundo W/O Hawthorne	AM	NB/EB	Integration of an ATSAC-equivalent improvement will mitigate the impacts of this link.	0.171	N/A
			SB/WB		0.484	N/A
		PM	NB/EB		0.778	N/A
			SB/WB		0.355	N/A
		AP	NB/EB		0.687	N/A
			SB/WB		0.872	N/A

Table F4.3.2-29

Year 2015 Alternative D Mitigation Plan (Adjusted Environmental Baseline Comparison)

Facility Number	Facility Name	Peak Hour	Direction	Improvements	Conditions After Mitigation V/C[1]	Conditions After Mitigation LOS[2]
Ramp 19	I-405 NB on-ramp and Century EB	AM	N/A	Addition of Lennox Interchange and I-105 ramps fully mitigate this impact.	0.599	N/A
		PM	N/A		0.933	N/A
		AP	N/A		0.571	N/A
Ramp 26	I-405 SB on-ramp and El Segundo	AM	N/A	Addition of Lennox Interchange and I-105 ramps fully mitigate this impact.	0.244	N/A
		PM	N/A		1.043	N/A
		AP	N/A		0.297	N/A
Ramp 35	I-105 WB off-ramp and Nash	AM	N/A	Addition of Lennox Interchange and I-105 ramps fully mitigate this impact.	1.155	N/A
		PM	N/A		0.238	N/A
		AP	N/A		0.631	N/A

[1] V/C = Volume to Capacity ratio.
[2] LOS = Level of Service.
[3] N/A = Not Applicable.
[4] WB = Westbound.
[5] TH = Through.
[6] RT = Right turn.
[7] AP = Airport peak hour.
[8] LT = Left turn.
[9] EB = Eastbound.
[10] ATSAC = Automated Traffic Surveillance and Control.
[11] ATCS = Adaptive Traffic Control System.
[12] NB = Northbound.
[13] RTOR = Right turn on red.
[14] OLA = Overlap allowed.
[15] MTA = Metropolitan Transportation Authority.
[16] SB = Southbound.
[17] N/O = North of.
[18] LA County's *Marina Expressway (SR-90) Connector Road to Admiralty Way* project is currently under environmental review and project funding has not been determined. Date of completion is targeted for 2011.
[19] S/O = South of.

Source: Barton-Aschman Associates, Inc., 2002.

Further, a more detailed mitigation phasing plan that shows the mitigation measures needed prior to operating each major component of Alternative D is shown in **Table F4.3.2-30**, Off-Airport Surface Transportation Phasing Plan.

Table F4.3.2-30

Off-Airport Surface Transportation Phasing Plan

Phase	Facility	Mitigation Measures Needed
1A	West Employee Parking Garage	♦ Complete off-site intersectional improvements at: ♦ Grand Avenue and Vista del Mar ♦ Highland Avenue/Vista del Mar and Rosecrans Boulevard ♦ Imperial Highway and Main Street ♦ Imperial Highway and Pershing Drive ♦ Imperial Highway and Sepulveda Boulevard ♦ Imperial Highway and Vista del Mar ♦ Jefferson Boulevard and Lincoln Boulevard ♦ Lincoln Boulevard and Manchester Avenue ♦ Lincoln Boulevard and Teale Street ♦ Rosecrans Avenue and Sepulveda Boulevard ♦ 83rd Street and Lincoln Boulevard; ♦ 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: ♦ Bali Way and Lincoln Boulevard ♦ Fiji Way and Lincoln Boulevard ♦ Lincoln Boulevard and Marina Expressway ♦ Lincoln Boulevard and Maxella Avenue ♦ Lincoln Boulevard and Mindanao Way ♦ Lincoln Boulevard and Washington Boulevard ♦ Provide a fair-share contribution toward the LAC-MTA's Metro Rapid Bus Line Expansion Program (possible concepts include but are not limited to paying for larger or additional buses from those planned by the LAC-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: ♦ Imperial Highway and Sepulveda Boulevard ♦ Jefferson Boulevard and Lincoln Boulevard ♦ Lincoln Boulevard and Manchester Avenue ♦ Lincoln Boulevard and Marina Expressway ♦ Lincoln Boulevard and Teale Street ♦ Lincoln Boulevard and Washington Boulevard

