Draft Environmental Impact Report (Draft EIR)

[State Clearinghouse No. 2008121080]

for

Los Angeles International Airport (LAX) Bradley West Project

(formerly Los Angeles International Airport [LAX] Tom Bradley International Terminal [TBIT] Reconfiguration Project)

Volume 1

Main Document

City of Los Angeles
Los Angeles City File No. AD 043-08

May 2009

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Los Angeles World Airports (LAWA) has prepared this project-level draft environmental impact report (Draft EIR) for the Bradley West Project pursuant to the California Environmental Quality Act (CEQA). The Bradley West Project is a project component of the LAX Master Plan Program approved by the Los Angeles City Council in December of 2004. The LAX Master Plan was the subject of a certified program-level environmental impact report (LAX Master Plan Final EIR) and an approved environmental impact statement (LAX Master Plan Final EIS), which were prepared by LAWA and the Federal Aviation Administration, respectively.

The Bradley West Project Draft EIR is "tiered" from, and incorporates by reference, the LAX Master Plan Final EIR. This means that this Draft EIR builds on the work contained in the LAX Master Plan Final EIR, and provides additional project-level information and analysis as necessary for public agencies, decision makers, and interested parties to evaluate the Bradley West Project under CEQA. CEQA encourages public agencies to tier environmental analyses for individual projects from program-level environmental impact reports to eliminate repetitive discussions and to focus later EIRs (such as this Draft EIR) on issues that may have not been fully addressed at a project-level of detail.

The LAX Master Plan Final EIR dealt with many of the specific issues associated with the individual projects encompassed within the Master Plan, such as the improvements currently proposed for the Bradley West Project. This "tiered" Draft EIR supplements the information and analysis provided in the LAX Master Plan EIR with further detailed information and analysis at the project level, and it focuses on those effects not previously considered in the Master Plan EIR. For this reason, much of the information related to the Bradley West Project improvements contained in the LAX Master Plan EIR is not repeated in this Draft EIR. However, a brief summary of each of the areas covered in the LAX Master Plan Final EIR has been provided in this project level Draft EIR, along with the location where the reader can locate the prior treatment of those areas.

This Draft EIR is prepared in accordance with all requirements of CEQA. This Draft EIR incorporates and responds to comments received on the Notice of Preparation for the EIR. LAWA will accept written comments on this Draft EIR during the 45-day public comment period, which expires on June 22, 2009. LAWA will then prepare written responses to all comments received on issues pertinent to the Draft EIR during the comment period. Those responses, along with a copy of the comments received, will be published in a Final EIR. LAWA, the Los Angeles Board of Airport Commissioners, and other decision-makers will use the Final EIR to inform their decisions on the Bradley West Project, as CEQA requires.

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1. INTRODUCTION AND EXECUTIVE SUMMARY

This document is a project-level Draft Environmental Impact Report (Draft EIR) for Bradley West Project improvements proposed for the Tom Bradley International Terminal (TBIT) at Los Angeles International Airport (LAX) (also referred to as the "TBIT Reconfiguration Project"). LAX is owned and operated by the City of Los Angeles, whose Board of Airport Commissioners oversees the policy, management, operation, and regulation of LAX, as well as LA/Ontario International Airport, Van Nuys Airport, and LA/Palmdale Regional Airport. Los Angeles World Airports (LAWA) is a self-supporting administrative department of the City of Los Angeles charged with administering the day-to-day operations of LAX. This Draft EIR has been prepared by LAWA as the lead agency in conformance with the California Environmental Quality Act (CEQA).[1]

The Bradley West Project is located entirely within the boundaries of LAX. **Figure 1-1** shows the regional location of LAX and **Figure 1-2** shows the local setting of the airport. The Bradley West Project involves certain terminal, concourse, and airfield improvements that are components of the LAX Master Plan, which was approved by the Los Angeles City Council in December 2004.[2] **Figure 1-3** shows the location of the Bradley West Project relative to the approved Master Plan. The LAX Master Plan provides a conceptual strategic framework for a variety of improvements to occur throughout the airport in light of specific existing and anticipated needs at LAX. Concurrent with the approval of the LAX Master Plan was the certification of the LAX Master Plan Final EIR, which addresses the environmental impacts associated with the LAX Master Plan improvements. The main elements of the Bradley West Project are identified within the LAX Master Plan Final EIR as the "reconfiguration" of TBIT.[3] As a programmatic level EIR, the LAX Master Plan Final EIR was prepared and certified by LAWA for the entire LAX Master Plan. In accordance with CEQA, subsequent activities occurring within the Master Plan are examined in light of the program EIR to determine whether an additional environmental document must be prepared. As further described later in this section, LAWA determined that detailed design, engineering, and construction plan information recently developed for the Bradley West Project provides the ability to address certain impacts, particularly construction-related impacts and certain operations-related impacts, that are not otherwise addressed, or not fully addressed, in the LAX Master Plan EIR. As such, this Draft EIR provides additional project-specific information on the environmental effects of the Bradley West Project, focusing on potentially significant environmental effects of the Bradley West Project that may not have been fully addressed in the LAX Master Plan Final EIR, and summarizing where and how other environmental impacts associated with the Bradley West Project are addressed in the LAX Master Plan Final EIR. Pursuant to the state CEQA Guidelines,[4] the information presented in this EIR considers and incorporates by reference the information presented in the LAX Master Plan Final EIR, and provides the new or revised information necessary to describe the specific environmental effects associated with the Bradley West Project that were not otherwise addressed in the LAX Master Plan Final EIR.

In addition to addressing the environmental impacts associated with the Bradley West Project, this Draft EIR describes the relationship of the Bradley West Project to other LAX Master Plan improvement projects nearby that have been, or are currently being, advanced into implementation, such as the South Airfield Improvement Project (SAIP), the Crossfield Taxiway Project (CFTP), and the proposed development of the Midfield Satellite Concourse. It also describes the LAX Specific Plan Amendment Study (SPAS), for which a separate EIR is currently being prepared by LAWA, and explains how that study applies to certain improvements within the LAX Master Plan, but not the Bradley West Project.

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1 California Environmental Quality Act, Public Resources Code Section 21000, et seq.

2 City of Los Angeles, Los Angeles World Airports, Los Angeles International Airport Final Master Plan, April 2004.

3 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004, page 3-82.

4 California Environmental Quality Act Guidelines, California Code of Regulations, Title 14, Section 15000, et seq.

1.1 Summary of Proposed Project

This chapter provides a summary of the reconfiguration and improvement of TBIT, including development of new aircraft gates on the west side of TBIT and improvements to the central core of TBIT. The project construction and scheduling are described in greater detail in Chapter 2 of this EIR.

The proposed Bradley West Project includes: construction of new north and south concourses at TBIT just west of the existing concourses, which would be demolished; construction of nine aircraft gates, and associated loading bridges and apron areas, along the west side of the new concourses at TBIT; relocation and consolidation of existing aircraft gates along the east side of TBIT; renovation, improvement, and enlargement of the existing U.S. Customs and Border Protection (CBP) areas within the central core of TBIT; renovation, improvement, and enlargement of existing concessions areas, office areas, and operations areas within the central core of TBIT; construction of secure/sterile passenger connector corridors (i.e., areas allowing only passengers that have gone through security clearance and are subject to FAA or airline security requirements) between Terminals 3 and 4 and TBIT; and westward relocation of existing Taxiways S and Q,[5] which are currently located in the area proposed for the new concourses and/or gates.

Construction of the relocated taxiways would require the relocation and/or removal of several existing airfield facilities, including the existing busing operations holdroom at TBIT, various utilities, the existing loading dock at TBIT, seven remain-overnight (RON) aircraft parking spots, ground service equipment (GSE) storage and maintenance facilities, two ground vehicle fueling stations, an airfield operations area (AOA) access control post, all or a part of the aircraft maintenance hangar formerly owned and operated by TWA, the American Airlines Low-Bay Hangar, one or more of the three water deluge tanks located south of the American Airlines Low-Bay Hangar, a flight kitchen, the Los Angeles Fire Department Station 80/Aircraft Rescue and Firefighting (ARFF) Facility,[6] a vehicle parking lot, the American Eagle Commuter Terminal building, and a fuel vault.

Additional information regarding the characteristics of the Bradley West Project, along with figures depicting the project and the proposed construction phasing, are provided in Chapter 2, *Project Description*, of this Draft EIR.

1.2 Relationship to LAX Master Plan

1.2.1 LAX Master Plan and EIR

In December 2004, the Los Angeles City Council approved the LAX Master Plan and related entitlements for the future development of LAX. The LAX Master Plan provides the first major new facilities for, and improvements to, the airport since 1984, and plans to accommodate projected growth in passengers and cargo at LAX through the year 2015. The approved LAX Master Plan includes airfield modifications, development of new terminals, and new landside facilities to accommodate passenger and employee traffic, parking, and circulation. The LAX Master Plan serves as a broad policy statement regarding the conceptual strategic planning framework for future improvements at LAX and working guidelines to be consulted by LAWA as it formulates and processes site-specific projects under the LAX Master Plan program.

The formulation of the LAX Master Plan was completed in three main phases and included an exhaustive iterative process during which LAWA reviewed a wide range of alternatives before selecting a preferred development program known as Alternative D. A brief summary of each of the three main phases is provided below.

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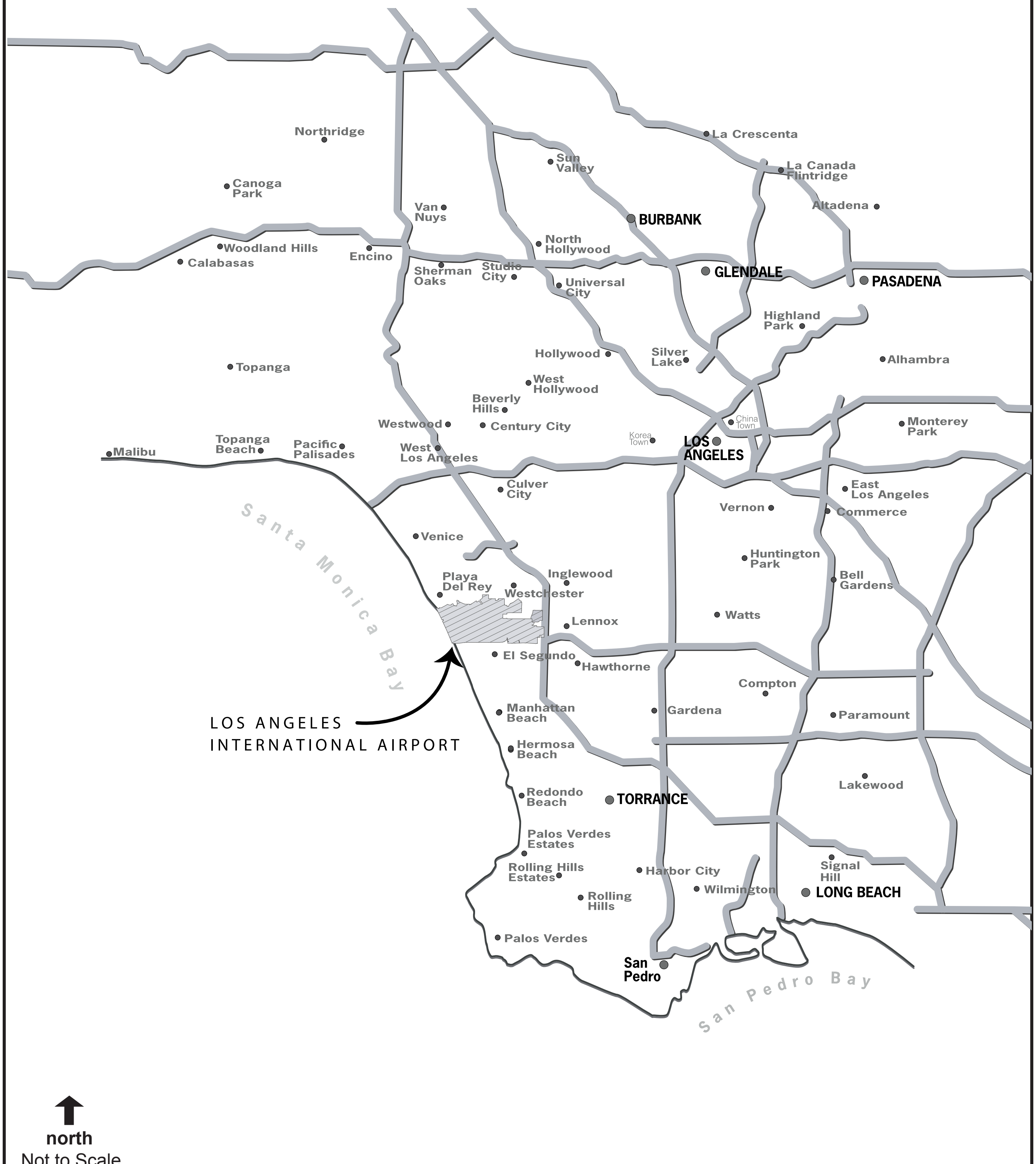
5 Based on the proximity of the alignments proposed for the two relocated taxiways, relative to the locations of other existing taxiways nearby, it is possible that relocated Taxiways "S" and "Q" would be redesignated as new Taxiways "T" and "S," respectively. That assumption is carried for the purpose of referencing the subject taxiways within this EIR, understanding that the FAA would later determine and assign the actual letter designations for the relocated taxiways.

6 A new fire station/ARFF would be constructed prior to, and independent of, demolition of the existing ARFF.



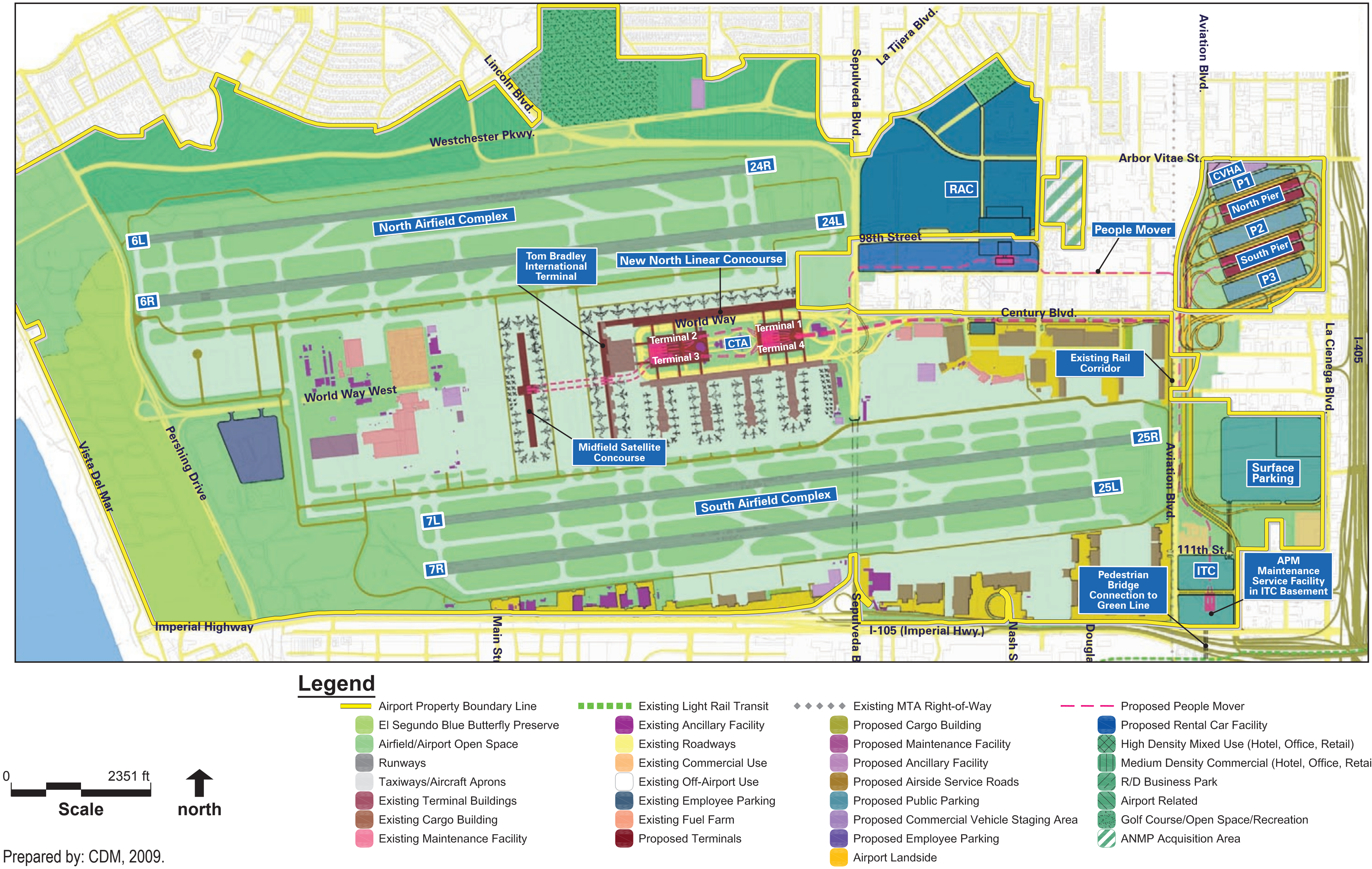
Prepared by: CDM, 2009.

LAX Bradley West Project Draft EIR	Regional Location Map	Figure 1-1

0 2400 4800 ft
Scale
north

Prepared by: CDM, 2009.

LAX Bradley West Project Draft EIR	Existing Airport	Figure 1-2



Legend

Prepared by: CDM, 2009.

LAX Bradley West Project Draft EIR	LAX Master Plan	Figure 1-3

- Research (Phase I): During this phase of the study, completed in December 1995, existing airport conditions at that time were defined, future demand was estimated, and the public consultation process was initiated. It was estimated that the unconstrained demand for air service at LAX by 2015 would be 98 million annual passengers and 4.2 million annual tons of cargo. During this phase, the Master Plan preparation process extensively analyzed existing and projected future activity levels at the airport. (Please also see Chapter 2 of the LAX Master Plan Final EIR and Chapter 3 of the Draft LAX Master Plan.)
- Concept Development (Phase II): This study phase was initiated in the fall of 1995 to evaluate facility requirements and to develop an airport layout for LAX to serve, in whole or in part, the forecast passenger and cargo demand. The concept development process involved policy decisions and design tradeoffs that spanned more than five years and included dozens of options to identify the best balance possible to serve the airport needs of the region and those of the differing stakeholders. As the process progressed, agency and public meetings and workshops were held to inform concerned parties of the progress and findings of the study and encourage participation in the process. As a result of public input, two of the initial four concepts were eliminated, and others were put forward. Three "build" alternatives and the No Action/No Project Alternative were initially moved forward to the third and final phase of the LAX Master Plan process and a fourth build alternative was later added to the process, following the events of September 11, 2001.
- Environmental Review and Approval (Phase III): Phase III of the LAX Master Plan Study included a thorough evaluation of the potential environmental effects associated with the four build alternatives, in accordance with federal and State of California environmental review procedures. The environmental review process was conducted as a joint Environmental Impact Statement (EIS), under federal environmental law, and Environmental Impact Report (EIR), under California law. The EIS/EIR provided descriptions of the environmental conditions in and around LAX, analyzed the potential impacts of the improvements associated with each alternative on the physical environment, and recommended mitigation measures to address potential impacts. The Draft EIS/EIR addressing three build alternatives and the No Action/No Project Alternative was released for public and agency review in January 2001, and the Supplement to the Draft EIS/EIR, addressing the fourth build alternative, was released for public and agency review in July 2003. All four of the build alternatives included a reconfiguration of TBIT and, depending on the design of the reconfiguration, relocation of existing taxiways west of TBIT. The main elements of the Bradley West Project, including the addition of new aircraft contact gates (i.e., aircraft parking and servicing positions located next to terminal buildings with passenger boarding bridges connecting aircraft to the terminal) and the relocation of the two adjacent taxiways (i.e., Taxiways Q and S), are evident on the airfield plan associated with Alternative D, which was ultimately selected as the approved LAX Master Plan. As indicated above, these types of improvements are specifically identified in the LAX Master Plan Final EIR as the "reconfiguration" of TBIT.

The LAX Master Plan Final EIR, which addressed four build alternatives and the No Action/No Project Alternative, was then developed on the basis of the Draft EIS/EIR, the Supplement to the Draft EIS/EIR, public and agency comments received on both documents, and written responses to those comments. The LAX Master Plan Final EIR, as well as the LAX Master Plan Mitigation Monitoring and Reporting Program (MMRP) identifying LAX Master Plan mitigation measures and commitments, were published in April 2004. A revised MMRP and an Addendum to the LAX Master Plan Final EIR were published in September 2004. Three additional LAX Master Plan addenda were published in early December 2004, prior to certification of the LAX Master Plan Final EIR by the Los Angeles City Council on December 7, 2004.

In January 2005, a number of lawsuits challenging the approval of the LAX Master Plan Program were filed. In early 2006, the City of Los Angeles and plaintiffs gave final approval to a settlement of the subject lawsuits. As part of the Stipulated Settlement, LAWA is proceeding with the SPAS process to identify potential alternative designs, technologies, and configurations for the LAX Master Plan Program that would provide solutions to the problems that the Yellow Light Projects[7] were designed to address, consistent with a practical capacity of LAX at 78.9 million annual passengers, the same practical capacity as included in the approved LAX Master Plan. While the SPAS is being processed, LAWA may continue to process and develop projects that are not Yellow Light Projects, such as the Bradley West Project, consistent with the LAX Specific Plan Compliance Review procedures.

1.2.2 LAX Master Plan Implementation

As indicated above, the LAX Master Plan provides a comprehensive long-term plan for a variety of major improvements throughout the airport, including airside facilities (i.e., the airfield area) and landside facilities (i.e., roads, parking areas, terminals, etc.). The LAX Master Plan EIR addresses the environmental impacts associated with those improvements, both in terms of impacts specific to particular improvements, such as noise impacts to hotels along the route of the proposed Automated People Mover, as well as impacts resulting from a combination of improvements, such as traffic impacts resulting from a combination of roadway system changes and project-related changes in passenger activity levels, as appropriate. As such, the public, agencies, surrounding jurisdictions, and decision-makers have been provided with a comprehensive look at the long-term plan for improvements at LAX and the environmental impacts associated with those improvements. As is the case for most, if not all, large-scale long-term improvement plans, implementation of the LAX Master Plan will occur in increments over many years, with the nature and timing of each improvement or set of improvements to be determined based on a number of considerations including, but not limited to, funding considerations, relationship to existing facilities, and relationship to future facilities identified in the plan.

The first improvement to be implemented under the LAX Master Plan was the SAIP, which started construction in March 2006 and was completed in June 2008. The SAIP provided for much needed improvements to the runway and taxiway system in the south airfield to address high-priority safety and efficiency issues in that portion of the LAX airfield, consistent with approved LAX Master Plan. The CFTP is the second airport improvement project to be processed under the LAX Master Plan. The CFTP includes construction of a crossfield taxiway between the north runway complex (i.e., Runways 6L/24R and 6R/24L) and the south runway complex (i.e., Runways 7L/25R and 7R/25L) and an associated connection to, and extension of, the existing Taxiway D. The CFTP taxiway improvements will ameliorate airfield congestion that occurs periodically at and near the existing midfield taxiways relative to movement of aircraft on the ground, and will also enhance the efficient movement of new large aircraft, such as the Airbus A380, between the north and south runway complexes. The CFTP was approved by the Board of Airport Commissioners (BOAC) on February 9, 2009 and received LAX Plan Compliance approval from the City Council on March 4, 2009. Construction of this project is anticipated to start in the second quarter of 2009. Similar to the SAIP and CFTP, implementation of the proposed Bradley West Project improvements addresses an existing need at LAX and is also an integral part of the approved LAX Master Plan to serve future needs, as addressed in the LAX Master Plan EIR.

The SAIP, the CFTP, and the Bradley West Project are only three of numerous major improvements contemplated in the approved LAX Master Plan. As noted above, the nature, scope, and timing of implementing the various improvements at LAX take into account a number of considerations including the relationship of a proposed improvement to existing and future facilities at LAX. In the case of the Bradley West Project, the subject improvements would occur in an active portion of the airport that is primarily occupied by a variety of airside and landside structures. The midfield portion of the airport, within which the Bradley West Project is situated, is identified in the LAX Master Plan as the location of several major improvements including development of the future Midfield Satellite Concourse (referred to as the "West Satellite Concourse" in the LAX Master Plan EIR) and adjacent dual crossfield taxiways, and the development of aircraft contact gates on the west side of TBIT and additional passenger holdroom

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[7] As further discussed in Section 3.3.2, "Yellow Light Projects" are a subset of the LAX Master Plan projects that are subject to special approval procedures. The Yellow Light Projects include: the Ground Transportation Center (GTC); Automated People Mover (APM) 2 from the GTC to the Central Terminal Area (CTA); demolition of CTA Terminals 1, 2, and 3; North Runway re-configuration, including center taxiways; and, on-site road improvements associated with the GTC and APM 2.

area within TBIT. LAWA is proceeding with the detailed planning, engineering, and design of the Bradley West Project for immediate implementation in coordination with the other Master Plan improvements it plans to propose in the midfield area (i.e., the area between the remote gates and the CTA) in the next few years. The specifics of the Bradley West Project are presented in Chapter 2, *Project Description*, of this EIR and the characteristics and relationship of the other Master Plan improvements are described in Chapter 3, *Overview of Project Setting*.

While the major improvements planned for the midfield area are currently being advanced into more detailed planning, engineering, design, and construction, consistent with the approved LAX Master Plan, certain elements of the LAX Master Plan are currently being reevaluated as part of the SPAS. The SPAS will identify and evaluate alternatives to certain elements of the LAX Master Plan that are referred to as "Yellow Light Projects." Based on input from the public and the LAX SPAS Advisory Committee, several alternative concepts for the Yellow Light Projects have been formulated and LAWA is currently preparing an EIR to address the potential impacts associated with each alternative. Additionally, the formulation, refinement, and evaluation of alternatives for improvements to the north airfield complex are being coordinated with the LAX North Airfield Safety Study currently being conducted by the NASA Ames Research Center. The Bradley West Project is not, however, a Yellow Light Project and the SPAS will not materially affect, or be affected by, the Bradley West Project, as further explained in Section 3.3.2, *LAX Specific Plan Amendment Study*, of this EIR.

1.2.3 Environmental Review in Light of LAX Master Plan EIR

Section 15168(a) of the CEQA Guidelines provides for the use of a program EIR to address a series of actions that can be characterized as one large project and are related either: (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same regulatory authority and having generally similar environmental effects which can be mitigated in similar ways. The LAX Master Plan, which provides for a variety of related actions within LAX that are under the authority of LAWA and are governed by a common set of criteria (i.e., the LAX Specific Plan and LAX Plan), is particularly well suited to the CEQA construct for use of a program EIR.

In the processing of subsequent activities in the program, Section 15168(c) of the CEQA Guidelines requires that the activities be reviewed in light of the program EIR to determine whether an additional environmental document must be prepared. In conducting such a review, Section 15162 of the CEQA Guidelines sets forth several criteria for determining whether a subsequent EIR needs to be prepared. One of the criteria pertains to the question of whether new information of substantial importance, which was not known at the time of the previous EIR, indicates that: (1) the project will have one or more significant effects not discussed in the previous EIR; (2) significant effects previously examined will be substantially more severe than shown in the previous EIR; (3) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt them; or (4) mitigation measures or alternatives considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt them. As described in greater detail below, the recent development of detailed design, engineering, and construction plans for the Bradley West Project provides information that was not available at the time of the LAX Master Plan EIR. Such new information now allows for a more detailed evaluation of certain impacts, particularly those that are construction-related, and the relatively new practice of addressing impacts associated with greenhouse gases. These considerations provide the bases for LAWA's determination that an additional EIR is required for the Bradley West Project.

Where a program-level environmental document has been prepared, such as in the case of the LAX Master Plan EIR, CEQA encourages the public agency to "tier" subsequent project-level environmental analyses from that document.[8] Section 15152(a) of the CEQA Guidelines describes the tiering approach as follows:

> "Tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.

Additionally, Section 15168(d)(3) of the CEQA Guidelines provides that a program EIR can be used to simplify the task of preparing environmental documents for later activities by having the EIR focus solely on new effects that had not been considered before.

This Draft EIR for the Bradley West Project is "tiered" from, and incorporates by reference, the LAX Master Plan Final EIR and focuses on those effects not previously considered in the Master Plan EIR. The LAX Master Plan Final EIR is available for public review at Los Angeles World Airports, Facilities and Environmental Planning Department, One World Way, Los Angeles, CA 90045 and via the internet at www.ourlax.org.

As identified in the December 10, 2008, Notice of Preparation (NOP) for this project-level EIR, LAWA initially determined, based on an preliminary review of the Bradley West Project, that five categories of environmental resources could potentially be affected by construction of the project and require additional review that was not otherwise provided in the LAX Master Plan Final EIR. These five categories of environmental resources included traffic, air quality (including human health risks and global climate change/greenhouse gas), surface water quality, biological resources, and noise. **Table 1-1** summarizes the results of LAWA's initial review of the Bradley West Project in light of the LAX Master Plan EIR. The subject table briefly summarizes: (1) where within the Master Plan EIR the environmental impacts of relevance to the Bradley West Project are considered; (2) whether the Bradley West Project as currently proposed poses the potential to result in new significant impacts that were not considered in the Master Plan EIR, result in a substantial increase in the severity of previously disclosed significant impacts, or be subject to new or substantially different mitigation measures or alternatives that the project proponents decline to adopt; and (3) where within the Bradley West Project Draft EIR the subject impact area is discussed. With regard to the last column, environmental disciplines that warrant substantive new analysis are included in Chapter 4, *Setting, Environmental Impacts, and Mitigation Measures*, of the Bradley West Project EIR. For those environmental disciplines where no new significant impacts were identified, a summary discussion of the findings of the LAX Master Plan EIR, and their relevance to the Bradley West Project, is provided in Chapter 5, *Other Environmental Resources*.

As a result of the preliminary review, this EIR for the Bradley West Project focuses primarily on impacts related to surface transportation, air quality, human health risks, global climate change, biological resources, and noise.

[8] California Public Resources Code Section 21093.

Table 1-1

Initial Review of the Bradley West Project in Light of the LAX Master Plan EIR

Environmental Issue	What analysis is provided in the LAX Master Plan EIR for each environmental issue and how does the LAX Bradley West Project relate to that issue and analysis?	Would the Bradley West Project result in a new significant impact, a substantial increase in the severity of a significant impact, or in a new or substantially different mitigation measure or alternative not adopted by the project proponents?	Bradley West Project EIR - Relevant Section
Noise	4.1, 4.2: Noise impacts from aircraft, roadway vehicles, the Automated People Mover (APM), and construction were addressed; significant or potentially significant impacts were identified for each type of noise source; and mitigation measures were recommended. Unavoidable significant impacts were identified relative to aircraft noise (i.e., outdoor living areas within the 65+ CNEL contour) and construction near sensitive receptors. The Bradley West Project site is not near any sensitive noise receptors and implementation of the Bradley West Project would not notably change existing airport operations relative to the aircraft flights that define the CNEL contours.	Potentially Yes. Additional details regarding Bradley West Project construction timing, activity levels, and employee parking/staging area locations provide basis for further evaluation of construction-related noise impacts to noise-sensitive uses to the north and south of the airport.	4.8
Land Use	4.2: Land use impacts addressed in LAX Master Plan EIR included noise compatibility, which is generally described above in Noise, and consistency with relevant land use plans. The Bradley West Project is consistent with the approved LAX Master Plan. The potential for land use impacts due to short-term construction-related traffic disruptions was identified as an unavoidable significant impact, even with mitigation.	No, with the exception of construction-related traffic impacts (see On- and Off-Airport Surface Transportation below).	5.1
On-Airport Surface Transportation	4.3.1: Impacts to on-airport roadway system were addressed. Temporary construction-related traffic disruptions were identified as an unavoidable significant impact, even with mitigation.	Potentially Yes. Additional details regarding Bradley West Project construction timing, activity levels, and employee parking/staging area locations provide basis for further evaluation of construction-related on-airport traffic impacts at west end of airport. Additional details regarding changes in passenger demand and peaking characteristics following construction of the contact gates that would accommodate New Large Aircraft (NLA) and improved federal inspection services (FIS) processing provide basis for further evaluation of impacts on operation of the TBIT curbsides and CTA intersections.	4.1, 4.3

Table 1-1

Initial Review of the Bradley West Project in Light of the LAX Master Plan EIR

Environmental Issue	What analysis is provided in the LAX Master Plan EIR for each environmental issue and how does the LAX Bradley West Project relate to that issue and analysis?	Would the Bradley West Project result in a new significant impact, a substantial increase in the severity of a significant impact, or in a new or substantially different mitigation measure or alternative not adopted by the project proponents?	Bradley West Project EIR - Relevant Section
Off-Airport Surface Transportation	4.3.2: Impacts to off-airport roadways system were addressed; several road/intersections significantly impacted by traffic from future increased activity levels at LAX; mitigation measures recommended but some unavoidable significant impacts remain. Temporary construction-related traffic disruptions identified as an unavoidable significant impact, even with mitigation.	Potentially Yes. Additional details regarding Bradley West Project construction timing, activity levels and employee parking/staging area locations provide basis for further evaluation of construction-related traffic impacts on nearby off-airport roadways and intersections. Additional details regarding changes in passenger demand and peaking characteristics following construction of the contact gates that would accommodate NLA and improved FIS processing provide basis for further evaluation of impacts to off-airport intersections and roadways due to changes in overall passenger throughput and arrival rates at the curbside.	4.2, 4.3
Population, Housing, Employment and Growth-Inducement	4.4.1, 4.4.2, 4.5: Direct and indirect impacts associated with population, housing, and employment were addressed. No significant impacts were identified and no mitigation measures were required. Consistent with the LAX Master Plan, no significant direct or indirect growth impacts would occur from implementation of the Bradley West Project.	No	5.2
Air Quality	4.6: Air quality impacts from aircraft operations, airport operations (e.g., stationary sources, energy consumption), roadway traffic vehicles, and construction were addressed; significant or potentially significant impacts were identified for each type of air pollutant source; and mitigation measures were recommended. Unavoidable significant impacts were identified for construction-related and operations-related emissions.	Potentially Yes. Additional details regarding Bradley West Project construction timing, activity levels and employee parking/staging area locations provide basis for further evaluation of construction-related air quality impacts. Details regarding changes in the routing of aircraft to and from new contact gates at TBIT in place of existing remote gates, which in turn would greatly reduce passenger busing, as well as details regarding TBIT heating and cooling units associated with the Bradley West Project provide the basis for further evaluation of operations-related air quality impacts.	4.4

Table 1-1

Initial Review of the Bradley West Project in Light of the LAX Master Plan EIR

Environmental Issue	What analysis is provided in the LAX Master Plan EIR for each environmental issue and how does the LAX Bradley West Project relate to that issue and analysis?	Would the Bradley West Project result in a new significant impact, a substantial increase in the severity of a significant impact, or in a new or substantially different mitigation measure or alternative not adopted by the project proponents?	Bradley West Project EIR - Relevant Section
Hydrology/Water Quality	4.7: Impacts related to the conversion of pervious/vacant area to paved/developed area were addressed, and provisions for development and implementation of a Conceptual Drainage Plan for hydrology and water quality were delineated to avoid significant hydrology/water quality impacts. Mitigation was also recommended to address a deficient regional drainage system facility. The Bradley West Project site is a relatively flat, largely developed airfield and concourse areas. Implementation of the proposed project would not substantially change the existing hydrology and would provide for improved water quality through the incorporation of short-term and permanent Best Management Practices (BMPs), consistent with the analysis in the Master Plan EIR.	No	5.3
Cultural Resources	4.9: Potentially significant historical and archaeological resources were identified, none of which are at the Bradley West Project site or construction staging/parking areas; potential significant impacts were identified; mitigation included preparation of an archaeological treatment plan and paleontological resources management plan to address the possibility of unexpectedly encountering cultural resources during construction. No unavoidable significant impacts are expected. The Bradley West Project site is not occupied by any historic resources and is underlain mostly by artificial fill. No significant impacts to cultural resources are expected to occur from the Bradley West Project.	No	5.4
Biotic Communities	4.10: Sensitive and non-sensitive flora and fauna were evaluated, with the most notable resources being found to occur in the undeveloped western portion of the airport, well-removed from the Bradley West Project site, and mitigation measures were recommended relative to sensitive resources. No unavoidable significant impacts to biotic resources would occur.	Potentially Yes. Additional details regarding Bradley West Project construction site and staging/parking area boundaries, including within areas that are undeveloped and vegetated, provide basis for further evaluation of impacts on biotic communities.	4.7

Table 1-1

Initial Review of the Bradley West Project in Light of the LAX Master Plan EIR

Environmental Issue	What analysis is provided in the LAX Master Plan EIR for each environmental issue and how does the LAX Bradley West Project relate to that issue and analysis?	Would the Bradley West Project result in a new significant impact, a substantial increase in the severity of a significant impact, or in a new or substantially different mitigation measure or alternative not adopted by the project proponents?	Bradley West Project EIR - Relevant Section
Endangered and Threatened Species of Flora and Fauna	4.11: Potential impacts to listed species, particularly the El Segundo blue (ESB) butterfly and the Riverside fairy shrimp were evaluated; formal consultation with U.S. Fish and Wildlife Service was completed pursuant to Section 7 of the federal Endangered Species Act; and mitigation measures were recommended. Subsequent to certification of the Final EIR, the Riverside fairy shrimp at LAX were removed in accordance with two federal Biological Opinions. ESB butterfly habitat is west of and well-removed from, the Bradley West Project site. The Bradley West Project construction staging areas are closer to, but still removed from, the ESB habitat. Recent field survey of the proposed Bradley West Project construction staging, parking and work areas concluded that, with the exception of the Southeast Construction Staging/Parking Area, suitable habitat is not present in any of the Bradley West Project area for any threatened or endangered plant or wildlife species; therefore, such species are not expected to occur in these areas. Several ponding areas were identified at the Southeast Construction Staging/Parking Area; however, based on the results of 2009 wet season surveys, no Riverside fairy shrimp have been found to be present in these ponded areas.	No	5.5
Wetlands	4.12: The presence of state and federal wetlands and "waters of the U.S." at LAX, including Argo Ditch and ephemerally wetted areas, such as those associated with the Riverside fairy shrimp, was evaluated and a mitigation measure was identified for areas subject to the jurisdiction of the U.S. Army Corps of Engineers (USACOE). The Bradley West Project site is fully developed, with no identified wetlands nearby. The results of recent field surveys conducted in support of a forthcoming jurisdictional delineation for the Bradley West Project indicate that none of the areas surveyed exhibited all three wetland parameters (i.e., hydric soils, wetlands hydrology, and hydrophytic vegetation) and are not believed to be "waters of the U.S." Subject to concurrence by the USACOE, no areas within the Bradley West Project site, including construction staging and parking areas, are considered to be jurisdictional wetlands or "waters of the U.S."	No	5.6

Table 1-1

Initial Review of the Bradley West Project in Light of the LAX Master Plan EIR

Environmental Issue	What analysis is provided in the LAX Master Plan EIR for each environmental issue and how does the LAX Bradley West Project relate to that issue and analysis?	Would the Bradley West Project result in a new significant impact, a substantial increase in the severity of a significant impact, or in a new or substantially different mitigation measure or alternative not adopted by the project proponents?	Bradley West Project EIR - Relevant Section
Energy Supply and Natural Resources	4.17: Potential impacts to energy supply, including fuel and power consumption, and to natural resources, such as construction materials, were evaluated, and energy conservation measures were recommended. No significant impacts related to energy consumption and distribution, or access to, and use of, natural resources were identified. Consistent with the Master Plan EIR, no significant impacts related to energy consumption and distribution or access to and use of natural resources would occur as a result of Bradley West Project construction and operation.	No	5.7
Solid Waste	4.19: Impacts associated with generation of solid waste from construction and operation of the Master Plan projects were addressed, and waste reduction measures were recommended. No significant impacts related to construction solid waste generation and disposal were identified. Consistent with the Master Plan EIR, the Bradley West Project includes reduction measures for construction waste such as reuse of demolished pavement material.	No	5.8
Light Emissions and Aesthetics	4.18, 4.21: Potential impacts associated with new/increased lighting at the airport were addressed, as were visual/aesthetic impacts. Master Plan commitments from the Land Use section were referenced to address potential light impacts; other commitments, included those related to construction screening, were provided for visual/aesthetic impacts. No unavoidable significant light emissions or visual/aesthetic impacts were identified. The Bradley West Project site is in a fully-developed active part of the airport that already has substantial lighting and does not have, or block views of, visual/aesthetic resources. Further, the new/reconfigured facilities would represent an aesthetic improvement over existing conditions. Consistent with the Master Plan EIR, the Bradley West Project includes commitments and measures to reduce/avoid potential aesthetic/light emissions impacts to off-airport receptors during construction activities and operation of the new facilities. Therefore, no new significant impacts are expected to occur.	No	5.9