Table F4.3.2-30

Off-Airport Surface Transportation Phasing Plan

Phase	Facility	Mitigation Measures Needed
1B	Intermodal Transportation Center (ITC)	♦ Complete pedestrian connection between ITC and Green Line light rail station south of Imperial Highway; ♦ 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 111th Street; ♦ 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; ♦ Widen northbound I-405 off-ramp at Imperial Highway; ♦ Provide a "fair-share" contribution toward the LAC-MTA's Metro Rapid Bus Line Expansion Program (possible concepts include but are not limited to paying for larger or additional buses from those planned by the LAC-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: ♦ Centinela Avenue and Sepulveda Boulevard ♦ Howard Hughes Parkway and Sepulveda Boulevard ♦ Manchester Avenue and Sepulveda Boulevard ♦ Mariposa Avenue and Sepulveda Boulevard ♦ 76th St/77th St and Sepulveda Boulevard ♦ 79th St/ 80th St and Sepulveda Boulevard ♦ 83rd Street and Sepulveda Boulevard ♦ I-105 Freeway Westbound off-ramp at Sepulveda Boulevard ♦ Complete off-site intersectional improvements at: ♦ I-105 Freeway ramps/Continental City Drive & Imperial Highway (at-grade intersectional improvement only) • I-405 northbound off-ramp at Imperial Highway ♦ Aviation Boulevard and El Segundo Boulevard ♦ Aviation Boulevard and Imperial Highway ♦ Aviation Boulevard and Rosecrans Boulevard ♦ ♦ ♦ Douglas Street and Imperial Highway ♦ El Segundo Boulevard and La Cienega Boulevard ♦ La Cienega Boulevard and 111th Street ♦ Manchester Avenue and Sepulveda Boulevard ♦ Mariposa Avenue and Sepulveda Boulevard ♦ 79th Street/80th Street and Sepulveda Boulevard
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 intersectional improvements at: ♦ Airport Boulevard and Arbor Vitae Street ♦ Airport Boulevard and Manchester Avenue ♦ Centinela Avenue and Jefferson Boulevard ♦ Centinela Avenue and Sepulveda Boulevard ♦ Century Boulevard and Sepulveda Boulevard ♦ La Tijera Boulevard and Manchester Avenue ♦ La Tijera Boulevard and Sepulveda Boulevard ♦ Sepulveda Boulevard and I-105 Freeway WB Off-Ramp north of Imperial Highway
1F	Ground Transportation Center (including Commercial Vehicle Holding Area)	♦ Complete project-component GTC/ITC Roadways and Century Bridge; ♦ Complete project-component realignment of 104th Street east of the internal airport roadways to connect to 102nd Street ♦ 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; ♦ Complete project-component widening of Aviation Boulevard between Arbor Vitae Street and Century Boulevard;

Table F4.3.2-30

Off-Airport Surface Transportation Phasing Plan

Phase	Facility	Mitigation Measures Needed
		♦ 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; ♦ Complete project-component roadway improvements on Century Boulevard between Aviation Boulevard and Glasgow Place; ♦ Widen the off-ramp from southbound I-405 Freeway north of Century Boulevard at La Cienega Boulevard; ♦ Complete off-site intersectional improvements at: ♦ Arbor Vitae Street and Inglewood Avenue ♦ Arbor Vitae Street and La Brea Avenue ♦ ♦ Aviation Boulevard and Manchester Boulevard ♦ Centinela Avenue and Culver Boulevard ♦ Centinela Avenue and La Cienega Boulevard ♦ Century Boulevard and Hawthorne Blvd/La Brea Avenue ♦ Century Boulevard and Inglewood Avenue ♦ Century Boulevard and La Cienega Boulevard ♦ El Segundo Boulevard and Sepulveda Boulevard ♦ Florence Avenue and La Cienega Boulevard ♦ Hawthorne Boulevard and Imperial Highway ♦ Imperial Highway and Inglewood Avenue ♦ La Cienega Boulevard and Manchester Boulevard ♦ Begin construction of direct connection between I-105 Freeway ramps and internal airport roadways east of ITC (See Note 7); ♦ Begin construction of I-405 Interchange at Lennox Boulevard (See Note 7)

Notes:

1 For a detailed description of intersectional improvements, see Tables F4.3.2-28 and F4.3.2-29.

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 the Off-Airport Transportation Phasing Plan, all required improvements in the entire phasing plan shall be funded, completed, or resolved to the satisfaction of LADOT.

Source: Los Angeles World Airports (LAWA), 2002.

The following mitigation measures are recommended for Alternative D:

- **MM-ST-6. Add New Traffic Lanes (Alternative D)**

  Traffic lanes shall be added to select intersections to the satisfaction of LADOT or other appropriate jurisdiction, sufficient to increase the capacity of the intersection without unnecessarily reducing sidewalk widths, removing on-street parking, or encroaching onto other land uses.

- **MM-ST-7. Restripe Existing Facilities (Alternative D)**.

  Existing traffic lanes shall be restriped to the satisfaction of LADOT or other appropriate jurisdiction, so that additional lane capacity will be provided without adding any new pavement to the intersection or road segment.

- **MM-ST-8. Add ATSAC, ATCS or Equivalent (Alternative D)**.

  Automated Traffic Surveillance and Control (ATSAC) or Adaptive Traffic Control System (ATCS) capability or equivalent shall be added to select intersections to the satisfaction of LADOT or other appropriate jurisdiction. The improved capability will result in a more effective traffic signal network.

- **MM-ST-10. Modify Signal Phasing (Alternative D)**.

  The traffic signal phasing of select intersections shall be modified to the satisfaction of LADOT or other appropriate jurisdiction, to allow more efficient use of the intersections, particularly those that will experience a notable change in traffic characteristics as a result of the project.