Table 1-1

Initial Review of the Bradley West Project in Light of the LAX Master Plan EIR

Environmental Issue	What analysis is provided in the LAX Master Plan EIR for each environmental issue and how does the LAX Bradley West Project relate to that issue and analysis?	Would the Bradley West Project result in a new significant impact, a substantial increase in the severity of a significant impact, or in a new or substantially different mitigation measure or alternative not adopted by the project proponents?	Bradley West Project EIR - Relevant Section
Earth and Geology	4.22: Potential impacts related to geotechnical issues, such as earthquakes and other seismic-related hazards, ground failure, and landslides, were evaluated. No significant impacts related to adverse geologic conditions and hazards were identified. The LAX Master Plan EIR analysis fully addresses potential effects of the Bradley West Project relative to earth/geology.	No	5.10
Hazards and Hazardous Materials	4.23, 4.24: Potential impacts related to hazards and hazardous materials, including potential conflicts with ongoing remediation activities, were evaluated and a number of Master Plan commitments were identified to address potential impacts. No significant impacts were identified. Given the nature and location of the Bradley West Project, the proposed project falls within the scope of the Master Plan EIR analysis and no new significant impacts are expected to occur.	No	5.11
Human Health Risks	4.24: Potential human health risk impacts associated with toxic air contaminants, primarily as related to aircraft operations, were addressed. Air quality mitigation measures were identified as a means to reduce potential health risk levels. No unavoidable significant impacts were identified.	Potentially Yes. Additional details regarding Bradley West Project construction timing, activity levels, and employee parking/staging area locations provide basis for further evaluation of construction-related toxic air contaminant emissions, particularly diesel particulate emissions from construction equipment exhaust. Further, additional details regarding aircraft activity on the ground at LAX, (i.e., transporting passengers between TBIT and the gates at the West Remote Pads) and TBIT heating and cooling units associated with the Bradley West Project provide the basis for further evaluation of operations-related toxic air contaminant emissions.	4.5
Public Utilities	4.25: The Master Plan EIR addresses potential impacts related to water consumption and wastewater generation, and identifies water conservation measures. No significant impacts were identified. In light of the basic nature of the Bradley West Project, the proposed project falls within the scope of the Master Plan analysis and no new significant impacts related to water or wastewater are expected to occur.	No	5.12

Table 1-1

Initial Review of the Bradley West Project in Light of the LAX Master Plan EIR

Environmental Issue	What analysis is provided in the LAX Master Plan EIR for each environmental issue and how does the LAX Bradley West Project relate to that issue and analysis?	Would the Bradley West Project result in a new significant impact, a substantial increase in the severity of a significant impact, or in a new or substantially different mitigation measure or alternative not adopted by the project proponents?	Bradley West Project EIR - Relevant Section
Public Services	4.26, 4.27: The Master Plan EIR addresses potential impacts related to fire, police, parks and recreation, schools, and libraries, and identifies a number of measures to reduce potential impacts to those services. Other than aircraft noise impacts on schools, no unavoidable significant impacts were identified. Based on the nature of the Bradley West Project, including the renovation, improvement, and enlargement of the existing U.S. Customs and Border Protection areas within the central core of TBIT, no significant impacts to public services are expected to occur.	No	5.13, 5.14
Climate Change/Greenhouse Gas	The need to address climate change and greenhouse gas issues within an EIR is something that has become more prominent in just the past few years. As was common practice at the time, this issue was not addressed within the LAX Master Plan EIR.	Potentially Yes	4.6

Source: CDM, 2009.

1.3 Organization of this EIR

This EIR follows the preparation and content guidance provided in CEQA and the State CEQA Guidelines. Chapters 1 through 7 are provided in Volumes 1 and 2. Appendices are included in Volumes 3 through 7. Listed below is a summary of the contents of each chapter of the report.

Chapter 1 -- Introduction and Executive Summary

This chapter provides a summary of the proposed project components and the relationship of the project to the LAX Master Plan. Also included is a summary of the environmental analysis.

Chapter 2 -- Project Description

This chapter presents detailed information pertaining to the proposed project including a discussion of the Bradley West Project's relationship to the LAX Master Plan, the objectives of the proposed project, and the specific characteristics of the Bradley West Project. Also provided in this chapter is a description of the intended uses of this EIR as related to specific approvals needed for implementation of the proposed project.

Chapter 3 -- Overview of Project Setting

This chapter provides an overview of the existing land use and environmental setting relevant to the Bradley West Project. This chapter also describes other projects proposed in the nearby area that may, in conjunction with the Bradley West Project, result in cumulative impacts on that existing setting.

Chapter 4 -- Setting, Environmental Impacts, and Mitigation Measures

The introductory portion of Chapter 4 describes the analytical framework for the environmental review of the Bradley West Project. The remainder of the chapter includes detailed analysis of the environmental impacts of the project on surface transportation, air quality, human health risk, global climate change, biotic communities, and noise.

Chapter 5 -- Other Environmental Resources

Chapter 5 provides an assessment of environmental impacts associated with the development of the Bradley West Project related to those environmental topics not addressed in Chapter 4. In accordance with Sections 15152(a) and 15168 of the CEQA Guidelines, the information presented in this chapter is primarily for disclosure and informational purposes, because the impacts of the Bradley West Project on these environmental resources were accounted for and addressed in the LAX Master Plan Final EIR and Addenda to the Final EIR.

Chapter 6 -- Alternatives

As required by CEQA, Chapter 6 evaluates the potential for alternatives to the proposed Bradley West Project to avoid or substantially lessen any significant effects of the project, while also meeting most of the basic objectives of the project.

Chapter 7 -- List of Preparers, Parties to Whom Sent, References, NOP Comments, and List of Acronyms

This chapter provides the following: a list of the individuals from the City of Los Angeles and contractors that performed key roles in the preparation and development of this Draft EIR; a list of the parties to whom copies of this Draft EIR were sent for review or to whom notice of the availability of this Draft EIR was sent; a list containing a bibliography of documents used in the preparation of the Draft EIR; a list of agencies, organizations and individuals who provided comments on the EIR NOP; and a list of acronyms used in the Draft EIR.

1.4 Executive Summary of Environmental Impacts Related to the Bradley West Project

Table 1-2 summarizes the environmental impacts of the Bradley West Project in terms of surface transportation, air quality, human health risks, global climate change, biotic communities, and noise related to the Bradley West Project as identified in Chapter 4 of this EIR. **Table 1-3** summarizes the potential environmental impacts of the Bradley West Project for all other environmental categories for which no, or minimal, additional analysis was required beyond that provided in the LAX Master Plan Final EIR. **Tables 1-2** and **1-3** include specific references to the applicable LAX Master Plan commitments and mitigation measures, as well as new mitigation measures that are proposed to reduce or avoid potential environmental impacts associated with the Bradley West Project. The level of significance following mitigation is also listed.

1.5 Areas of Known Controversy and Issues to be Resolved

Based on comments on the NOP that were received by LAWA, the areas of known controversy are related primarily to 1) how the Bradley West Project relates to other projects and aspects of the LAX Master Plan, and 2) the proposed use of the Northwest Construction Staging/Parking Area and associated potential traffic, air quality, and noise impacts to residents of Westchester. These concerns are addressed in this Draft EIR.

With respect to the first issue, comments were expressed suggesting that the environmental review, processing, and implementation of the Bradley West Project should be combined with that of other improvements included in the LAX Master Plan. As described in Section 2.2 of this EIR, the need for and utility of the Bradley West Project is independent of other Master Plan projects, and implementation of the Bradley West Project is appropriate under the approved LAX Master Plan; is consistent with common practice for the phased development of large, long-term master plan infrastructure projects; and is in accordance with the provisions of CEQA.

NOP comments were also received suggesting that the environmental review, processing, and implementation of the Bradley West Project should await, and be based upon, the outcome of the LAX SPAS process. The Bradley West Project is not dependent on implementation of any of the Yellow Light Projects or alternatives to the Yellow Light Projects that will be evaluated in the SPAS. Nor does construction of the Bradley West Project commit LAWA to, or preclude LAWA from, proceeding with any of the projects that will be evaluated in the SPAS. Therefore, consideration of the Bradley West Project may proceed prior to completion of the SPAS process. Further, under the Stipulated Settlement, LAWA may continue to process and develop projects that are not Yellow Light Projects, such as the Bradley West Project, while the SPAS is being processed.

With respect the second issue, some residents in the Westchester and Vista del Mar areas commented that the proposed Northwest Construction Staging/Parking Area is not an appropriate location for construction staging and parking due to its proximity to those communities. Such comments further proposed that all construction staging and parking activities be limited to staging areas in the west and south parts of the airport. Conversely, the City of El Segundo commented that the proposed Southeast Construction Staging/Parking Area is not an appropriate location for construction staging and parking, and encouraged LAWA to focus on use of other sites including the West Construction Staging Area. In light of comments from all of these communities, the Draft EIR includes an alternative that focuses construction staging and parking primarily on use of the West Construction Staging Area.

Table 1-2

Summary of Environmental Impacts Related to the Bradley West Project for Which Additional Analysis is Required

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures/ Commitments	Level of Significance After Mitigation
On-Airport Surface Transportation: Implementation of the project would change the nature and timing of peak on-airport traffic as the number and processing time of international passengers arriving at specific times of the day would be affected by the project; however, it is the natural increase in international travel activity levels projected to occur at LAX by 2013 that would have the most notable influence on traffic volumes at LAX. This increase is anticipated to occur even if the project is not implemented. The on-airport surface transportation system in 2013 is projected to experience substantial congestion compared to existing (2008) conditions.	None applicable.	MM-AQ-3. Transportation-Related Mitigation Measure	MM-ST (BWP)-1. Trip Reduction Measures MM-ST (BWP)-2. Improve the Intersection of Center Way and World Way South MM-ST (BWP)-3. Widen World Way Across from TBIT	Impacts to CTA intersections would be reduced to less than significant; however, the residual impacts to roadway links would be significant and unavoidable.

Table 1-2

Summary of Environmental Impacts Related to the Bradley West Project for Which Additional Analysis is Required

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures/ Commitments	Level of Significance After Mitigation
Off-Airport Surface Transportation: Similar to above, implementation of the proposed project would change the nature and timing of international passengers being processed through TBIT, which, in turn, affects the volume of traffic being generated at TBIT during peak travel hours; however, it is the natural increase in international travel at LAX projected to occur by 2013 that would have the most influence on off-airport traffic impacts. With TBIT-related operational traffic in 2013, when the proposed improvements would be completed, it is projected that there would be significant traffic impacts at 19 intersections.	None applicable.	None applicable.	MM-ST (BWP)-4. Modify the Intersection of Airport Boulevard and Manchester Avenue (Intersection #9) MM-ST (BWP)-5. Modify the Intersection of Arbor Vitae Street and Aviation Boulevard (Intersection #10) MM-ST (BWP)-6. Modify the Intersection of Imperial Highway and Sepulveda Boulevard (Intersection #71) MM-ST (BWP)-7. Modify the Intersection of La Cienega Boulevard and I-405 Ramps N/O Century Boulevard (Intersection #96). MM-ST (BWP)-8. Modify the Intersection of La Tijera Boulevard and Sepulveda Boulevard (Intersection #101) MM-ST (BWP)-9. Modify the Intersection of Sepulveda Boulevard and 76th/77th Street (Intersection #136)	Impacts to 6 of the 19 intersections would be mitigated to a level less-than-significant. Impacts to the remaining 13 intersections would be significant and unavoidable.

Table 1-2

Summary of Environmental Impacts Related to the Bradley West Project for Which Additional Analysis is Required

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures/ Commitments	Level of Significance After Mitigation
Construction Surface Transportation: Construction of the Bradley West Project would increase traffic volumes on the surrounding area roadway network. Depending on which of several proposed construction staging/parking locations are used, up to four intersections could be significantly impacted by project-specific construction traffic and by cumulative traffic from other nearby projects under construction at the same time as the Bradley West Project.	C-1. Establishment of a Ground Transportation/Construction Coordination Office C-2. Construction Personnel Airport Orientation ST-9. Construction Deliveries ST-12. Designated Truck Delivery Hours ST-14. Construction Employee Shift Hours ST-16. Designated Haul Routes ST-17. Maintenance of Haul Routes ST-18. Construction Traffic Management Plan ST-22. Designated Truck Routes	None applicable.	MM-ST (BWP)-10. Modify the Intersection of Imperial Highway and Main Street (Intersection #68) MM-ST (BWP)-11. Modify the Intersection of Imperial Highway and Pershing Drive (Intersection #69).	Project and cumulative impacts to 2 of the 4 intersections would be mitigated to a level less-than-significant. Impacts to the remaining 2 intersections would be significant and unavoidable.
Air Quality: Construction activities would cause air pollutant emissions that exceed the SCAQMD significance thresholds for carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), and particulate matter (PM10 and PM2.5). The construction threshold for sulfur oxides (SO_x) would not be exceeded. Upon completion of the Bradley West Project, aircraft movements around the airfield would see a slight improvement (reduction) in taxi/idle times and associated emissions from aircraft operations over the 2013 without project scenario, and the need for bus transport of passengers and crews between the remote gates and TBIT would be less in 2013 with the project	None applicable.	MM-AQ-1. LAX Master Plan - Mitigation Plan for Air Quality MM-AQ-2. Construction-Related Measure Community Benefits Agreement, Section X.F.1, Construction Equipment.[1]	None available.	Construction-related impacts would be significant and unavoidable. Operations-related impacts would be significant and unavoidable.

Table 1-2

Summary of Environmental Impacts Related to the Bradley West Project for Which Additional Analysis is Required

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures/ Commitments	Level of Significance After Mitigation
than without the project; however, the amount of natural growth in airfield activity projected to occur by 2013 with or without the project would represent a substantial increase over 2008 baseline conditions and would result in a significant impact. Additionally, there would be a 19 percent increase in energy consumption, and related air pollutant emissions, upon project completion, although this increase would be much less than the increase (100 percent increase) in building floor area proposed for the project. Air pollutant emissions from airfield and building operations would exceed SCAQMD significance thresholds for CO, NO_x, VOC, and SO_2, Off-airport traffic emissions would be significant for CO, VOC, NO_x, PM10 and PM2.5.				
Human Health Risks: People living, working, recreating, or attending school in communities near the airport would not experience increased cancer risks, increased non-cancer chronic health hazards, or increased non-cancer acute health hazards from exposure to toxic air contaminants (TACs) above established thresholds of significance during Bradley West Project construction or project-specific operations. People working at the airport would not be exposed to concentrations of TACs in the air in excess of occupational	None applicable.	MM-AQ-1. LAX Master Plan - Mitigation Plan for Air Quality MM-AQ-2. Construction-Related Measure	None required.	Less than significant.

Table 1-2

Summary of Environmental Impacts Related to the Bradley West Project for Which Additional Analysis is Required

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures/ Commitments	Level of Significance After Mitigation
standards as defined by CalOSHA 8-hour Time-Weighted Average Permissible Exposure Levels (PEL-TWA) during Bradley West Project construction or project-specific operations.				
Global Climate Change: Construction and operation of the Bradley West Project would generate greenhouse gases, primarily in the form of CO_2, which would contribute to climate change; however, such activities would be conducted in accordance with the LAWA Sustainability Guidelines, which are designed and intended to reduce greenhouse gas emissions. Project and cumulative construction and operations-related impacts related to climate change would be significant.	None specific to global climate change; however, the following commitment would contribute to reductions in greenhouse gases:[2] SW-3. Requirements for the Recycling of Construction and Demolition Waste	None specific to global climate change; however, the following measures would contribute to reductions in greenhouse gases:[1] MM-AQ-1. LAX Master Plan - Mitigation Plan for Air Quality MM-AQ-2. Construction-Related Measure	All feasible measures have been applied.	Project and cumulative construction and operations-related impacts would be significant and unavoidable.
Biotic Communities: There are no sensitive biotic resources within the primary Bradley West Project area. One special status plant species, southern tarplant, a CNPS List 1B.1 species, was observed on the Southeast Construction Staging/Parking Area and East Contractor Employee Parking Area. Construction of the Bradley West Project would directly impact approximately 300 southern tarplant individuals, which would be a significant impact.	None applicable.	MM-BC-1. Conservation of State-Designated Sensitive Habitat within and Adjacent to the El Segundo Blue Butterfly Habitat Restoration Area MM-BC-3. Conservation of Floral Resources: Mature Tree Replacement MM-BC-8. Replacement of Habitat Units MM-BC-9. Conservation of Faunal Resources MM-ET-3. El Segundo Blue Butterfly Conservation: Dust Control	MM-BC (BWP)-1. Conservation of Floral Resources: Southern Tarplant MM-BC (BWP)-2. Conservation of Floral Resources: Lewis' Evening Primrose MM-BC (BWP)-3. Conservation of Floral Resources: California Spineflower MM-BC (BWP)-4. Conservation of Faunal Resources: Burrowing Owl	Less than significant with mitigation.

Table 1-2

Summary of Environmental Impacts Related to the Bradley West Project for Which Additional Analysis is Required

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures/ Commitments	Level of Significance After Mitigation
Special status plant species that have the potential to occur within the Bradley West Project areas include Lewis' evening primrose and California spineflower. If either of these species is present, construction of the Bradley West Project could directly impact individuals of these sensitive plant species, which, for purposes of this EIR, is considered to be a significant impact. Special status wildlife species that have the potential to occur within the Bradley West Project areas include burrowing owl, loggerhead shrike, and San Diego black-tailed jackrabbit. If any of these species is present, construction of the Bradley West Project could directly impact individuals of these sensitive wildlife species, which would be a significant impact. Construction of the Bradley West Project has the potential to impact nesting birds/raptors subject to the Migratory Bird Treaty Act (MBTA). In addition, use of the Northwest Construction Staging/Parking Area would result in the removal of mature trees. Both are considered to be significant impacts. Bradley West Project construction staging and stockpiling of materials in close proximity to the Los Angeles/El Segundo Dunes and the El Segundo Blue Butterfly Habitat Restoration Area would have the potential to deposit			MM-BC (BWP)-5. Conservation of Faunal Resources: Loggerhead Shrike MM-BC (BWP)-6. Conservation of Faunal Resources: San Diego Black-tailed Jackrabbit MM-BC (BWP)-7. Conservation of Floral Resources: Mature Tree Replacement MM-BC (BWP)-8. Conservation of Faunal Resources: Nesting Birds/Raptors	

Table 1-2

Summary of Environmental Impacts Related to the Bradley West Project for Which Additional Analysis is Required

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures/ Commitments	Level of Significance After Mitigation
fugitive dust within State-designated sensitive habitats, which would be considered a significant impact.				
Noise: Construction noise would not exceed the existing ambient noise level by 5 dBA or more at noise sensitive locations. Construction traffic would not trigger an exceedance of the CEQA construction traffic noise threshold (5 dBA) for a substantial increase in traffic noise.	ST-16. Designated Haul Routes ST-22. Designated Truck Routes	MN-N-7. Construction Noise Control Plan MM-N-8. Construction Staging MM-N-9. Equipment Replacement MN-N-10. Construction Scheduling	None required.	Less than significant.

[1] LAWA and the LAX Coalition for Economic, Environmental and Educational Justice (LAX Coalition) have developed and entered into an agreement, the Community Benefits Agreement (CBA), to ensure that communities adversely affected by the LAX Master Plan Program also receive benefits as a result of the implementation of the Program. The benefits and mitigations included in the CBA were negotiated independently from, and are not a part of, the LAX Master Plan MMRP. The CBA contains a number of air quality mitigation measures, of which Section X.F.1 is applicable to the Bradley West Project.

[2] At the time of preparation of the LAX Master Plan EIR, global climate change was not commonly addressed in EIRs. Therefore, there are no Master Plan commitments or mitigation measures that were developed specifically to address global climate change.