- **MM-ST-12. Provide New Ramps Connecting I-105 to LAX Between Aviation Boulevard and La Cienega Boulevard (Alternative D).**

  These ramps shall be provided to allow for direct access and egress to/from the ITC and GTC via I-105, between Aviation Boulevard and La Cienega Boulevard. A feasibility study is underway to determine the best design for these ramps.

  These ramps may cause additional construction impacts, but no other significant impacts are expected to result, as discussed in subsection 4.3.2.9, *Environmental Impacts of Off-Airport Surface Transportation Mitigation Measures,* below.

There may be an interim period in which the GTC is open but the full mitigation plan associated with the GTC is not yet available, due to delays in obtaining permits, etc. Should this occur, temporary mitigation may be necessary, including, but not limited to, temporary installation of changeable message signs, traffic signal phasing adjustments, increased use of Highway Advisory Radio, and others. Any temporary mitigation would be closely coordinated with impacted transportation departments, including LADOT and Caltrans. Also, at the discretion of LAWA and in consultation with the LADOT, some of the mitigation measures may be replaced by other comparable measures due to changes that occur in the area.

- **MM-ST-13. Create A New Interchange at I-405 and Lennox Boulevard (Alternative D).**

  This interchange shall provide grade-separated ramps from I-405 directly into airport property, and vice-versa. It shall be located approximately mid-way between Century Boulevard and Imperial Highway. A feasibility study is underway to determine the best design for the interchange.

  This interchange will likely cause both visual and road noise impacts, and will require the relocation of several residential and commercial properties, as discussed in subsection 4.3.2.9, *Environmental Impacts of Off-Airport Surface Transportation Mitigation Measures (Alternative D),* below.

- **MM-ST-15. Provide Fair-Share Contributions to Transit Improvements (Alternative D).**

  Provide fair-share contributions to benefit transit to and from LAX to the satisfaction of LADOT and/or other appropriate jurisdiction or agency.

- **MM-ST-16. Provide Fair-Share Contribution to LA County's Project to Extend the Marina Expressway.**

  Provide fair-share contribution to Los Angeles County's project to extend the Marina Expressway (Route 90) to Admiralty Way or complete alternative off-site improvements.

As shown, the mitigation plan includes such measures as enhancing traffic signaling, providing ATSAC and ATCS, and contributing to other ongoing capital projects that will benefit airport traffic. As indicated at the beginning of this subsection, 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.

4.3.2.8.3 Cumulative Impacts - Alternatives A, B, C, and D

The following mitigation measure is proposed to limit the cumulative impacts of construction on area roads:

- **MM-ST-14. Ground Transportation/Construction Coordination Office Outreach Program (Alternatives A, B, C, and D).**

  The construction coordination office proposed in Master Plan Commitment C-1, Establishment of a Ground Transportation/Construction Coordination Office (Alternatives A, B, C, and D), shall establish appropriate mechanisms to involve and coordinate with other major airport-area development projects to the extent feasible, to ensure that the cumulative impacts of construction in the airport area are coordinated and minimized.

4.3.2.8.4 CMP Mitigation Analysis (Alternative D)

In accordance with CMP requirements, the analysis completed for Alternative D includes the identification of possible improvements that would mitigate CMP impacts and an estimate of the project's fair-share contribution to such improvements, based on the amount of traffic growth at affected facilities that is attributable to the proposed project. State statute requires that the CMP include a program that analyzes the impacts of land use decisions on the regional transportation system, and that provides estimates of the cost of mitigating associated impacts. The objectives of the CMP Land Use Analysis Program for Los Angeles County are: reaffirming the responsibility of the lead agency as the decision-making authority; establishing a program that can be integrated into existing local review processes, with minimal additional burden placed on public and private entities; promoting increased inter-jurisdictional coordination in evaluating and mitigating land use impacts; and encouraging consistent analysis of regional impacts and the sharing of this information through the CEQA process.

This evaluation includes the identification of CMP impacts, and estimates the costs of mitigating associated impacts. This includes an order-of-magnitude cost estimate of potential improvements, as well as an estimate of the project's fair-share contribution to such improvements based on demand, as shown in **Table F4.3.2-31,** Possible Mitigation Measures for Impacts to CMP Segments - Alternative D. Project fair-share estimates are calculated by determining the total traffic growth on each facility between existing (1996) and future (2015) conditions. The percentage of this growth attributable to the project is used as the fair-share percentage. It is important to note that the identification of possible improvements, cost estimates, and fair-share contribution calculations are for general information purposes only, to assist in local land use decisions and inter-jurisdictional coordination.