Source: CDM, 2009.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Land Use: Construction effects associated with traffic, air quality, noise and views have the potential to affect land uses along the southern and northern boundaries of LAX.	C-1. Establishment of a Ground Transportation/ Construction Coordination Office C-2. Construction Personnel Airport Orientation ST-9. Construction Deliveries ST-12. Designated Truck Delivery Hours ST-14. Construction Employee Shift Hours ST-16. Designated Haul Routes ST-17. Maintenance of Haul Routes ST-18. Construction Traffic Management Plan ST-22. Designated Truck Routes LU-4. Neighborhood Compatibility Program	MN-N-7. Construction Noise Control Plan MM-N-8. Construction Staging MM-N-9. Equipment Replacement MN-N-10. Construction Scheduling MM-DA-1. Construction Fencing MM-AQ-2. Construction-Related Measure	None required for construction-related noise and aesthetic impacts. See Construction Surface Transportation in Table 1-2 for new mitigation measures to address construction-related traffic impacts.	Less than significant for construction-related noise and aesthetic impacts. Construction-related traffic impacts would be significant and unavoidable. See Construction Surface Transportation above in Table 1-2.
The Bradley West Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.	None applicable.	None applicable.	None required.	Less than significant.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Population, Housing, Employment and Growth Inducement: No property acquisition would be required for the Bradley West Project and construction and operations-related employment would not induce growth in the area. On-airport tenants and uses affected by the Bradley West Project would be relocated within the airport or to off-site facilities, depending upon the business plans of the individual tenants.	EJ-1. Aviation Curriculum EJ-2. Aviation Academy EJ-3. Job Outreach Center EJ-4. Community Mitigation Monitoring	None applicable.	None required.	Less than significant.
Hydrology/Water Quality: Excavation and grading associated with the Bradley West Project would result in an alteration to existing drainage facilities. The new storm drain facilities would be designed to accommodate larger storm events than the existing facilities. Existing drainage patterns would not be notably altered.	HWQ-1. Conceptual Drainage Plan	None applicable.	None required.	Less than significant.
Implementation of the Bradley West Project would result in the conversion of 5.3 acres from a pervious condition to an impervious condition, resulting in a negligible decrease in surface recharge within the regional groundwater basin. No groundwater production occurs at LAX and beneficial uses of the basin would not be adversely affected.	None applicable.	None applicable.	None required.	Less than significant.
Total impervious area would be increased by approximately 5.3 acres. LAWA would prepare a Standard Urban Storm Water Mitigation Plan (SUSMP) to address long-term impacts to water quality and a Storm Water Pollution Prevention Plan to address construction-related impacts. The addition of permanent Best Management Practices to the on-site drainage system would improve water quality compared to existing conditions.	HWQ-1. Conceptual Drainage Plan	None applicable.	None required.	Beneficial.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Cultural Resources: The Bradley West Project would not affect the one historic property, the International Airport Industrial District, that would be affected by the LAX Master Plan. However, construction activities could potentially disturb or destroy potentially significant, undiscovered archaeological resources. This impact would be significant.	None applicable.	MM-HA-4. Discovery MM-HA-5. Monitoring MM-HA-6. Excavation and Recovery MM-HA-7. Administration MM-HA-8. Archaeological/ Cultural Monitor Report MM-HA-9. Artifact Curation MM-HA-10. Archaeological Notification	MM-HA (BWP)-1. Conformance with LAX Master Plan Archaeological Treatment Plan	Less than significant with mitigation.
As the Bradley West Project would involve grading and excavation greater than 6 feet in depth, it is possible that potentially important paleontological resources could be exposed and/or damaged. In addition, Bradley West Project construction could make paleontological resources accessible for unauthorized fossil collection.	None applicable.	MM-PA-1. Paleontological Qualification and Treatment Plan MM-PA-2. Paleontological Authorization MM-PA-3. Paleontological Monitoring Specifications MM-PA-4. Paleontological Resources Collection MM-PA-5. Fossil Preparation MM-PA-6. Fossil Donation MM-PA-7. Paleontological Reporting	MM-PA (BWP)-1. Conformance with LAX Master Plan Paleontological Management Treatment Plan MM-PA (BWP)-2. Construction Personnel Briefing	Less than significant with mitigation.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Endangered and Threatened Species of Flora and Fauna: With the exception of the Southeast Construction Staging/Parking Area, the Bradley West Project site, staging areas, and construction employee vehicle parking areas do not contain suitable habitat for any threatened or endangered species. Based on the results of 2009 wet season surveys, no Riverside fairy shrimp were found on the Southeast Construction Staging/Parking Area site. However, the absence of Riverside fairy shrimp at this site cannot be confirmed until completion of a second protocol survey. In the event that Riverside fairy shrimp are identified at the Southeast Construction Staging/Parking Area, proposed construction activities would have a significant impact on this species.	None applicable.	MM-ET-3. El Segundo Blue Butterfly Conservation: Dust Control	MM-ET (BWP)-1. Mitigation for Riverside Fairy Shrimp.	Less than significant with mitigation.
Bradley West Project construction staging and stockpiling of materials in close proximity to the Habitat Restoration Area would have the potential to deposit fugitive dust within habitat for the El Segundo blue butterfly, which is considered a significant impact.	None applicable.	MM-ET-3. El Segundo Blue Butterfly Conservation: Dust Control	None required.	Less than significant with mitigation.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Wetlands: The Bradley West Project site is fully developed, with no identified wetlands nearby. The results of recent field surveys conducted in support of a forthcoming jurisdictional delineation for the Bradley West Project indicate that none of the areas surveyed exhibited all three wetland parameters (i.e., hydric soils, wetlands hydrology, and hydrophytic vegetation) and there are no waters of the U.S. subject to USACOE jurisdiction. Subject to concurrence by the USACOE, no areas within the Bradley West Project site, including construction staging and parking areas, are considered to be jurisdictional wetlands or waters of the U.S. If USACOE finds that wetlands or waters of the U.S. are present on-site, these impacts would be the same as those previously identified under the LAX Master Plan and for which a Jurisdictional Determination has already been issued. Therefore, the Bradley West Project would not result in any new impacts.	None applicable.	None applicable.	MM-ET-1. Riverside Fairy Shrimp Habitat Restoration.	Less than significant with mitigation.
Energy Supply and Natural Resources: Adequate energy and aggregate supplies would be available for construction of the Bradley West Project. It is anticipated that operation of the Bradley West Project would result in a net increase in natural gas and electricity demands.	E-1. Energy Conservation and Efficiency Program E-2. Coordination with Utility Providers PU-1. Develop a Utility Relocation Program SW-2. Requirements for the Use of Recycled Materials During Construction SW-3. Requirements for the Recycling of Construction and Demolition Waste	None applicable.	None required.	Less than significant.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Solid Waste: The primary source of construction-related solid waste generation from the Bradley West Project would be demolition of existing facilities. Debris would also be generated from new construction. Construction bid documents for the Bradley West Project would specify that a minimum of 20 percent of construction waste materials would be required to be recycled. The project would not alter passenger numbers assumed in the LAX Master Plan and, as a result, would not result in any new solid waste impacts during operations.	SW-1. Implement an Enhanced Recycling Program SW-2. Requirements for the Use of Recycled Materials During Construction SW-3. Requirements for the Recycling of Construction and Demolition Waste	None applicable.	None required.	Less than significant.
Aesthetics: Construction activities and construction staging would be visible from I-105, the upper stories of hotels and office buildings to the south and some residences on Imperial Avenue, and to a lesser extent due to their distance from the project site, a limited number of residences north of Westchester Parkway.	None applicable.	MM-DA-1. Construction Fencing	None required.	Less than significant.
The Bradley West Project would not impact, and would be complementary of, the iconic Theme Building and the Airport Traffic Control Tower. The reconfigured and new facilities proposed under the Bradley West Project would incorporate more modern design elements, greater architectural articulation, and more extensive landscape amenities than present under existing conditions, consistent with the CTA's Southern Californian landscape theme. Further, the proposed improvements would not cause view obstruction from off-site vantages. The new/reconfigured facilities would represent an aesthetic improvement compared to existing conditions.	None applicable.	None applicable.	None required.	Beneficial impact.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Light Emissions: Construction of the Bradley West Project would include nighttime activities that would require lighting of work areas. Construction lighting would be focused downward and directed on airport property away from sensitive uses. Further, construction work hours would comply with municipal code requirements. No nighttime construction work and associated lighting would occur in areas close enough to disturb residential uses. The Bradley West Project would result in operational changes to lighting, including new facility and airfield lighting systems, new airfield signage, and aircraft parking apron lighting. The aircraft parking apron and ramp lighting would include tall, bright lights. However, these lights would be distant from the nearest sensitive receptors. The proposed new/relocated Bradley West Project facilities would be constructed of non-reflective materials or materials with non-reflective coating. No building materials or light sources would be introduced that could generate glare which would pose an aviation hazard.	LI-2. Use of Non-Glare Generating Building Materials LI-3. Lighting Controls	None applicable.	None required.	Less than significant.
Earth and Geology: Construction of the Bradley West Project would require grading and excavation. A site-specific geotechnical investigation would be prepared, and provide the basis for the grading plan. Project design would include remedial and protective construction methods, as warranted.	None applicable.	None applicable.	None required.	Less than significant.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Hazards and Hazardous Materials: During construction, ground access on the airport and in the vicinity would be altered. With implementation of Master Plan commitments, emergency access would be adequately maintained.	C-1. Establishment of a Ground Transportation/Construction Coordination Office C-2. Construction Personnel Airport Orientation ST-9. Construction Deliveries ST-12. Designated Truck Delivery Hours ST-14. Construction Employee Shift Hours ST-16. Designated Haul Routes ST-17. Maintenance of Haul Routes ST-18. Construction Traffic Management Plan ST-22. Designated Truck Routes FP-1. LAFD Design Recommendations	None applicable.	None required.	Less than significant.
Due to the presence of sites with contamination within and in proximity to the Bradley West Project site, contamination would be encountered during construction. Construction activities would be conducted in accordance with LAWA's Procedure for the Management of Contaminated Materials Encountered During Construction.	HM-2. Handling of Contaminated Materials Encountered During Construction	None applicable.	None required.	Less than significant.
Hazardous building materials, such as asbestos, PCBs, and lead-based paint would be encountered during demolition. Compliance with existing laws, regulations, codes, and policies would serve to reduce or avoid potential impacts.	None applicable.	None applicable.	None required.	Less than significant.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Public Utilities: Adequate water supply would be available for construction and operation of the Bradley West Project. Reclaimed water would be used to the extent feasible for dust suppression in accordance with Master Plan Commitment W-1. Adequate wastewater treatment capacity would be available to handle additional wastewater generated by the project.	W-1. Maximize Use of Reclaimed Water W-2. Enhance Existing Water Conservation Program PU-1. Develop a Utility Relocation Program	None applicable.	None required.	Less than significant.
Public Services: During construction, ground access on the airport and in the vicinity would be altered, with the potential for affecting emergency response times.	C-1. Establishment of a Ground Transportation/ Construction Coordination Office C-2. Construction Personnel Airport Orientation ST-9. Construction Deliveries ST-12. Designated Truck Delivery Hours ST-14. Construction Employee Shift Hours ST-16. Designated Haul Routes ST-17. Maintenance of Haul Routes ST-18. Construction Traffic Management Plan ST-22. Designated Truck Routes FP-1. LAFD Design Recommendations LE-2. Plan Review	None applicable.	None required.	Less than significant.

Table 1-3

Summary of Other Environmental Impacts Related to the Bradley West Project for Which No, or Minimal, Additional Analysis is Required Beyond that Provided in the LAX Master Plan Final EIR

Impact by Discipline	Master Plan Commitments	Master Plan Mitigation Measures	New Mitigation Measures	Level of Significance After Mitigation
Existing Fire Station No. 80/ARFF would be impacted as part of the Bradley West Project. Under the approved LAX Crossfield Taxiway Project, a new fire station/ARFF will be constructed as a replacement for the existing undersized Fire Station No. 80/ARFF. The Bradley West Project includes renovation, improvement, and enlargement of the existing CBP areas within the Central Core of TBIT. The CBP area improvements would result in a beneficial impact to law enforcement services by enhancing passenger processing by the CBP within TBIT.	PS-1. Fire and Police Facility Relocation Plan PS-2. Fire and Police Facility Space and Siting Requirements	None applicable.	None required.	Beneficial impact.
The Bradley West Project would not adversely affect libraries or parks and recreational facilities.	None applicable.	None applicable.	None required.	Less than significant.
Schools: Bradley West Project construction and operation would not result in a substantial increase in student enrollment.	None applicable.	None applicable.	None required.	Less than significant.

Source: CDM, 2009.

2. PROJECT DESCRIPTION

The proposed project is located near the center of Los Angeles International Airport (LAX), as shown in Figures 1-2 and 1-3 in Chapter 1 of this EIR. As one of the airfield improvements included in the LAX Master Plan, the LAX Tom Bradley International Terminal-Reconfiguration Project (TBIT-RP), now referred to as the "Bradley West Project," provides for the addition of aircraft gates along the west side of the TBIT, which will reduce the existing need for, and use of, remote aircraft gates located at the west end of the airport. In conjunction with development of the new aircraft gates, the existing concourses at TBIT would be replaced by new improved concourses, as described in greater detail below. The new contact gates (i.e., aircraft gates with a passenger loading bridge(s) or "jetway(s)" that extend from the concourse to the aircraft) proposed in the Bradley West Project include several gates specifically designed to accommodate new generation aircraft such as the Airbus A380, Boeing 747-8, and Boeing 787, with features such as multiple jetways for each aircraft, larger passenger lounges/holdrooms, and wider, thicker taxiways and aircraft apron areas. The central core of TBIT, which provides for the processing of passengers at TBIT (i.e., ticketing, baggage check/claim, security screening, concessions, etc.), would also be modified to provide additional floor area and improvements to better serve existing and future passengers at TBIT. The following provides additional details regarding the Bradley West Project, including the background of the project, its relationship to the LAX Master Plan, the project objectives, and the project characteristics.

2.1 Bradley West Project Background

LAX is well recognized as one of the world's leading airports and is an integral part of southern California. In 2007, LAX ranked as the fifth busiest airport in the world, based on number of passengers, and is the second largest gateway for international travelers entering the U.S., second only to JFK International Airport.[9] From a regional perspective, LAX serves a vital role relative to trade and tourism and the associated employment and economic benefits. According to a 2007 study completed by the Los Angeles Economic Development Corporation (LAEDC), LAX flights in 2006 created 363,700 direct and indirect jobs with annual wages of $19.3 billion in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties.[10] Of particular importance to the region is the role of LAX relative to international travel. According to the 2007 LAEDC study, an average transoceanic flight, occurring over the course of 2006, traveling round-trip from LAX every day added $623 million in economic output and sustained 3,120 direct and indirect jobs in southern California with $156 million in wages. The economic output, jobs, and wages were calculated from the production and transportation of freight exports, the transportation of freight imports, the operation of the airport itself, and the purchases made by international visitors on the flights. Freight exports (which are generally high-value items) accounted for over 80 percent of the annual economic activity generated by international flights at LAX.

TBIT is the primary facility that serves international travel at LAX. TBIT, along with the upper roadway level within the Central Terminal Area (CTA), was constructed in the early 1980s as part of preparations for the 1984 Summer Olympics hosted by the City of Los Angeles. Over the subsequent 24 years of operations, hundreds of millions of international travelers have passed through TBIT, and the nature, size, number, and operational characteristics of aircraft serving the international market have changed substantially.

The improvements described below would substantially improve the level and quality of passenger service at TBIT, than is otherwise available today, especially as related to the increased presence of new large aircraft in the fleets of commercial carriers at LAX. Given the extensive nature of these

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9 Airports Council International, Available: www.aci.aero/aci/aci/file/Press%20Releases/2008/Interesting%20Stats_2007.pdf, accessed December 29, 2008.

10 Los Angeles Economic Development Corporation, "LAEDC Study of International Flights at LAX Finds $82.1B in Economic Output to Southern California Region," Available: http://www.laedc.org/newsroom/releases/2007/091307.pdf., accessed December 31, 2008.

improvements, additional consideration was given to other operational aspects of TBIT, especially relative to the desire to improve the level and quality of international passenger service, which collectively would elevate TBIT to a world-class facility that Los Angeles could be proud of. Such other improvements identified as part of the Bradley West Project include, but are not limited to, the need for more area and facilities for processing and claiming baggage; additional and improved stations for Customs and Border Protection processing of passengers and inspection of baggage; more general circulation area; better variety, quality, and availability of concessions; more lounge areas; more restrooms; and expanded ticketing areas.

2.2 Bradley West Project as Part of the LAX Master Plan

The approved LAX Master Plan provides the conceptual framework for an extensive array of improvements at LAX, including a variety of improvements throughout the airfield area. The Bradley West Project is the third project under the LAX Master Plan to be advanced into implementation, with the first project being the South Airfield Improvement Project (SAIP) and the second project being the Crossfield Taxiway Project (CFTP). As further described in Section 3.3.2 of this EIR, LAWA is currently working on the LAX Specific Plan Amendment Study (SPAS) pursuant to the requirements of a stipulated settlement, which will evaluate and reconsider certain projects identified in the LAX Master Plan. Such projects are referred to as the "Yellow Light Projects" and pertain primarily to improvements proposed for the north airfield complex and for the on-airport surface transportation system. While the SPAS is being processed, LAWA may continue to process and develop projects that are not "Yellow Light Projects," such as the SAIP, the CFTP, and the Bradley West Project.

The main elements of the Bradley West Project, including the addition of new aircraft contact gates (i.e., aircraft parking and servicing positions located next to terminal buildings with passenger boarding bridges connecting aircraft to the terminal) and the relocation of the two adjacent taxiways (i.e., Taxiways Q and S), are evident on the airfield plan associated with the approved LAX Master Plan. Figure 1-3, presented earlier, delineates the main components of the approved LAX Master Plan and shows aircraft gated along the west side of TBIT, where no aircraft gates currently exist, and two crossfield taxiways immediately to the west of the new gates, which represents the relocation of the two taxiways that currently exist in the area to be improved for the new gates. Improvements related to the Bradley West Project, referred to as the "reconfiguration of TBIT" in the LAX Master Plan and related EIR, are also noted in Section 3.2.9 of the LAX Master Plan Final EIR and Section 2.10 of the Final LAX Master Plan text, as presented below:

- ♦ The Tom Bradley International Terminal (TBIT) would be reconfigured with the addition of a new north/south linear concourse on the west side of the existing building (LAX Master Plan Final EIR page 3-75).
- ♦ Reconfigure the TBIT. The components of this reconfiguration include the addition of holdrooms and departure gates on the west side of the TBIT and the demolition of a portion of the north concourse. (LAX Master Plan Final EIR page 3-82).
- ♦ Relocate Taxiways Q and S that are located immediately to the west of the TBIT building. Construct the aircraft parking apron associated with the future new TBIT gates. (LAX Master Plan Final EIR page 3-82 and Final LAX Master Plan page 2-123).

Midfield taxiway improvements are also contemplated in the 2015 Alternative D Conceptual Summary Schedule presented as Figure F3-20 of the LAX Master Plan Final EIR, including references to *Clear Midfield Area (Phased, Midfield Aprons & Taxiways, and TBIT Rework)*.

As an integral part of the LAX Master Plan, along with the many other improvements that are represented in Figure 1-3 in Chapter 1 of this EIR, the environmental impacts associated with the Bradley West Project and all the elements of the Master Plan are addressed directly and indirectly throughout the LAX Master Plan Final EIR.

2.3 Bradley West Project Objectives

The objectives of the proposed Bradley West Project include the following:

- Reduce the need for, and use of, existing remote gates at the west end of the airport and the need to bus passengers and crews between TBIT and the remote gates.
- Maintain or improve existing aircraft ground access between the north airfield complex and the south airfield complex.
- Accommodate "New Generation Aircraft"[11] such as the Airbus A380, Boeing 747-8, and Boeing 787.
- Improve passenger level of service.
- Avoid loss of international travelers to other airports outside the region and the adverse direct and indirect economic consequences this would cause.
- Complement the systematic phased implementation of the Master Plan and minimize impacts to existing airport operations during construction.
- Provide a substantial number of construction employment opportunities and substantial direct and secondary regional economic benefits, including the need for construction goods and services, associated with construction of a large capital improvements project such as the Bradley West Project.