Table F4.3.2-31

Possible Mitigation Measures for Impacts to CMP Segments - Alternative D

CMP Route	Segment Terminals		Agency/ Jurisdiction	Possible Improvement[2]	Project's Fair-Share Contribution[3]
	North or West End	South or East End			
Lincoln Boulevard	Venice[1]	Washington	Los Angeles	Improvements at intersection #96	11.0%
	Washington	Marina Expwy[1]	Los Angeles	Improvements at intersections #89, 96	3.4%
	Marina Expwy[1]	Culver	Los Angeles	Improvements at intersections #16, 39, 89, 91	17.1%
	Culver	Jefferson	Los Angeles	Improvements at intersection #57	24.0%
	Jefferson	Manchester[1]	Los Angeles	Improvements at intersections #57, 87, 88, 94	19.5%
	Manchester[1]	Westchester Pkwy	Los Angeles	Improvements at intersection #88	25.7%
Sepulveda Boulevard	Lincoln[1]	Century	Los Angeles	Improvements at intersection #27	1.9%
	Century	I-105	Los Angeles	Improvements at intersections #27, 105	20.9%
	I-105	Mariposa	El Segundo	Improvements at intersections #100, 105	62.9%
	Mariposa	El Segundo[1]	El Segundo	Improvements at intersections #35, 100	18.3%
	El Segundo[1]	Rosecrans[1]	El Segundo	Improvements at intersections #35, 103	13.2%
	Rosecrans[1]	Marine	Manhattan Bch	Improvements at intersection #103	7.5%
	Marine	Manhattan Bch	Manhattan Bch	Signal synchronization (ATSAC, ATCS or equivalent)	12.4%
	Manhattan Bch	Artesia[1]	Manhattan Bch	Signal synchronization (ATSAC, ATCS or equivalent)	16.6%
Venice Boulevard	I-405	Overland[1]	Culver City	Signal synchronization (ATSAC, ATCS or equivalent)	17.7%
La Cienega Boulevard	Fairfax	Jefferson[1]	Los Angeles	Signal upgrade to ATCS or equivalent	21.9%
	Jefferson[1]	Rodeo	Los Angeles	Signal upgrade to ATCS or equivalent	57.0%
	Rodeo	Stocker[1]	L.A. County	Signal synchronization (ATSAC, ATCS or equivalent)	35.9%
	Stocker[1]	Slauson	L.A. County	Signal synchronization (ATSAC, ATCS or equivalent)	31.4%
	Slauson	Centinela[1]	Inglewood	Signal synchronization (ATSAC, ATCS or equivalent)	58.0%
	Centinela[1]	I-405	Los Angeles	Improvements at intersection #20	70.6%
Manchester Boulevard	Lincoln[1]	Sepulveda[1]	Los Angeles	Improvements at intersection #88	12.6%
	Sepulveda[1]	La Tijera	Los Angeles	Signal upgrade to ATCS or equivalent	13.8%
I-405	Santa Fe Ave.[1]			Contribution to future freeway improvements	7.7%
	S/o I-110 @ Carson Scales[1]			Contribution to future freeway improvements	10.0%
	N/o Inglewood Ave.[1]			Contribution to future freeway improvements	75.0%

[1] CMP monitoring location.
[2] Descriptions of intersection improvements are found in Attachment E of Technical Report S-2b, *Supplemental Off-Airport Surface Transportation Technical Report*, intersection numbers identify specific intersections to be improved.
[3] Fair-Share Contribution represents the percentage of future traffic growth attributed to airport traffic. It does not represent the percentage of total traffic on the facility attributed to airport traffic.

Source: Parsons Transportation Group, 2003.

Because Los Angeles County has deficient transportation facilities, as defined in the CMP, all jurisdictions in the County are required to participate in the County Deficiency Plan. Each jurisdiction in Los Angeles County is required to monitor its development activity on an annual basis. This monitoring includes documentation of all new development projects within the jurisdiction and an inventory of all mitigation strategies employed by the jurisdiction.

There is no prescribed set of mitigation strategies that will be effective in every community of Los Angeles County. Therefore, the CMP guidelines provide a series of strategies that can be used in addressing CMP impacts. As a part of the Countywide Deficiency Plan, each jurisdiction is given a congestion mitigation goal, also referred to as "debits," and must accrue "credits" through implementation of mitigation strategies to offset the debits and meet the congestion mitigation goal.

Under CMP guidelines, the City of Los Angeles may use CMP credits accrued from this and other projects within the City to offset regional congestion impacts of all new development within the City. CMP debits are defined as the number of vehicle miles generated annually by new development within the City, and are quantified according to procedures provided in Appendix G of the 2002 CMP. CMP credits are defined and quantified in the Countywide Deficiency Plan Toolbox of Strategies (CMP Appendix F), and are used to offset the accrued CMP debits. As long as CMP credits equal or exceed debits, the

jurisdiction meets in full its obligation to provide mitigation strategies commensurate with its contribution to regional congestion.

While a debit/credit analysis is required annually on a citywide basis, not on a project basis, it can be useful to assess an individual project's contribution toward the overall debit/credit balance for the City. For this reason, a preliminary assessment of CMP debits and credits that may be attributable to the LAX Master Plan has been performed.

The CMP Deficiency Plan establishes a congestion mitigation goal for each jurisdiction. This goal is equivalent to the number of CMP debits accrued. Debit values are assigned to residential development activity, commercial development activity, and non-retail development activity. A fourth category, "other" is identified for land uses not referenced elsewhere, including airport related projects, as well as port and commercial recreation development.

LAX Master Plan development is categorized as "other" development activity. Calculation of the CMP debits is shown in Attachment G of Technical Report S-2b, *Supplemental Off-Airport Surface Transportation Technical Report*. Acquisition of currently developed land will reduce trip generation from areas surrounding the airport. Adjustments to reduce the value of the debits are allowed, and have been made. The final number of debits, or the congestion mitigation goal, is 69,841.

Possible CMP credits to be claimed for Alternative D include the following.

- **Multimodal transit center credits**

  Credits are given for increases in transit ridership at multimodal transit centers. Transit ridership is expected to increase by 1,847 daily boardings at the ITC. Assuming that there are 1,351 rail boardings, one-half of the bus boardings are express bus, and one-half are local bus trips, the total number of credits accrued is (1,351 * 7.9) + (248 * 0.38) + (248 * 0.17) = 10,809 credits.

- **Freeway ramp credits**

  There are 1,150 credits given per new freeway ramp. Six new freeway ramps are proposed in the Alternative D mitigation plan that includes the Lennox Boulevard/I-405 Freeway interchange. In order to construct these proposed ramps, it is likely that an existing ramp on the I-405 Freeway would need to be closed, leaving a net increase of five ramps. Therefore the credit for freeway ramps is 1,150 * 5 = 5,750 credits.

- **Traffic signal surveillance and control (including synchronization) credits**

  Credits are given for traffic signalization and control improvements to intersections, both along the CMP highway system and other major arterials. LAWA would contribute to a system-wide upgrading of the ATSAC system to ATCS. This enhances the capacity of 3.4 miles of regional arterials and 15.4 miles of other major arterials by three percent. However, CMP credits for this category are based on upgrading an intersection to ATSAC, which increases intersectional capacity by seven percent. Therefore, the CMP credits claimed for upgrading an intersection from ATSAC to ATCS are calculated at three-sevenths (43 percent) of the full CMP credit. CMP credits for traffic signal surveillance and control are 3,271 for regional (CMP) arterials and 14,294 for other major arterials, totaling 17,565 credits.

- **Intersection modification credits**

  In addition to other improvements claimed in other categories, intersection improvements are applied to one arterial on the regional highway system and 11 other arterials. The total credits are 575 for improvements on regional (CMP) roadways and 1,584 for improvements to other roadways, totaling 2,159 credits.

The total of these accrued credits and adjustments is 36,283. This falls short of the congestion mitigation goal of 69,841. Some of these credits have been based on conservatively low assumptions, such as the multimodal transit center credits. When implemented, these programs may well accrue more credits than currently estimated. In addition, the City of Los Angeles currently has a credit balance that can be used to offset any remaining debits. In fact, the City of Los Angeles has a large balance of CMP credits as of the end of FY 2002. Those credits were accumulated from four types of projects throughout the City: capital improvements, land uses, transit projects, and traffic demand management (TDM) projects. Therefore it is concluded that the ground access plan for LAX, in combination with the use of existing City

of Los Angeles CMP credits, can be used to fully offset Alternative D's contribution to regional traffic congestion. This preliminary assessment of LAX Master Plan debits and credits is for information only, and is not intended to represent the City's CMP Deficiency Plan participation for this or any future year. Detailed assessments of annual CMP debits and credits are performed by the City of Los Angeles based on the development approvals and transportation improvements that occur throughout the city each year.

4.3.2.9 Environmental Impacts of Off-Airport Surface Transportation Mitigation Measures (Alternative D)

4.3.2.9.1 Improvements at I-405 and I-105

As described above, proposed mitigation measures include a new I-405/Lennox Boulevard interchange, which will provide a direct connection for vehicles traveling to and from I-405 and LAX. Measures also include a new elevated roadway structure to fly over the existing I-105/Imperial Highway interchange near Aviation Boulevard. This new roadway will provide a direct connection for vehicles traveling to and from I-105 and LAX.

In addition to the traffic impacts described above, implementation of these mitigation measures could result in secondary impacts (i.e., environmental impacts associated with construction of the proposed improvements). The following describes, in general, the more notable types of environmental impacts that would likely occur in conjunction with the improvements recommended under MM-ST-12, Provide New Ramps Connecting to I-105 to LAX Between Aviation Boulevard and La Cienega Boulevard (Alternative D), and MM-ST-13, Create a New Interchange at I-405 and Lennox Boulevard (Alternative D).

Air Quality

Development of the I-105 ramps to the ITC and the new interchange at Lennox Boulevard and I-405 would result in construction-related air quality impacts from equipment operations, worker commute, materials deliveries, and ground disturbance. Most notable from the equipment operation would be emissions from diesel-powered equipment, which can be particularly high in NO_X emissions. This would also be the case for emissions associated with the use of diesel-powered trucks associated with the transport of materials to and from the I-105 and I-405 improvements sites.

From an operations standpoint, development of the I-105 ramps to the ITC and the new interchange at Lennox Boulevard and I-405 effectively mitigates traffic impacts at several intersections by reducing the amount of traffic delay. Delay created at other intersections would also be mitigated by the other elements of the transportation mitigation plan described in subsection 4.3.2.8, *Mitigation Measures*. This reduced delay should translate into reduced emissions and improved air quality, when compared to the Adjusted Environmental Baseline condition.