2.4 Bradley West Project Characteristics

The main characteristics of the proposed Bradley West Project are shown in **Figure 2-1** and generally include the following:

- Construction of new north and south concourses at TBIT just west of the existing concourses, which would be demolished. Compared to the existing concourses, the new concourses would provide new larger holdrooms, and improved and expanded concessions, airline lounges, passenger corridors, and administrative offices;
- Construction of nine aircraft gates, and associated loading bridges and apron areas, along the west side of the new concourses at TBIT;
- Relocation and consolidation of existing aircraft gates along the east side of TBIT. In conjunction with the demolition of the existing concourses at TBIT, nine new aircraft gates, and associated loading bridges and apron areas, would be constructed along the east side of the new concourses, and one existing gate would be retained, to replace the twelve aircraft gates that currently exist at TBIT;
- Renovation, improvement, and enlargement of the existing federal inspection services of Customs and Border Protection (CBP) areas within the central core of TBIT;
- Renovation, improvement, and enlargement of existing concessions areas, office areas, and operations areas within the central core of TBIT;
- Construction of secure/sterile passenger corridors (i.e., areas allowing only passengers that have gone through security clearance and are subject to FAA or airline security requirements) between Terminals 3 and 4 and TBIT; and
- Westward relocation of existing Taxiways S and Q, which are currently located in the area proposed for the new concourses and/or gates.

Additional information regarding each of these improvements is provided below.

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11 New Generation Aircraft is a general term referring to the development and release of new models of commercial aircraft that are larger, more fuel efficient, and incorporate new technology in flight engineering.

2.4.1 Proposed Improvements

2.4.1.1 TBIT Concourse Improvements

The proposed project includes construction of a new concourse area at TBIT to replace the existing north and south concourses. The north and south portions of the new concourse would be constructed approximately 130 feet west of the existing concourses, as measured from the west face of the existing concourses to the east wall of the proposed concourses, and would be approximately 120 feet wide with a maximum roof height of approximately 84 feet above ground. New concourse area would also be constructed west of the existing central core of TBIT, connecting with the new north and south concourses, to provide a total new concourse length of approximately 2,525 feet, including the northern 275 feet length of the existing north concourse. With the exception of that northernmost 275 feet of the existing north concourse, which would tie into the proposed concourse area, the existing north and south concourses at TBIT would be demolished after completion of the new concourses. Demolition would include approximately 77,620 square feet of floor area in the north concourse (i.e., two-story structure with approximately 38,810 square feet on each level) and all of the approximately 127,160 square feet of the south concourse (approximately 63,580 square feet of floor area on each of two levels). The new concourses would provide larger passenger hold areas than the existing concourses, and improved concessions including new food and beverage stores, merchandise stores, airline lounges, passenger corridors, administrative offices, and support space. The new passenger holdrooms on the departure level will be designed to accommodate approximately 125 passengers for Airplane Design Group (ADG) III/IV gates, approximately 225-340 passengers for ADG V gates, and approximately 450 passengers for ADG VI gates. The new concourse facility would be constructed to current seismic standards which are more stringent than those in existence at the time the existing north and south concourses were constructed in the early 1980s. (California seismic safety building standards were revised following the Northridge Earthquake in 1994). **Figure 2-2** shows the proposed configuration of the proposed Bradley West concourse.

2.4.1.2 Aircraft Gates

The development of new gates along the west side of the new concourses includes four gates on the south concourse that would be designed to accommodate ADG VI aircraft such as the A380 and 747-8,[12] providing passenger loading bridges at the fore and aft of the aircraft as well as an additional loading bridge for the upper level of the A380 aircraft. **Figure 2-3** illustrates how an A380 could be gated with three loading bridges, with the two forward bridges connected to the lower level and the rear bridge connected to the upper level, and ground service trucks/equipment distributed around the aircraft. At the north concourse, three gates would be developed on the west side and would be designed to accommodate either two ADG VI aircraft or three ADG V aircraft such as the 787, Boeing 747-400, and Airbus A340; see **Figure 2-2**. Two new gates, one designed to accommodate an ADG IV aircraft and the other to accommodate an ADG VI aircraft, would be constructed west of the existing central core of TBIT, between the new north and south concourses.

As indicated previously, once the new concourse facility is completed, all of the existing south concourse and most (i.e., approximately 75 percent) of the existing north concourse would be demolished. The twelve gates that currently exist along the east side of TBIT would be replaced by nine new gates plus existing Gate 123, which was modified in 2008 to accommodate the A380, and which would be retained. It is currently anticipated that the east side of the north concourse would include one ADG VI gate, two ADG V gates, and two ADG VI/III gates (i.e., such as for Boeing 757 and 737 aircraft and Airbus 320 and 319 aircraft), while the east side of the south concourse would include one ADG VI gate, three ADG V gates, and one ADG IV/III gate (see **Figure 2-2**).

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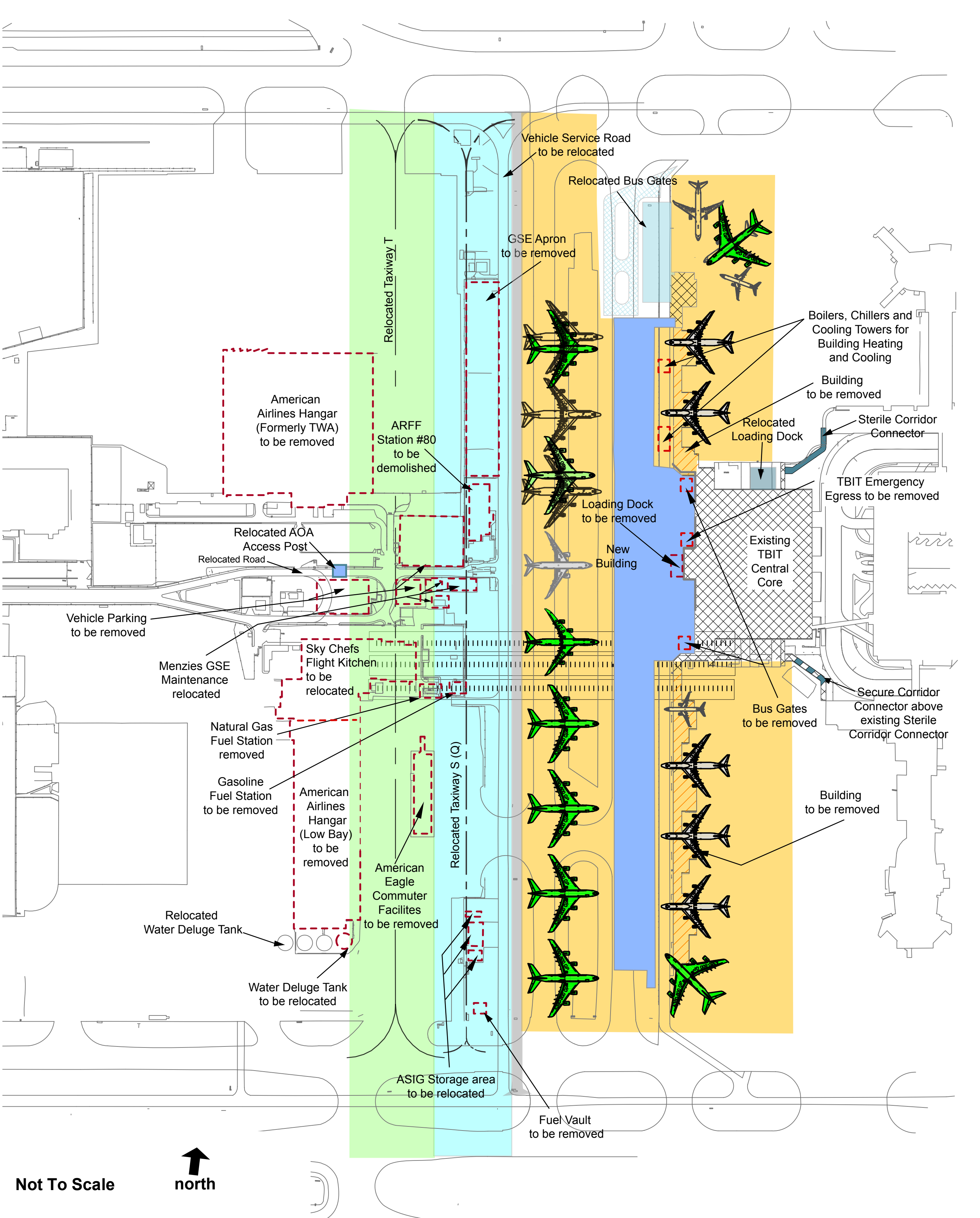
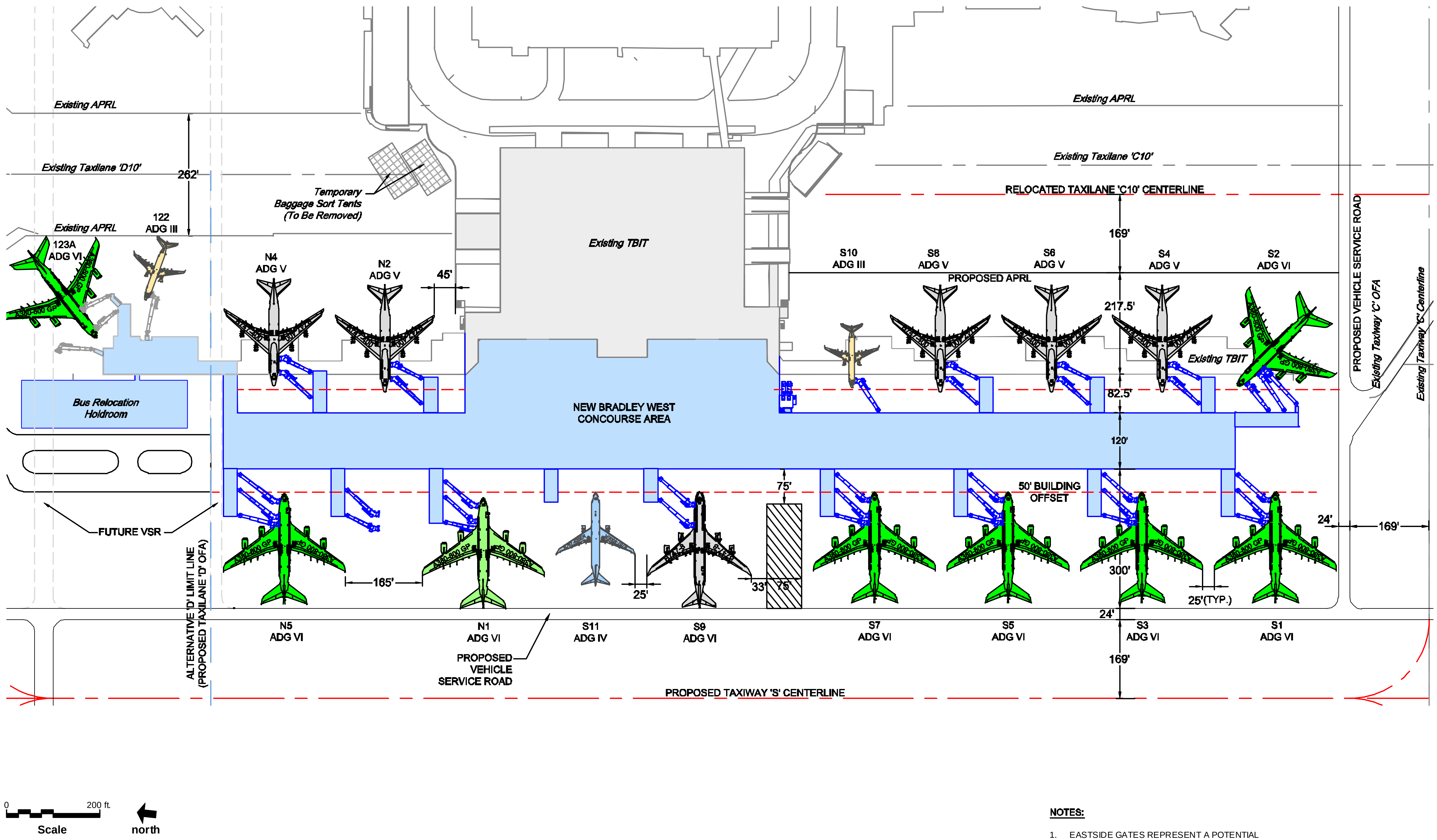
12 ADG VI generally includes aircraft with a wingspan of between 214 and 262 feet and a tail height of between 66 and 80 feet. It should be noted that all New Large Aircraft (NLA) currently in production are considered to be ADG VI aircraft, but not all ADG VI aircraft are NLA. For example, the Lockheed C-5 Galaxy heavy-duty military transport plane is an ADG VI aircraft. NLA generally refers to the new large aircraft that are proposed for commercial service that meet ADG VI size standards.



Source: LAX Development Program Team, 2008.

LAX Bradley West Project Draft EIR	Project Site Plan	Figure 2-1

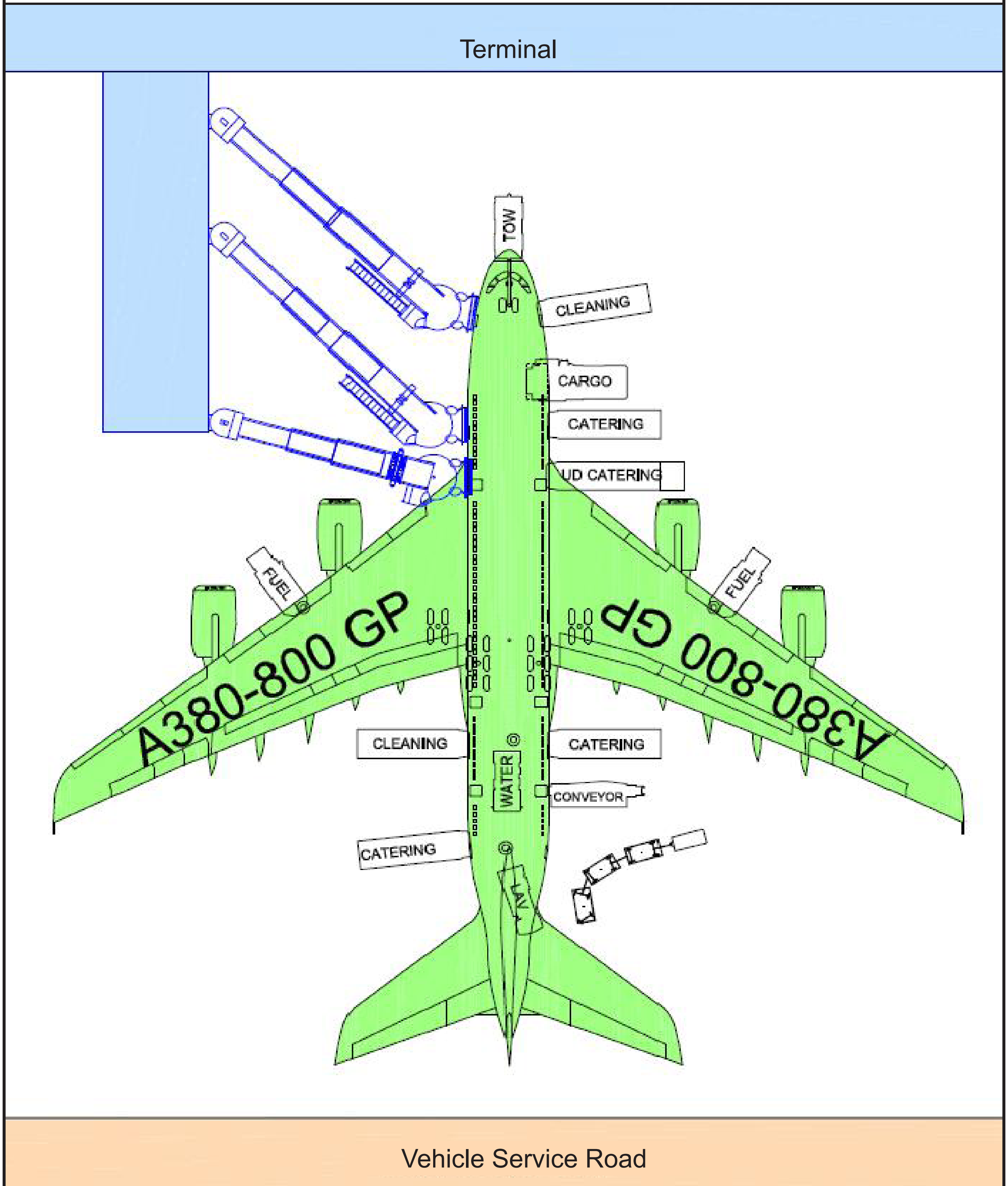


Source: LAX Development Program Team, 2009.

NOTES:

1. EASTSIDE GATES REPRESENT A POTENTIAL FLEET MIX FOR FUTURE SERVICE.

LAX Bradley West Project Draft EIR	Proposed Bradley West Concourse Layout	Figure 2-2



Prepared by: CDM, 2009.

LAX Bradley West Project
Draft EIR

A380 Passenger Loading Bridge Configuration

Figure
2-3

With implementation of the proposed project, international flights that process passengers through TBIT and that would otherwise use remote gates would instead be routed directly to and from TBIT, thereby eliminating the remote gate busing operations associated with those flights. To the extent development of the new gates along the west side of TBIT would reduce the need for, and use of, the existing remote gates for international flights, the remote gates would be more available to be used for Remain Overnight (RON) aircraft parking.

Relocation of existing Taxiways Q and S, as described in greater detail below, would require demolition of the existing American Eagle (American Airlines) Commuter Terminal, which has 12 existing aircraft gates. In conjunction with the expiration of American Airlines' existing lease and establishment of a new lease, the existing commuter operations at that facility would relocate to the existing commuter terminal located just east of Terminal 8, which was formerly operated by United Express but is now vacant.

Nominally, based on the above, implementation of the proposed project would result in a net reduction of 5 aircraft gates, with 7 gates being added to the current total of 12 gates at TBIT and 12 gates being eliminated with the demolition of the American Eagle Commuter Terminal.

2.4.1.3 Bradley West Core

Within the central portion of TBIT, the existing central core would be improved and enlarged to provide additional inspection counters, baggage claim units, primary and secondary processing areas, and CBP administrative/office areas. Other proposed improvements would include renovations within the ticket counter area and airline ticket office area, addition of new concessions areas, expansion and improvement of the meeter/greeter area, additional restrooms, and additional general circulation area. The improved and enlarged area is referred to as the Bradley West Core.

The improvements proposed for the Bradley West Core would occur both within the existing building area as well as within new building area that would fill in the area between the existing west face of the existing central core and the new concourse area to the west. A new roof structure, consistent with the design of the new concourses' roof, would be constructed over both the existing central core and the new building area extending west. The maximum height of the Bradley West Core would be approximately 130 feet above ground. This would require relocation of existing functions that are now located on the west face of the existing central core, including the TBIT loading dock, which would be moved to the north side of the existing building temporarily and then moved back to the new west face of the Bradley Core; a TBIT emergency egress, which would be integrated into the design of the new western portion of the Bradley West Core; and the existing bus gates that provide for the loading and unloading of passengers and crews on the buses traveling between TBIT and other gates, including the west remote gates.

The existing bus gates would be replaced by a 28,400-square-foot busing operations holdroom comprised of either a pre-engineered metal building or a concrete tilt-up structure to be constructed at the northern end of the existing north concourse. The subject facility would accommodate the existing busing operations between TBIT and the west remote gates and between TBIT and international flights occurring at gates within the CTA. With development of the new contact gates at TBIT and the addition of new sterile/secure connector corridors between TBIT and Terminals 3 and 4, the need for busing operations and associated passenger holdroom would be substantially reduced. The temporary busing operations holdroom would remain in operation until a new busing operation holdroom sized to reflect the reduced need for busing is constructed. Such a facility could be accommodated in the new south concourse near the Bradley West Core, after which the temporary busing operations holdroom would be demolished/removed.

Development of the new concourse area and the westward extension of the existing central core to tie into the new concourse will result in an increase in the total floor area of TBIT. The existing facility, including the north and south concourses and central core, encompasses a total of approximately 977,120 square feet. The proposed future facility would provide approximately 2,024,110 square feet of floor area. **Table 2-1** provides a breakdown of existing and future floor area uses within TBIT, including the central core and concourse areas, and **Figures 2-4a** through **2-4e** present conceptual floor plans for the Bradley West Project. **Figure 2-5** presents a conceptual section view looking north through the Bradley West Core, including new building area on the west that would tie into the new concourse.