Further, a feasibility analysis of the Lennox Interchange and I-105 ramps has found that these mitigation measures will not substantially change the total traffic volumes on the I-105 or I-405 freeways, but will increase average speeds and reduce vehicle hours on these facilities. As shown in **Table F4.3.2-6**, vehicle hours traveled on these two freeways will be reduced. These reductions in vehicle hours due to increased average speeds will have a beneficial impact on emissions and air quality.

Visual/Aesthetics

The ramp improvements at I-105 and the construction of a new interchange at Lennox Boulevard and I-405 include new structures, some being elevated, that will alter the visual character of each area. The recommended I-105 ramp improvements would cross Imperial Highway, extending north/south between an existing warehouse and a future elevated parking structure and maintenance service facility within the ITC. Given that the I-105 site area is already characterized primarily by a network of existing surface roadway, elevated freeway, and associated ramp improvements, and is situated largely within an industrial land use setting, the addition of the recommended ramps would not likely result in a significant impact on existing views or the visual character of the area.

The recommended interchange at Lennox Boulevard would include the development of entrance and exit ramps to and from I-405, which is elevated above Lennox Boulevard. Segments of these ramps would occur as elevated roadways, as structured viaducts or on retaining walls, with both creating visual impacts. Development of these new roadways (ramps) would likely include the construction of sound

walls, which would also have visual impacts. Along the southbound side of I-405 near Lennox Boulevard, the visual impacts would be less than significant as most of the new roadways would either be below grade or at the same elevation as I-405 while running parallel to it. In this area, sound walls may be necessary along the new roadways that are adjacent to commercial buildings.

Along the northbound side of I-405 near Lennox Boulevard, elevated roadways would extend from the I-405/I-105 interchange to Lennox Boulevard and most likely would extend all the way to Century Boulevard. These roadways would run adjacent to two local schools and along residential properties. Sound walls would need to be placed along these stretches of the roadway to reduce the amount of noise impact to the schools and residences. Where the elevated roadways run alongside the schools' right-of-way, if these roadways are on retaining walls, these retaining walls could be architecturally treated or have murals painted on them which would not only minimize the visual impacts of the presence of the walls but may enhance the aesthetic surroundings of the school.

Development of the ramps and roadways associated with the recommended interchange would likely include the installation of light standards; however, given the existing lighting that already occurs along I-405 and the typical requirements that new lighting fixtures be hooded and directed to minimize the amount of light "spill-over" off of the targeted roadway areas, no significant lighting impacts would likely occur.

Noise Effects (I-405)

Based on the industrial nature of existing land uses located near the recommended ramps at I-105, and the relatively limited nature and extent of those ramp improvements, no significant noise impacts would occur from those improvements.

As indicated above, the improvements associated with the recommended Lennox Boulevard/I-405 interchange include the construction of elevated roadways that would extend near two schools and along residential properties; however, sound walls would be included in the construction of such roadways. The subject noise-sensitive land uses could be exposed to periods of high noise levels during construction of the interchange improvements, but long-term exposure to noise from traffic on the interchange would likely be less than significant, based on the effectiveness of the sound walls.

Hydrology/Water Quality

Based on the elevated nature of the recommended ramps at I-105, no substantial change in hydrology would occur. It is anticipated that the construction and long-term operation of those recommended improvements would incorporate water quality Best Management Practices (BMPs) in accordance with local, state, and federal requirements.

Development of the recommended Lennox Boulevard/I-405 interchange may result in changes to local hydrology; however, such changes would not likely be substantial and would be addressed through the detailed planning and engineering to occur. Similar to the I-105 improvements noted above, potential water quality impacts associated with construction and operation of the recommended interchange would be addressed through BMPs, in accordance with local, state, and federal requirements.

Relocation of Residences or Businesses

No residential or business properties would need to be acquired and/or relocated for the recommended I-105 ramp improvements.

Implementation of the recommended Lennox Boulevard/I-405 interchange would require some right-of-way acquisition and would impact residential and commercial property. Nine to 12 residential homeowners would need to be relocated. Four to seven commercial buildings would need to be either relocated or, if possible, refaced with only a partial right-of-way take. There is also a community center located at the northeast quadrant of the intersection of I-405 and Lennox Boulevard, which may also need to be relocated. It is anticipated that existing residential and business uses that would need to be acquired and relocated in order for the recommended Lennox Boulevard/I-405 interchange to be constructed would be addressed through a Residential and Business Relocation Program, similar to that described in Master Plan Commitment RBR-1, Residential and Business Relocation Program (Alternatives A, B, C, and D), in accordance with state and federal requirements.

Historical Resources

Based on a preliminary review and assessment of structures located in the vicinity of the recommended improvements at I-405 and I-105, no historic/architectural resources were identified. Therefore, impacts on historic architectural resources are not expected to occur. Additionally, no archaeological/cultural resources were identified; however, unanticipated discoveries may occur from construction-related activities. The recommended mitigation measures outlined in Section 4.9.1, *Historical/Architectural and Archaeological/Cultural Resources*, would reduce the impact to a less than significant level.