Table 2-1

TBIT Floor Area Breakdown

		Future Conditions with Project Completion[1]			
Level Detail	**Existing Conditions[1]**	**Existing (Unaltered) Area**	**Renovated Area**	**New Area**	**Total Area**
Level 1 - Arrivals					
Baggage Claim and Customs	89,000				
Baggage Claim			59,500	54,900	114,400
Baggage Re-check	4,820	6,730			6,730
Baggage Trolley				4,050	4,050
Customs Secondary Inspection			9,150		9,150
Circulation	48,310	21,930	50,880	16,030	88,840
Mechanical/Electrical				7,180	7,180
Meter Greeter Hall	25,530	25,530	6,210		31,740
Office/Support	18,490	17,140			17,140
Restrooms	6,110	2,630		2,800	5,430
Retail/Concession	6,810	1,740			1,740
Vertical Circulation	17,610	15,240		13,300	28,540
Total	**216,680**	**90,940**	**125,740**	**98,260**	**314,940**
Level 2 - Interstitial					
Building Core		3,890			3,890
Circulation	40,690			26,790	26,790
Concession	2,660			4,200	4,200
Corridor				17,700	17,700
Duty Free Staging Area				380	380
Gate		16,770			16,770
Holdroom	2,120			11,660	11,660
Inbound Baggage				36,050	36,050
In-Transit Lounge	14,570			18,360	18,360
Information Technology (IT) Rooms/Offices				9,660	9,660
Loading Dock				4,800	4,800
Mechanical/Electrical	2,670			45,920	45,920
Office/Support	55,470	990			990
Open Floor Area				83,080	83,080
Operations/Offices				104,780	104,780
Outbound Baggage	101,800	101,800			101,800
Restrooms	1,740			6,510	6,510
Shuttle Wait Area				380	380
Sterile Corridor	23,260			1,950	1,950
Unassigned			25,330	4,740	30,070
Vertical Circulation	10,040	3,850		10,430	14,280
Total	**255,020[2]**	**127,300**	**25,330**	**387,390**	**540,020**
Level 3 - Departures					
Bus Gates	17,120			38,680	38,680
Circulation	137,450	86,850	1,920	145,000	233,770
Concessions	18,940	12,970	9,900	93,100	115,970
Holdroom/Lounge	37,080	5,510		101,060	106,570
Information Technology (IT) Rooms/Offices				240	240
Loading Dock	2,370				
Mechanical/Electrical	3,220			13,830	13,830
Office/Support	47,340	8,350			8,350
Operations		800			800
Pier (Area Between Holdroom and Jetways at Each Gate)				56,230	56,230
Restrooms	5,450	2,630		14,420	17,050

Table 2-1

TBIT Floor Area Breakdown

		Future Conditions with Project Completion[1]			
Level Detail	**Existing Conditions[1]**	**Existing (Unaltered) Area**	**Renovated Area**	**New Area**	**Total Area**
Retail		1,240			1,240
Security/Passenger Screening	16,260	6,600	23,400		30,000
Ticket Counter Area	11,730				
Ticket Counter Queuing	25,670				
Ticket Office		36,810	10,530		47,340
Ticketing		15,550			15,550
TSA				5,660	5,660
Unassigned				7,490	7,490
Vertical Circulation	12,160	9,340		12,250	21,590
Total	**334,790[3]**	**186,650**	**45,750**	**487,960**	**720,360**
Level 4 - Lower Mezzanine					
Customs & Border Protection Offices				10,940	10,940
Customs & Border Protection Primary Inspection				56,050	56,050
Circulation	2,310	2,310	5,200	20,020	27,530
Concession	30,250				
In-Transit Lounge	15,080	6,500	34,680		41,180
Mechanical/Electrical	10,980		8,870		8,870
Office/Support	23,740	23,740			23,740
Gate Piers				24,590	24,590
Restrooms	4,540		5,600		5,600
Sterile Corridor				78,350	78,350
Vertical Circulation	5,830	5,830		12,940	18,770
Total	**92,730**	**38,380**	**54,350**	**202,890**	**295,620**
Level 5 - Upper Mezzanine					
Airline Alliance Lounge Areas	26,130	26,130		75,090	101,220
Circulation	2,520	6,680		180	6,860
Building Core/Mechanical & Utility	14,630	11,500			11,500
Office/Support	22,500	22,500			22,500
Restrooms	2,140	1,110			1,110
Vertical Circulation	9,980	9,980			9,980
Total	**77,900**	**77,900**	**0**	**75,270**	**153,170**
Grand Total	**977,120[4]**	**521,170**	**251,170**	**1,251,770**	**2,024,110**

1 Different databases were used to calculate existing and future uses on each level. As a result, although the total square footage for each level matches (i.e., the total square footage under "existing conditions" for each level, minus square footage to be demolished, equals the future "existing (unaltered) area" plus the future "renovated area"), there are some discrepancies in the breakdown of square footage by functional area within a given level. These discrepancies do not affect any findings of the environmental analysis.

2 Of the 255,020 square feet on Level 2 under existing conditions, 102,390 would be demolished as part of the Bradley West Project. Of this, 38,810 would be from demolition of the existing north concourse - departure level and 63,580 would be from demolition of the existing south concourse - departure level.

3 Of the 334,790 square feet on Level 3 under existing conditions, 102,390 would be demolished as part of the Bradley West Project. Of this, 38,810 would be from demolition of the existing north concourse - departure level and 63,580 would be from demolition of the existing south concourse - departure level.

4 Of the 977,120 square feet in TBIT under existing conditions, 204,780 square feet would be demolished as part of the Bradley West Project. Demolition would include approximately 77,620 square feet of floor area in the north concourse and all of the approximately 127,160 square feet of the south concourse.

Source: LAX Development Program Team, 2008.

The improvements proposed within Level 1, the Arrivals Level, include substantial emphasis on baggage processing, inspection, and claim areas, with approximately 40,500 square feet of area dedicated to those activities being added to the existing 93,800 square feet for such uses. The associated additional baggage conveyance trolleys, CBP inspection stations, and baggage claim carousels, combined with the addition of new contact gates at TBIT reducing the use of the more distant west remote gates, are expected to substantially improve the processing time and quality of service provided to arriving passengers, especially international travelers. Additionally, the amount of general circulation area on Level 1 would be increased by approximately 80 percent, with approximately 40,500 square feet being added, while the area on Level 1 for retail/concessions would be reduced from approximately 6,800 square feet to 1,740 square feet.

Level 2, referred to as the Interstitial Level, includes the lower level of the concourses. This level is used primarily for baggage conveyance, office area, and operations. Improvements proposed for this level focus primarily on additional area for baggage conveyance; additional area for operations/offices; relocation of the bus gates holdroom and the provision of concessions nearby; and an increased amount of restroom area. Once the new concourses are built, all of the existing south concourse and most of the existing north concourse will be demolished, including the 102,390 square feet on this level (see **Figure 2-4b**).

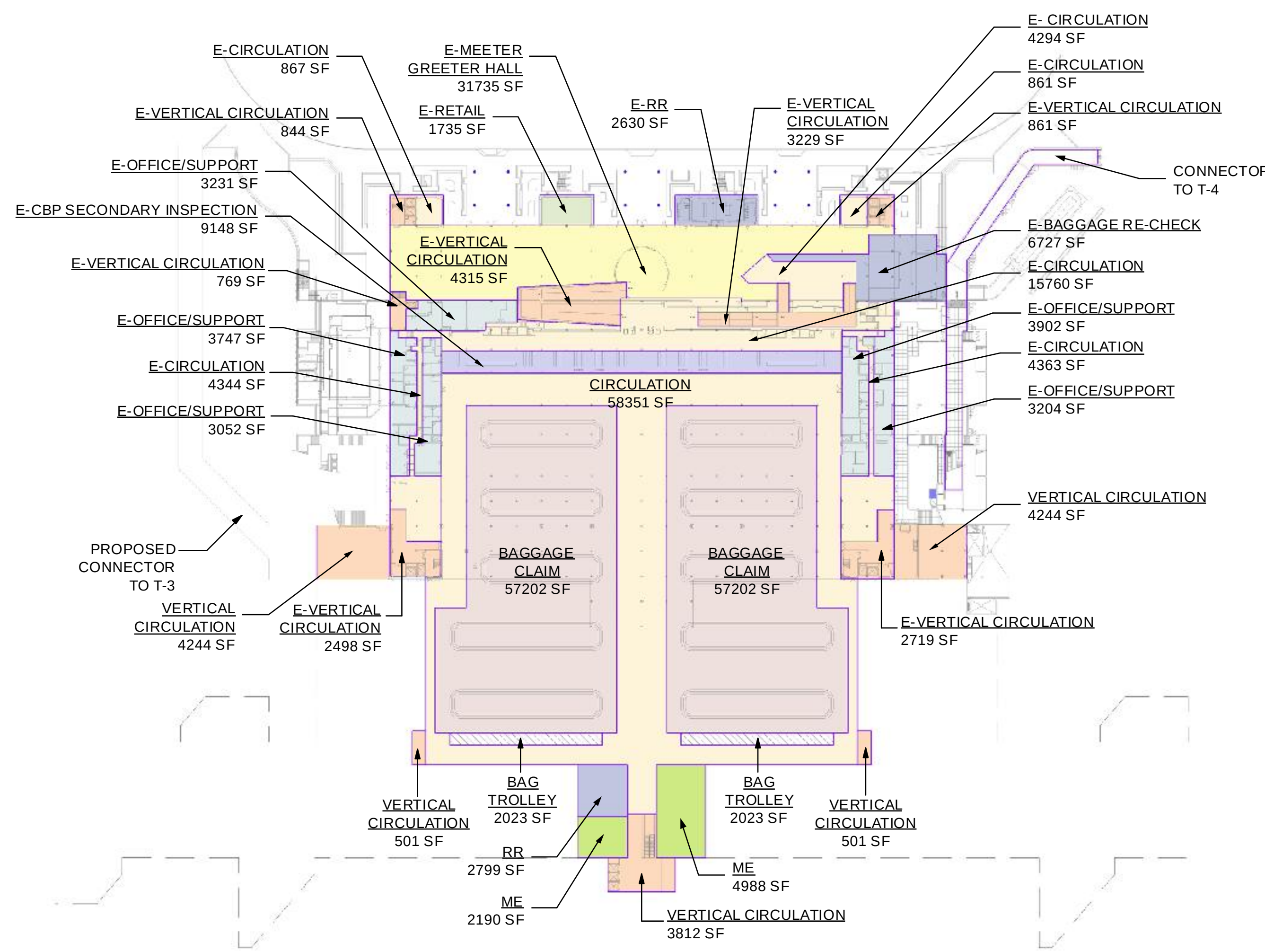
Level 3, the Departures Level, will be improved to provide additional area and checkpoints for security/passenger screening (over 80 percent increase in area), new larger passenger holdrooms including those associated with the new gates on the west side of TBIT (almost a three-fold increase in holdroom area). A key feature on this level within the Bradley West Core is the proposed "Great Hall" which will be a large open space open to natural light, with both high ceilings and glass curtainwall that will contain a variety of concessions, providing an almost five-fold increase in the amount of concessions area currently on that level. Additionally, there would be an approximately 70 percent increase in the ticketing area and an approximately 70 percent increase in general circulation area. Similar to Level 2 described above, completion of the proposed new concourse area would be followed by demolition of the 102,390 square feet of existing concourse area on Level 3.

Level 4, the Lower Mezzanine, would be improved to provide a sterile corridor connecting the aircraft gates to a new 56,000-square-foot CBP primary inspection area for the processing of passengers arriving on international flights, and approximately 11,000 square feet for CBP offices nearby. Other improvements proposed on this level would increase the size of the in-transit lounge area from 15,100 square feet to 41,200 square feet.

Level 5, the Upper Mezzanine, would be improved to fill in the area between the west edge of the existing central core and the east edge of the new concourse area with approximately 75,090 square feet of new airline alliance lounge area. Relatively minor modifications would be made to the remainder of the existing Upper Mezzanine, which contains existing airline alliance lounge areas, office/support area, restrooms, circulation, and building mechanical/utility area.

2.4.1.4 Secure/Sterile Connector Corridors between TBIT and Terminals 3 and 4

Improvements proposed within TBIT include the addition of secure/sterile corridors connecting with Terminals 3 and 4 to allow passengers on international arrival flights in those terminals to have direct access to the screening and inspection services within TBIT, instead of the current procedure of deplaning onto buses and being transported to the west side of TBIT for processing.



Legend

- BAG TROLLEY
- BAGGAGE CLAIM
- CIRCULATION
- E - BAGGAGE RE-CHECK
- E - CBP SECONDARY INSPECTION
- E - CIRCULATION
- E - MEETER GREETER HALL
- E - OFFICE / SUPPORT
- E - RETAIL
- E - RR
- E - VERTICAL CIRCULATION
- ME
- RR (RESTROOMS)
- VERTICAL CIRCULATION

Not To Scale

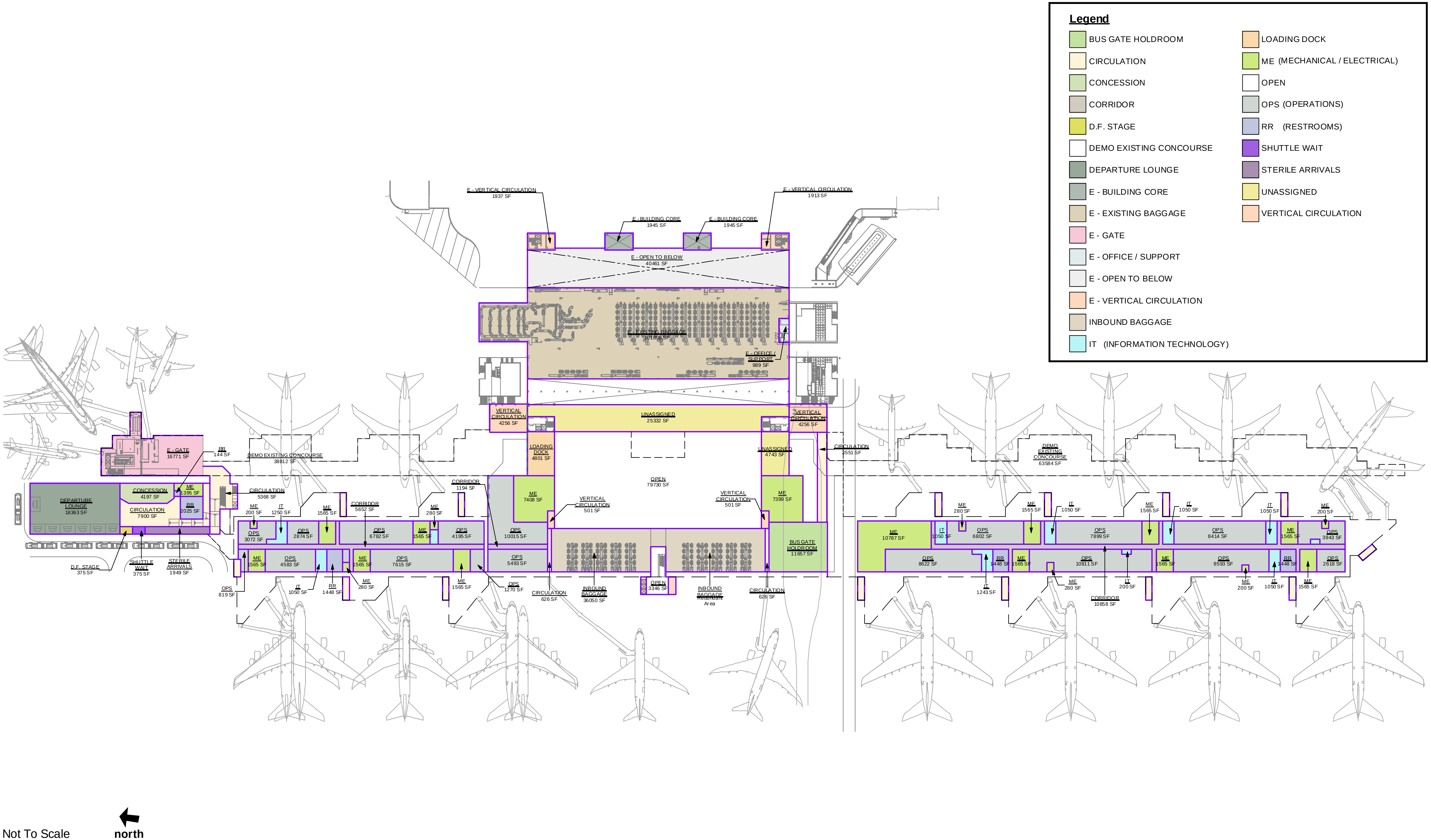
north

Source: LAX Development Program Team, 2008.

LAX Bradley West Project Draft EIR

Bradley West Conceptual Floor Plan - Level 1

Figure 2-4a



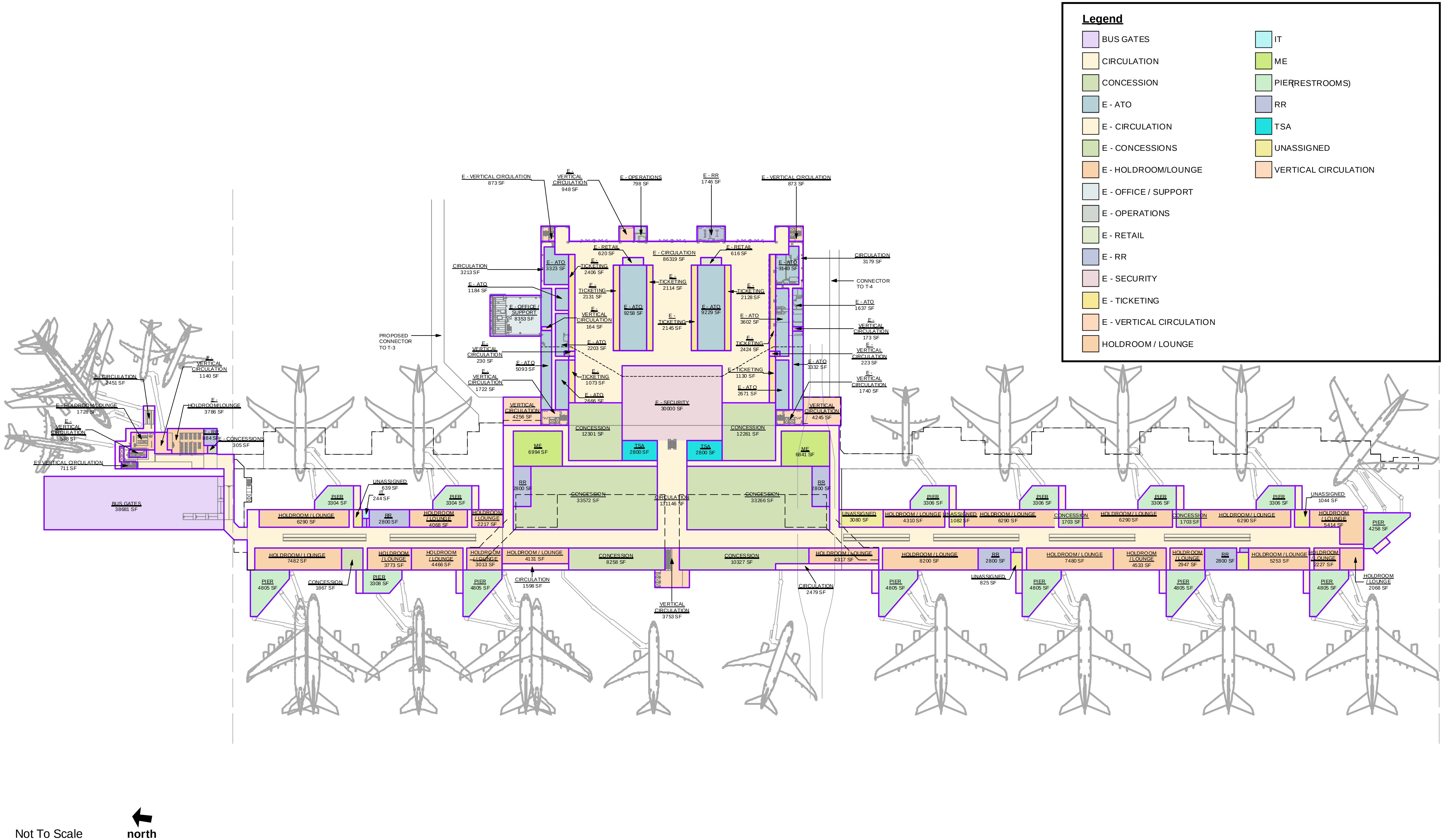
Source: LAX Development Program Team, 2008.