Construction Detours

Temporary closure of the existing I-105 on- and off-ramps at Imperial Highway near Aviation Boulevard would be required during construction of the recommended ramps between the ITC and I-105. Partial closure of Imperial Highway may also be necessary during the construction of the elevated roadway structure over Imperial Highway.

During construction of the recommended interchange at Lennox Boulevard/I-405, the northbound I-405 off-ramp to the collector/distributor road at the I-405/I-105 interchange and the northbound I-405 off-ramp to Century Boulevard would both need to be temporarily closed. La Cienega Boulevard at Lennox Boulevard would also need to be temporarily closed as the grade separations below La Cienega Boulevard are being constructed. A detour at this location would be necessary, the impacts of which would depend on the specific detour route(s) determined at the time of detailed planning and/or construction.

4.3.2.9.2 FlyAway Remote Terminals

The development of new FlyAway remote terminals is proposed to reduce the amount of vehicle traffic associated with travel to and from LAX. LAWA currently operates a FlyAway terminal at Van Nuys Airport and is planning the addition of two new remote terminals, one at Union Station in downtown Los Angeles and the other in the City of Long Beach. LAWA is also evaluating the potential to develop FlyAway terminals in the City of Inglewood and at the Norwalk/Santa Fe Springs transportation center. A second remote terminal for the San Fernando Valley is also being considered. Although the location, size, and design of new FlyAway terminals will depend on the specifics of candidate sites, the general characteristics of a remote terminal include a 5,000 square foot to 7,000 square foot terminal building with approximately 1,200 parking stalls. New remote terminals would be located in non-residential areas, typically near a major freeway or on major arterial streets to facilitate regional access. In particular, LAWA prefers developing new FlyAway terminals at existing or planned transportation centers.

The potential environmental impacts associated with development of a new FlyAway remote terminal would depend largely on the existing use and land use setting of the proposed site. For example, the addition of a new FlyAway terminal at an existing or planned regional transportation center would, in general, pose a much lower potential for significant environmental impacts than developing a terminal at a vacant site or one that requires demolition or substantial alteration of existing structures. The potential for construction-related impacts, such as noise, dust, and air pollutant emissions, as well as operational impacts such as traffic, noise, light and glare, visual and aesthetics, and land use compatibility would be influenced accordingly. As noted above, however, the exact nature, extent, and significance of such impacts from a new FlyAway terminal would largely depend on the specifics of the proposed site. Such project- and site-specific information would also influence the nature, extent, and effectiveness of mitigation measures proposed to address those impacts. It is anticipated that most, if not all, impacts related to construction activities, as well as operational land use compatibility, could be addressed through the types of mitigation measures described in this Final EIS/EIR, as well as through site design specifications (i.e., noise walls, shielding of outdoor lighting to avoid "spill-over" onto adjacent properties, etc.).

4.3.2.9.3 Other Off-Airport Surface Transportation Mitigation Measures

As described above in subsection 4.3.2.8, *Mitigation Measures,* several types of improvements to the off-airport surface transportation system are recommended to mitigate the impacts of each of the Master Plan alternatives. Such improvements include the addition of, or improvements to, travel- and turn-lanes, and the addition or modification of automated traffic signal control systems such as Automated Traffic

Surveillance and Control (ATCAS), Adaptive Traffic Control System (ATCS), or other traffic signal systems. For some of these types of off-airport surface transportation system improvements, the associated potential environmental impacts would be very limited, such as in the case of the addition or modification of automated traffic control systems where the most notable impacts would be improved traffic flows and associated reductions in vehicular air pollutant emissions. The potential environmental impacts associated with other types of improvements to the off-airport surface transportation system would depend on the specific nature, location, and extent of such improvements. For example, the addition or improvement of travel- and/or turn-lanes that is accomplished by restriping of lanes within existing roadway segments would, in general, have a low potential for significant environmental effects other than improvement in traffic flows. The addition of lanes accomplished by the removal or modification of existing raised medians would have some level of environmental impacts such as construction-related noise, air quality impacts, temporary lane closures, and possibly visual impacts if the removed median was previously landscaped. The addition of lanes accomplished through elimination of on-street parking could impact nearby off-street parking areas and/or remaining on-street parking areas to the extent that the affected parking redistributes to such areas, or such existing parking may simply be lost. The addition of lanes accomplished through the physical widening of roadway segments could result in the types of potential environmental impacts described above relative to the removal or modification of raised medians, and could also result in the reduction of the widths of sidewalks or parkways, possibly impacting trees, utilities, or other existing improvements, if any, located within the needed right-of-way. Similar to the above relative to the impacts of future FlyAway remote terminals, the location, nature, and significance of, as well as appropriate mitigation measures for, the environmental impacts associated with these other types of off-airport surface transportation system improvements would depend on the specifics of each improvement. Similar to the above, it is anticipated that many of the potential impacts could be addressed by the types of mitigation measures presented in this Final EIS/EIR.

4.3.2.10 Level of Significance After Mitigation

4.3.2.10.1 Alternative A - Added Runway North

The final levels of service (LOS) after implementing the proposed transportation mitigation plan for Alternative A are summarized in **Table F4.3.2-23.** Information presented in the table represents the level of significance for off-airport surface transportation impacts after mitigation.

According to LADOT, it is likely that physical constraints adjacent to six intersections would hinder their mitigation to less than significant, even with implementation of the mitigation plan shown in **Table F4.3.2-23**. As a result, impacts to the following intersections would be significant and unavoidable:

- Arbor Vitae Street and La Cienega Boulevard,
- Century Boulevard and La Cienega Boulevard,
- Jefferson Boulevard and Lincoln Boulevard,
- La Tijera Boulevard and Sepulveda Boulevard,
- Lincoln Boulevard and the Marina Expressway, and
- Lincoln Boulevard and Teale Street.

By 2015, in addition to the intersection improvements, improvements would be needed to mitigate link (i.e., street segment) impacts. In most of these cases, the link impacts would be such that the proposed intersection improvements would provide full mitigation. In addition, construction-related traffic would, at times, result in significant and unavoidable impacts.

4.3.2.10.2 Alternative B - Added Runway South

The final LOS after implementing the proposed transportation mitigation plan for Alternative B are summarized in **Table F4.3.2-24.** Information presented in the table represents the level of significance for off-airport surface transportation impacts after mitigation. According to LADOT,[167] it is likely that physical constraints adjacent to six intersections would hinder their mitigation to less than significant, even with

[167] Telephone Communication with Tom Carranza, Transportation Engineer, of the LADOT, (October 18, 2000).

implementation of the mitigation plan shown in **Table F4.3.2-24**. As a result, impacts to the following intersections would be significant and unavoidable:

- Arbor Vitae Street and La Cienega Boulevard,
- Century Boulevard and La Cienega Boulevard,
- Jefferson Boulevard and Lincoln Boulevard,
- La Tijera Boulevard and Sepulveda Boulevard,
- Lincoln Boulevard and the Marina Expressway, and
- Lincoln Boulevard and Teale Street.

By 2015, in addition to the intersection improvements, improvements would be needed to mitigate link (i.e., street segment) impacts. In most of these cases, the link impacts would be such that the proposed intersection improvements would provide full mitigation. In addition, construction-related traffic would, at times, result in significant and unavoidable impacts.

4.3.2.10.3 Alternative C - No Additional Runway

The final LOS after implementing the proposed transportation mitigation plan for Alternative C are summarized in **Table F4.3.2-25**. Information presented in the table represents the level of significance for off-airport surface transportation impacts after mitigation. It is likely that physical constraints adjacent to eight intersections would hinder their mitigation to less than significant, even with implementation of the mitigation plan shown in **Table F4.3.2-27**. As a result, impacts to the following intersections would be significant and unavoidable:

- Arbor Vitae Street and La Cienega Boulevard during the a.m. and p.m. peak hours,
- Century Boulevard and La Cienega Boulevard,
- Jefferson Boulevard and Lincoln Boulevard,
- La Tijera Boulevard and Lincoln Boulevard during the p.m. peak hour,
- La Tijera Boulevard and Sepulveda Boulevard during the p.m. peak hour,
- Lincoln Boulevard and Manchester Avenue during the a.m. peak hour,
- Lincoln Boulevard and the Marina Expressway, and
- Lincoln Boulevard and Teale Street.

By 2015, in addition to the intersection improvements, improvements would be needed to mitigate link (i.e., street segment) impacts. In most of these cases, the link impacts would be such that the proposed intersection improvements would provide full mitigation. In addition, construction-related traffic would, at times, result in significant and unavoidable impacts.

4.3.2.10.4 Alternative D - Enhanced Safety and Security Plan

The final LOS after implementing the proposed transportation mitigation plan for Alternative D are summarized in **Table F4.3.2-29**. Information presented in the table represents the level of significance for off-airport surface transportation impacts after mitigation. It is likely that physical constraints adjacent to three intersections would hinder their mitigation to less than significant, even with implementation of the mitigation plan shown in **Table F4.3.2-29**. As a result, impacts to the following intersections would be significant and unavoidable:

- Century Boulevard at La Cienega Boulevard (a.m., p.m., and airport peak hours),
- Imperial Highway at La Cienega Boulevard (p.m. and airport peak hours), and
- Jefferson Boulevard at Lincoln Boulevard (p.m. and airport peak hours).

All other intersections and links would be mitigated to less than significant levels. Implementation of the mitigation measures would be phased to ensure that all interim impacts are mitigated throughout the development of the LAX Master Plan.

Further, in the event that the GTC opens prior to the successful implementation of all necessary GTC-related mitigation measures, feasible temporary mitigation measures would be installed to minimize the chance for resulting significant impacts. However, even with these temporary mitigation measures, there could still be temporary and unavoidable significant impacts associated with this circumstance.

In addition to the impacts described above, construction-related traffic would, at times, result in significant and unavoidable impacts.