LAX Bradley West Project Draft EIR

Bradley West Conceptual Floor Plan - Level 2

Figure

2-4b

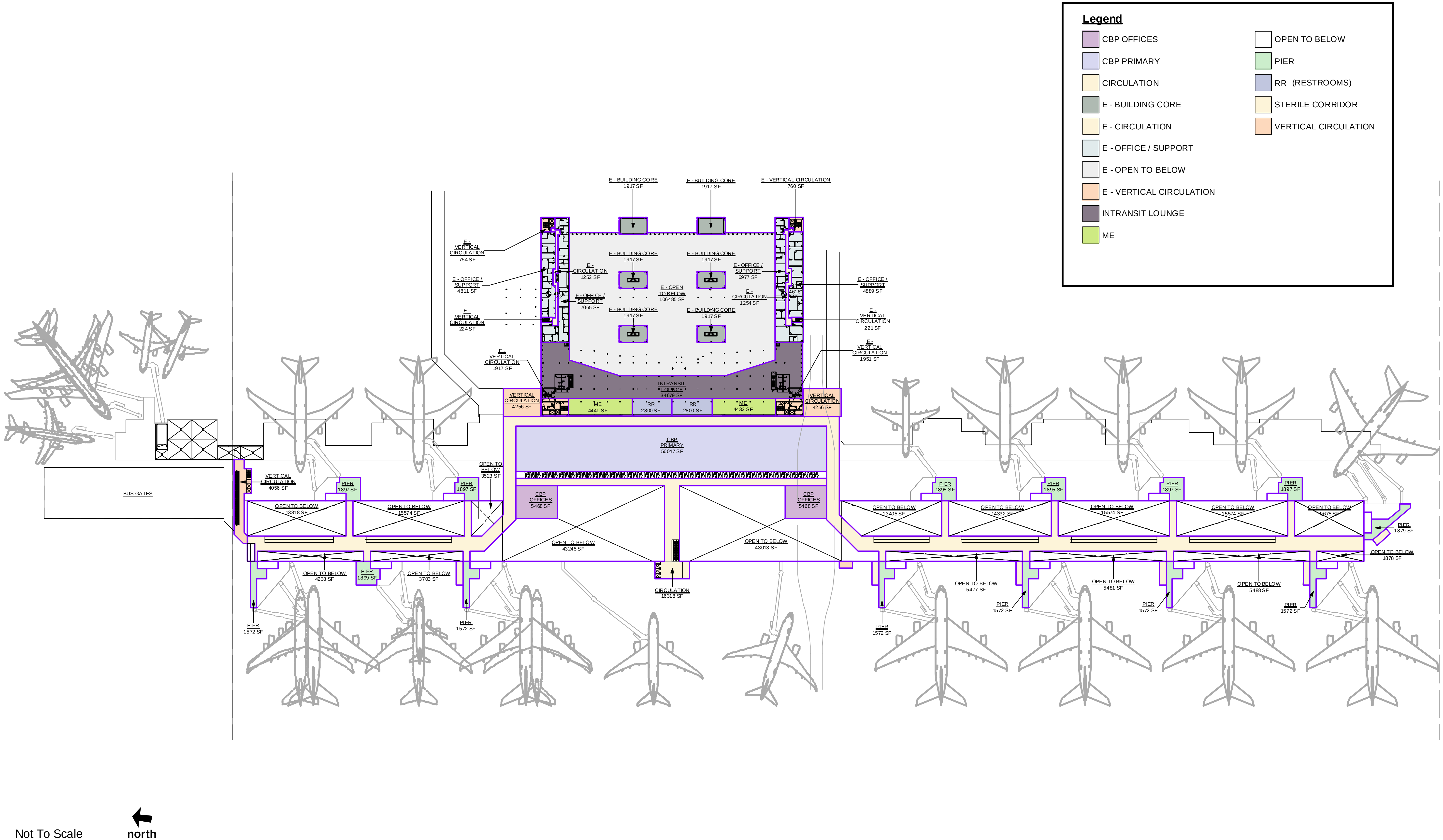


Source: LAX Development Program Team, 2008.

LAX Bradley West Project Draft EIR

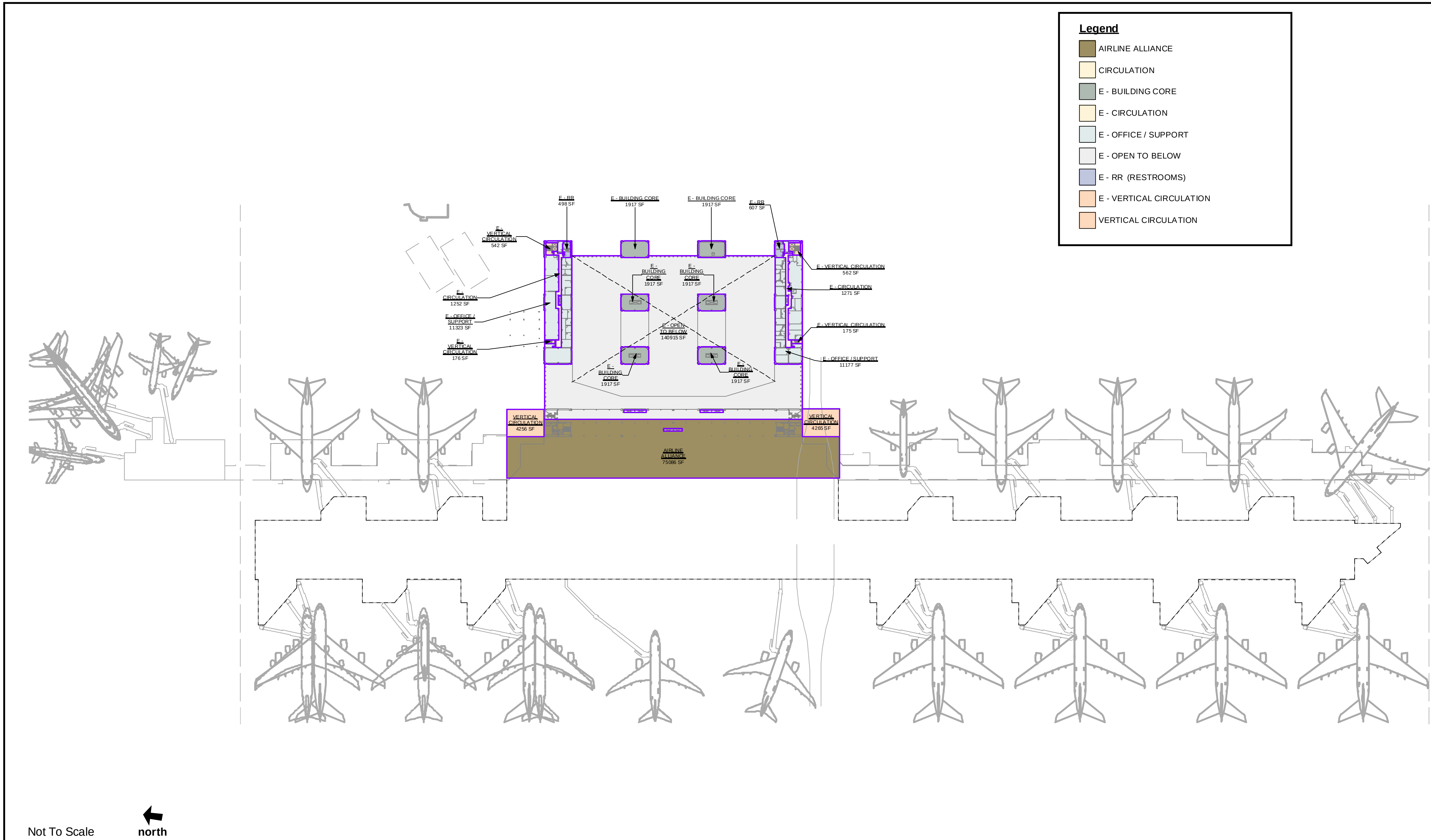
Bradley West Conceptual Floor Plan - Level 3

Figure 2-4c



Source: LAX Development Program Team, 2008.

LAX Bradley West Project Draft EIR	Bradley West Conceptual Floor Plan - Level 4	Figure 2-4d

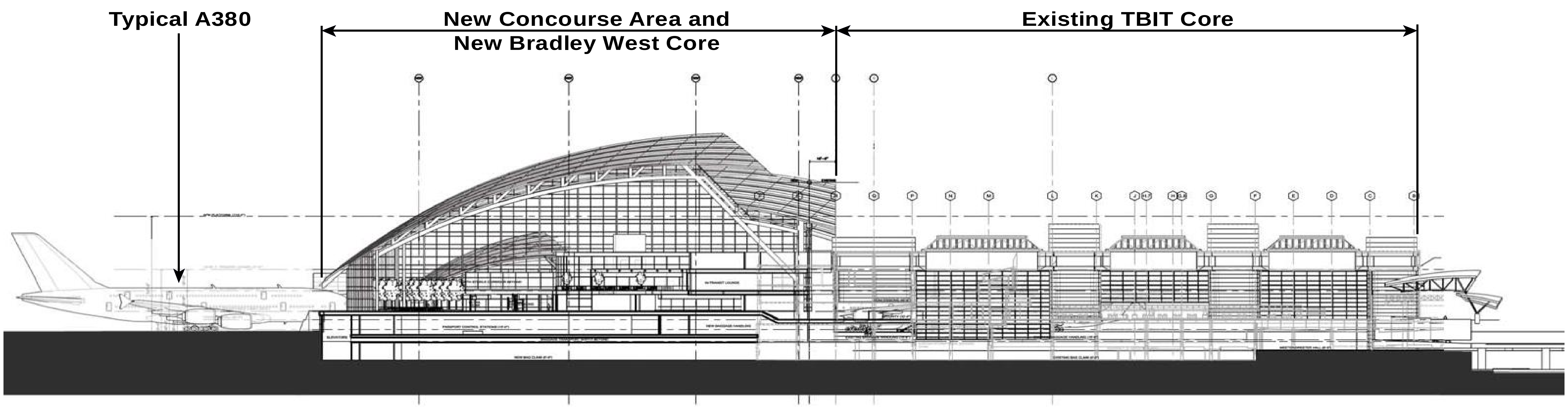


Source: LAX Development Program Team, 2008.

LAX Bradley West Project Draft EIR

Bradley West Conceptual Floor Plan - Level 5

Figure 2-4e



Not To Scale

Source: LAX Development Program Team, 2008.

LAX Bradley West Project Draft EIR

Bradley West Conceptual Building Section View
Looking North at Concourse and Bradley West Core

Figure
2-5

2.4.1.5 Taxiways S and Q Westward Relocation

The area along the west side of TBIT that is proposed for the new concourse facility, new gates, loading bridges, and aircraft apron area is currently occupied by Taxiways S and Q and an adjacent service road, which provide aircraft access between the north runway complex and the south runway complex. As part of the proposed project, both taxiways would be relocated approximately 518 feet to the west (from centerline of existing Taxiway Q to centerline of new Taxiway S), and would be designed and constructed to accommodate ADG VI aircraft. The relocated taxiways may be designated by the FAA as either taxiways, taxilanes, or one of each.

Early in the preparation of construction plans for relocation of Taxiways Q and S, consideration was given to the development of various tunnel segments that are improvements included in the approved LAX Master Plan. Specifically, the LAX Master Plan identifies a tunnel system to access the future Midfield Satellite Concourse. While such a tunnel system is not required for the Bradley West Project, construction of those segments of the tunnels situated beneath the relocated taxiways was evaluated relative to reducing future environmental impacts and taxiway operations disruption associated with development of the tunnel system. Constructing the tunnel segments in conjunction with the proposed taxiway construction would avoid the future need to either tunnel beneath the subject taxiways or close them and excavate across them in order to complete the tunnel system. Further evaluation and consideration of that development approach found that it may be preferable to hold construction of the tunnel segments until such time as the entire tunnel system can be developed in conjunction with construction of the future Midfield Satellite Concourse. While the impacts analyses presented in this EIR relative to relocation of Taxiways Q and S include the subject tunnel segments (i.e., tunnel segments were included in the initial project description used as the basis of the impacts analysis), the actual construction of the tunnel segments and system is anticipated to occur through a discretionary approval(s) separate from the Bradley West Project.

2.4.1.6 Building Heating and Cooling System

The Bradley West Project improvements include provisions for meeting the heating and cooling requirements of the building. A system that includes four natural gas boilers to generate hot water and seven chillers, with associated cooling towers, to generate chilled water is proposed to be installed in the outdoor area where the Bradley West Core and the new north concourse would meet (see **Figure 2-1**). This boiler and chiller system would supplement the heating and cooling capabilities of the existing LAX Central Utilities Plant (CUP), which currently operates below its design capacity and is considered to be outdated and inefficient. As described in Chapter 3 of this EIR, the existing CUP is proposed to be replaced with a new and more efficient CUP. Completion of the replacement CUP project would substantially reduce, if not eliminate, the need for supplemental heating and cooling that is proposed to be provided by the system included in the Bradley West Project. Should the supplemental heating and cooling no longer be needed, it is anticipated that the boiler, chiller, and cooling tower system would be decommissioned and removed.

2.4.1.7 Relocation, Modification, and Upgrading of Utility Lines

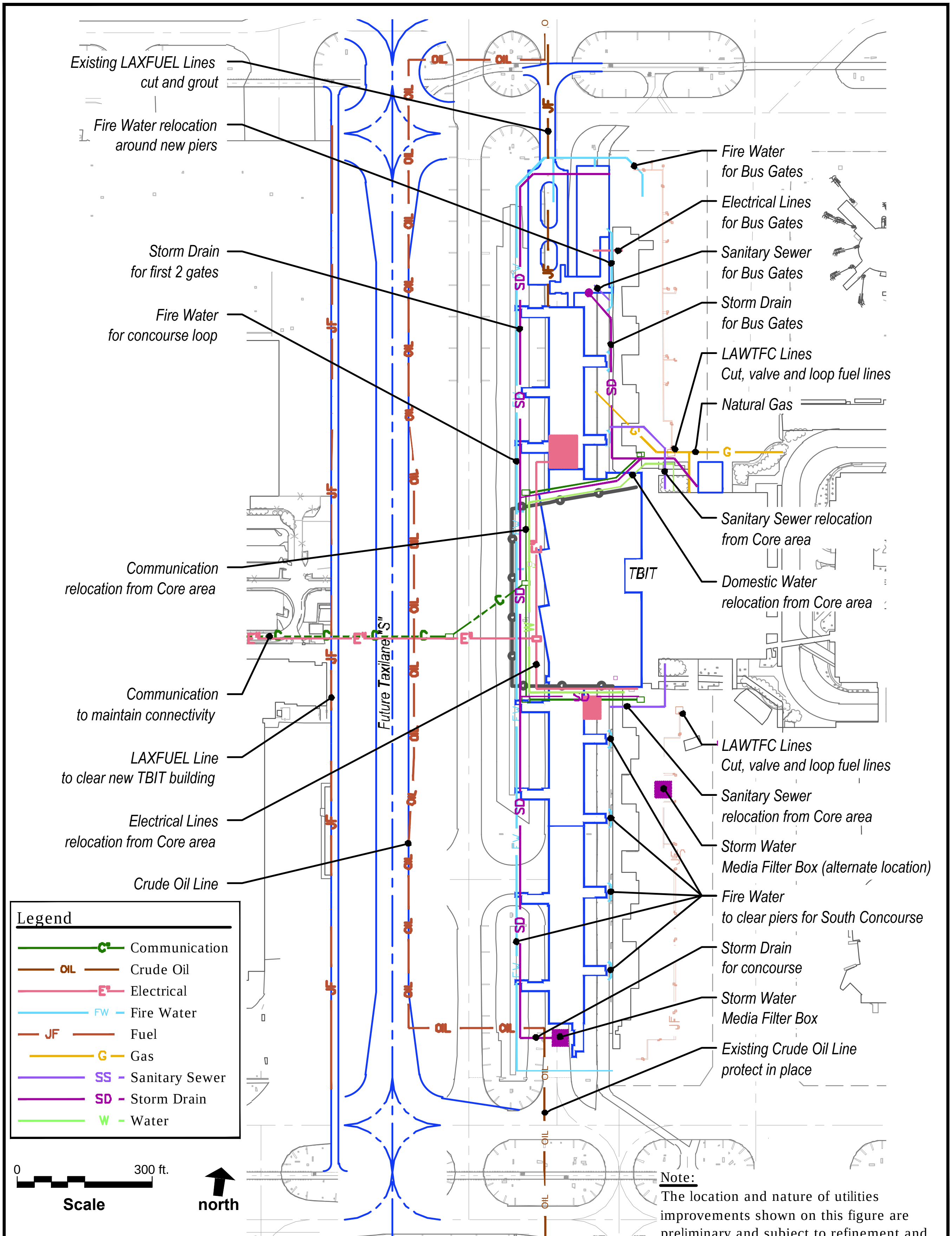
The Bradley West Project site extends across an area that contains various subsurface and above-ground utility lines and facilities, including those related to storm drain, sewer, water, electricity, natural gas, oil and fuel, and communications. Implementation of the Bradley West Project would require the relocation or modification of some lines, and may include the upgrading of lines to meet current code requirements and to function more efficiently. Utility lines in the Bradley West Project area that have been identified as requiring relocation are identified in **Table 2-2** and illustrated in **Figure 2-6**. Additional infrastructure facilities in the project area may also require relocation as a result of project construction.

Table 2-2

Summary of Planned Utility Relocations and Modifications for the Bradley West Project

Utility	Description
Domestic backbone water supply relocation	Existing 12" combined domestic and fire water lines to be relocated around the existing and new TBIT north, west and south peripheral. Total length approximately 1,300 linear feet (LF).
Fire water loops to be rerouted	Existing 8" fire water loops to be re-routed. Total length approximately 5,000 LF.
Sanitary sewer lines relocation	Two existing 8" collectors to be relocated from the northwest and southwest corners of existing TBIT to make room for the new TBIT building. Total length approximately 750 LF.
Roof drains and site drainage rerouting	Existing drainage runoff from TBIT to be rerouted due to demolition of existing trunk lines around TBIT. New building roof runoff to be directed to the same system to be treated per SUSMP requirement. New storm drain system to be installed around the north, west and south sides of new TBIT building. Existing system to be abandoned/removed during core construction. Size of pipe varies from 18" to 48".
Crimson Oil product line relocation	Existing 10" line in Taxiway Q to be relocated on the west side of the existing service road next to Taxiway S. Total length approximately 4,000 LF.
LAXFUEL redundancy lines relocation	Existing 18" line to be relocated from Taxiway Q to between future Taxiway S and Taxiway T. Total length approximately 3,800 LF. Existing lines to be abandoned in place and removed.
LAWTFC aircraft hydrant loop modifications	Existing 2 x 12" lines to be capped, re-looped and isolated.
Electrical feeds to World Way West relocation/new duct bank	Relocate two 34.5 kV (high voltage) electrical feeds that run in duct banks located south of the existing TBIT to route new lines and duct banks to/along World Way West to the west and through the CTA to the east. Coordinate LAWA 34.5 kV system upgrade with LADWP system including new on-airport distribution stations and possibly new network stations.
Power/communication conduit lines rerouting	Subsurface 480v power distribution and communication conduit lines to be rerouted vertically over concourses for a total distance of 1,100 LF at each concourse. After rerouting is completed and conductors pulled through, a "cut over" sequence (i.e., systematic transfer of live power from old lines to new lines) will complete the work.
Communication fiber optic relocations	Provide temporary communication duct bank in front of future TBIT building to supply LAWA communication needs until a new communication duct bank is constructed. New duct bank, separate from 34.5 kV duct bank, will feed LAWA, FAA, AT&T, third party and other miscellaneous communication cables.

Source: LAX Development Program Team, 2009.



Source: LAX Development Program Team, 2009.

LAX Bradley West Project Draft EIR

Proposed Utility Relocations and Modifications

Figure 2-6

In general, the relocation, modification, and upgrading of utility systems would involve the placement of new lines or facilities at locations compatible with project plans in advance of taking the potentially affected existing line out of service. The design and construction of the utility systems improvements are coordinated with the affected service provider which, relative to the aforementioned utility types, may include the Los Angeles Bureau of Sanitation, Los Angeles Department of Water and Power, Southern California Edison, Southern California Gas Company, LAXFUEL and other fuel/oil companies with lines at LAX, and various communications companies. The construction activity associated with such utilities systems improvements would occur in conjunction with the other project-related construction activities. For example, when the existing buildings, apron/pavement areas, and other surface improvements are removed to prepare the project site for relocation of Taxiway S or for construction of the new concourses and Bradley West Core, the necessary improvements to the underlying utility lines, including relocation to be compatible with project plans, would occur. In some cases, it is necessary to complete some or all of the improvements associated with a utility line relocation or modification in advance of construction occurring near the existing line in order to avoid a substantial disruption of service, such as if removal of existing surface structures has a high likelihood of impacting the underlying utility line. Work on subsurface utility lines may involve the cutting and removal of surface pavement using equipment such as concrete saws and backhoes, excavation of soils down to the utility line(s) level, removal of existing lines or further excavation and placement of bedding material for installation of a new line(s), placement of the new or modified utility line(s) using a backhoe or crane, backfilling and compaction of the area using equipment such as a backhoe, front loader, compactor, and roller, and placement of new surface pavement. Work on above ground utility lines and facilities would typically involve the use of various lifts and cranes. Haul trucks, materials delivery trucks, and crew pickup trucks would also be involved in subsurface and above ground utility work.

2.4.2 Removal/Relocation of Existing Facilities

Construction of the relocated taxiways would require the relocation and/or removal of several existing airfield facilities including, in addition to the busing facility and utilities described above, the existing loading dock at TBIT, seven RON aircraft parking spots, ground service equipment (GSE) storage and maintenance facilities, a ground vehicle fueling station, an airfield operations area (AOA) access control post, all or a part of the aircraft maintenance hangar formerly owned and operated by TWA, the American Airlines Low-Bay Hangar, one or more of the three water deluge tanks located south of the Low-Bay Hangar, a flight kitchen, the Los Angeles Fire Department Station 80/Aircraft Rescue and Firefighting (ARFF) Facility,[13] a vehicle parking lot, the American Eagle Commuter Terminal, and a fuel vault.

Table 2-3 provides an overview of the existing facilities that would be affected by the proposed project, including the name, size, and disposition of each facility; additional discussion of the subject facilities is provided in the narrative text that follows the table. **Figure 2-7** delineates the existing and proposed locations of the affected facilities.

[13] A new fire station/ARFF would be constructed prior to, and independent of, demolition of the existing ARFF.

Table 2-3

Summary of Existing Facilities to be Removed/Relocated

Facility	Approximate Count	Current Use	Disposition of Facility/Use
American Airlines (Former TWA) Maintenance Hangar	56,500 sq. ft.	The western portion of hangar is used for aircraft maintenance. The eastern portion is generally vacant, but occasionally used for storage.	Either all or just the eastern portion of the building would be demolished and not replaced. Existing aircraft maintenance activities could be relocated to the American Airlines High Bay Hangar and some maintenance activities could occur when aircraft are parked at RON areas.
AOA Access Post #5	144 sq. ft.	Guard Post	Building would be demolished and current use would be relocated to new guard post to be constructed northeast of the World Way West loop.
Vehicle Parking at east end of World Way West	Approximately 120 parking spaces	Employee/visitor parking	Parking associated with uses to be relocated, such as Menzies GSE Maintenance Facility and Sky Chefs Flight Kitchen would be provided at the use relocation areas. Other displaced parking would be accommodated at several other existing parking lots nearby.
Water Deluge Tanks	Three 750,000 gallon tanks	Serves the fire suppression systems for the existing American Airlines High and Low Bay Hangars, the former TWA Hangar and the Coast Guard Hangar	Easternmost storage tank and associated pumping system elements would be demolished and a replacement tank and associated piping would be constructed on the west side of the two remaining tanks.
Sky Chefs Flight Kitchen	270,000 sq. ft.	Food Preparation	Building would be demolished and the current operations therein would be relocated into an existing Sky Chefs facility located at 6901 Imperial Highway and/or moved to other off-site facilities, depending on business planning decisions yet to be made by Sky Chefs.
American Airlines Low Bay Hangar	170,000 sq. ft.	Aircraft, Facility, and GSE Maintenance; Baggage Sorting; Operations/Crew Lounge; Cabin Service; Fixed-Base Operator (Business Jet Maintenance); and Food Preparation	Hangar would be demolished. American Eagle aircraft maintenance would be relocated to the Delta Low Bay Hangar. GSE maintenance, luggage sorting, and operations/crew lounge would be relocated to the former United Express Commuter Terminal located east of Terminal 8 and Sepulveda Boulevard. Cabin service would be relocated to the former United Airlines cargo facility. American Airlines facility maintenance operations could be relocated into the American Airlines High Bay Hangar. The Fixed-Base Operator could be relocated to the Delta Low Bay Hangar or other suitable location along the south side of the airfield where several other fixed-based operators are located. Sky Chefs operations would be relocated to either the Imperial facility or other operations off airport site (see above).

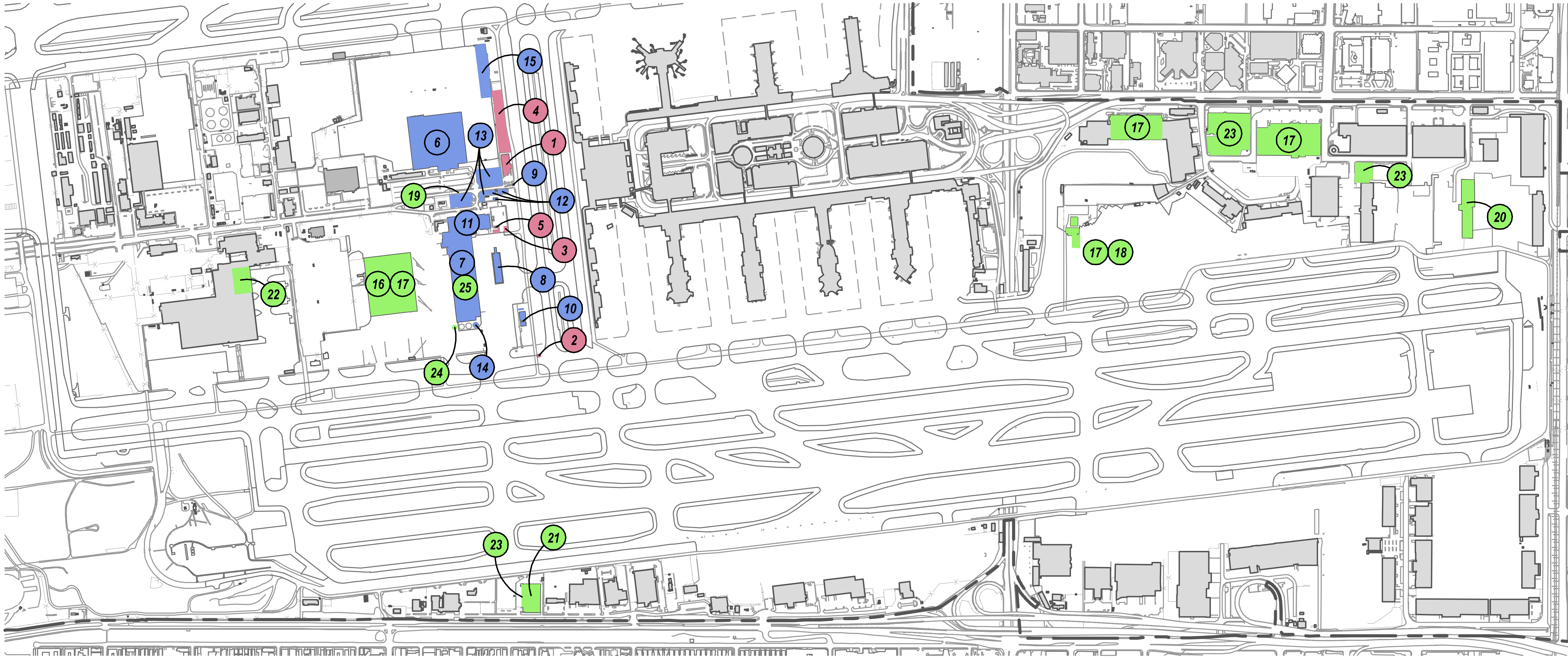
Table 2-3

Summary of Existing Facilities to be Removed/Relocated

Facility	Approximate Count	Current Use	Disposition of Facility/Use
Liquid Gas and Fueling Stations	Three underground tanks (12,000 gallon diesel, 8,000 gallon gasoline, 7,000 gallon storage) and one above ground tank (10,000 gallon liquefied propane storage tank)	Liquid Gas and Fueling Stations operated by American Airlines	Tanks would be removed, the underlying soils would be checked for any contamination and remediated if/as necessary. It is uncertain at this time whether the GSE fueling operations at the existing fueling stations would relocate to another on-airport GSE fueling station, possibly in the vicinity of the former United Airlines cargo facility, or whether the gas/fueling would be provided by an off-airport fuel vendor.
Fuel Vault	One underground concrete vault approximately 4 feet long by 5 feet wide.	Fuel line valve controls	Relocation of fuel lines as part of Taxiways Q and S relocation would include new in-line valve structures; hence, there would be no need to relocate existing fuel vault.
ASIG GSE Storage	7,000 sq. ft.	Vehicle Service/Repair Office	Building would be demolished and current operation would be moved to the Air Freight 8 Building located at the east end of the airport.
GSE Apron	N/A	GSE Equipment Staging/Storage	GSE equipment would be removed.
RON Aircraft Parking	Seven aircraft parking positions	Aircraft Parking	During construction of the relocated Taxiway S, the RON positions would be temporarily relocated to apron areas east of the American Airlines (Former TWA) Maintenance Hangar and east of the American Airlines Low Bay Hangar. Following removal of the American Airlines Low Bay Hangar, the RON positions would be permanently relocated to that location.
Menzies GSE Maintenance	13,000 sq. ft.	GSE Maintenance	Building would be demolished and current operation could be moved to an existing building near the Continental Airlines maintenance hangar.
LAFD Station No. 80/ARFF	14,000 sq. ft.	Fire/Rescue Station (to be vacated upon transition of existing operations to a new station proposed as part of the Crossfield Taxiway Project).	The existing facility is anticipated to be vacated, and the building would possibly be in use for storage, at the time of Bradley West Project implementation. As such, the existing facility would be removed and no further relocation required.
American Eagle Commuter Terminal	16,500 sq. ft.	Commuter Terminal	Building would be demolished. In conjunction with the expiration of American Airlines' existing lease and establishment of a new lease, the current American Eagle commuter operations are planned to relocate to the former United Express Commuter Terminal.

Source: CDM, 2008.

- **Remain Overnight (RON) Aircraft Parking Positions**. There are seven RON aircraft parking positions located within the northern portion of the future Taxiway S. The subject RON positions can accommodate three Boeing 757 and four Boeing 737-800 or McDonnell Douglas MD-80 aircraft. One of the Boeing 757 positions can also accommodate a Boeing 767-300ER; however, the use of the adjacent parking position is limited when a 767 aircraft is present. Generally, only four to five of the seven positions are occupied each night. During construction of future Taxiway S, the displaced RON positions could be temporarily accommodated on the east side of the former TWA Hangar and on the east side of the American Airlines Low Bay Hangar. It is possible to park three aircraft (MD-80) along the east side of the former TWA Hangar, and also three aircraft (one B767 and two B757) along the east side of the American Airlines Low Bay Hangar. Upon demolition of the American Airlines Low Bay Hangar when Taxiway T would be constructed, it would be possible to park RON aircraft on the site formerly occupied by the Hangar.
- **American Airlines (Former TWA) Maintenance Hangar**. Development of future Taxiway T would require demolition of the eastern portion the existing American Airlines Maintenance Hangar that was formerly operated by TWA (i.e., the "TWA Hangar"). While only the eastern portion of the building is located within the Taxiway T improvement area, it may be necessary to demolish and remove the entire building, subject to further evaluation regarding the design, approach, cost, and logistics of demolishing only a portion of the building. For purposes of this EIR, a conservative assumption has been made that the entire hangar would be demolished and removed. Presently, aircraft maintenance operations only occur in the western portion of the hangar and the eastern portion of the building is generally vacant and occasionally used for storage. If the entire hangar were to be demolished, the limited amount of aircraft maintenance activities that presently occur would be relocated to the American Airlines High Bay Hangar and some maintenance activities could occur while aircraft are parked in RON positions. It is anticipated that relocation of the aircraft maintenance activities from the TWA Hangar to the American Airlines High Bay Hangar would require very little, if any, modifications and improvements to the High Bay Hangar given the similarity of uses.
- **Air Operations Area (AOA) Access Guard Post #5**. Guard Post #5 serves as the main access to the existing AOA Service Road S from the end of World Way West. In conjunction with the development of future Taxiway T, this building would be relocated from its current location to a new location northeast of the World Way West loop. Given that the existing guard post building is comprised of assembled panels, it is possible that only a new 12-foot by 12-foot concrete slab and various utilities improvements would be required for the new location. The existing building would then be disassembled, moved, and reassembled at the new site, subject to confirmation that the existing building panels are in a condition suitable for such relocation.
- **Vehicle Parking at East End of World Way West**. The development of future Taxiway T would extend across the eastern end of World Way West, which, in addition to impacting Guard Post #5 described above, would eliminate approximately 120 existing vehicle parking spaces located in the area where the road loops around. This parking is generally shared by existing uses in the nearby area, several of which would be relocated and/or reduced or eliminated by the Bradley West Project and the LAX Crossfield Taxiway Project improvements. Such uses include those associated with the Sky Chefs Flight Kitchens, the American Airlines Low Bay Hangar, the former TWA Hangar, and various GSE maintenance facilities. As those existing uses are relocated, reduced, or eliminated, the need for those existing parking spaces would follow. **Figure 2-7** shows the general areas where existing parking would be redistributed, along with the associated uses, such as the Sky Chefs Flight Kitchens located north of Imperial Highway and various aircraft maintenance and GSE operations within the Century Cargo Complex located to the east of the Bradley West Project site, where there are ample areas to accommodate the parking that would be eliminated by the Bradley West Project.



	To Be Removed	To Be Relocated	New Site
American Airlines (Former TWA) Hangar		6	16
American Airlines Low Bay Hangar		7	17
American Eagle Commuter Terminal		8	18
AOA Access Post #5		9	19
LAFD Station #80/ARFF	1		
ASIG GSE Storage Area		10	20
Fuel Vault	2		
Gasoline Fuel Station	3		

	To Be Removed	To Be Relocated	New Site
GSE Apron	4		
Sky Chefs Flight Kitchen		11	21
Menzies GSE Maintenance		12	22
Natural Gas Fuel Station	5		
Vehicle Parking		13	23
Water Deluge Tanks		14	24
RON Aircraft Parking		15	25

0 1,000 ft.
Scale
north

Source: LAX Development Program Team, 2009.

- **Water Deluge Tanks**. The water deluge system serves the hangar fire suppression system for the American Airlines hangars including the American Airlines High Bay Hangar, Low Bay Hangar, former TWA Maintenance Hangar and the Coast Guard Hangar. Three 750,000-gallon water storage tanks, and a pumping station and associated supply manifold and pumping manifold are located on the north end and east end of the American Low Bay Hangar, respectively. The easternmost water storage tank and pumping head manifold fall within the footprint of the future Taxiway T object free area. With development of Taxiway T, the easternmost storage tank and associated pumping system elements would be demolished and replaced in-kind on the west side of the two remaining tanks.
- **Sky Chefs Flight Kitchen, American Airlines Low Bay Hangar, and Liquid Gas and Fueling Stations**. These facilities are located within the footprint of future Taxiways S and T. More specifically, the Sky Chefs Flight Kitchen and American Airlines Low Bay Hangar are located within the footprint of Taxiway T, while the Liquid Gas and Fueling Station and associated appurtenances are within the future Taxiway S footprint. The existing Sky Chefs Flight Kitchen building would be demolished and the current operations would be relocated to an existing Sky Chefs facility located at 6901 Imperial Highway and/or moved to other off-site facilities (i.e., other facilities/buildings that may be leased by Sky Chefs, to be determined in the future in conjunction with overall business plans).[14] The American Airlines Low Bay Hangar would be demolished and the existing uses therein would be redistributed as follows: the American Eagle commuter aircraft maintenance operations would be relocated to the Delta Low Bay Hangar east of Sepulveda Boulevard; the GSE maintenance, luggage sorting, and operations/crew lounge would be relocated to the former United Express (United Airlines) Commuter Terminal located east of Terminal 8 and Sepulveda Boulevard; aircraft cabin service would be relocated to the former United Airlines cargo facility located in the eastern portion of the airport; the American Airlines facility maintenance operations could be relocated to the American Airlines High Bay Hangar located nearby; and, the Fixed-Base Operator (FBO) currently utilizing the American Airlines Low Bay Hangar could be relocated to the Delta Low Bay Hangar or other suitable location along the south side of the airfield where several other fixed-based operators are located. The Liquid Gas and Fueling Stations for ground vehicles would also need to be removed. It is uncertain at this time whether the GSE fueling operations at the existing fueling stations would relocate to another on-airport GSE fueling station, possibly in the vicinity of the former United Airlines cargo facility, or whether the gas/fueling would be provided by an off-airport fuel vendor. For those uses described above that would be relocated to another existing facility, it is anticipated that various tenant improvements will be required to accommodate the relocated use. Such improvements could include, but are not limited to, the demolition/clearing of interior areas in order to construct new walls, work bays, storage areas, office areas, restrooms, etc., along with associated electrical, plumbing, mechanical, and space conditioning systems modifications and upgrades. Exterior improvements could include, but not be limited to, installation of fences/walls, modifications to doors, windows, loading docks/bays, placement of storage sheds, designation of parking areas, security lighting, and signage.
- **ASIG GSE Storage**. This building is located within the footprint of the future Taxiway S improvement area. The building would be demolished and current operation would be moved to the Air Freight 8 Building located at the east end of the airport.
- **Fuel Vault**. An underground four-foot by five-foot concrete vault containing fuel line valves is located within the footprint of the future Taxiway S. Relocation of fuel lines as part of Taxiways Q and S relocation would include new in-line valve structures and there would be no need to relocate the existing fuel vault.
- **GSE Apron**. An area where GSE, primarily baggage carts/trolleys and cargo container trailers, are often stored is situated north of the existing Fire Station No. 80/ARFF, which falls within the footprint of future Taxiway S. Such existing GSE storage occurs more by convenience than by need or designation. Once this area is cordoned off for construction, such GSE storage would simply move to

[14] Vogt, Kris, LAX Development Program, Personal Communication, April 15, 2009.

other such areas at the airport and/or the affected GSE operators would be required to store the equipment within their respective leasehold areas, as appropriate.

- **Menzies GSE Maintenance**. This building is located within the footprint of the future Taxiway T improvements and would need to be demolished/removed. It is anticipated that the current operation could be moved to an existing building near the Continental Airlines maintenance hangar.
- **LAFD Station No. 80/ARFF**. LAFD Station No. 80/ARFF is presently located on the west side of Taxiway S, across from TBIT. The existing facility is over 30 years old and severely undersized. Plans to construct a new, larger replacement facility were approved in March 2009 for a location approximately 2,500 feet to the southwest of the existing location. The existing facility is located within the footprint of the future Taxiway S and T, which will require that the existing structure be demolished and removed; however, it is anticipated that relocation of the LAFD operations to the new facility will have already occurred. As such, the existing LAFD Station No. 80/ARFF is anticipated to be vacant at the time of demolition and no replacement facility/use is proposed as part of the Bradley West Project.
- **American Eagle Commuter Terminal Facility**. An American Eagle commuter terminal, operated by American Airlines, is located west of Taxiway S, southwest of the Bradley West Core. In conjunction with the expiration of American Airlines' existing lease that includes the subject facility, and establishment of a new lease, American Eagle commuter operations would relocate from the existing commuter terminal facility to the commuter terminal formerly operated by United Airlines (UAL) east of Terminal 8. Relocation of the American Eagle commuter operations to the former UAL commuter facility would occur prior to the demolition of the existing American Eagle commuter terminal.

2.4.3 Construction Phasing

Construction of the Bradley West Project is anticipated to occur over approximately five and one-quarter years, beginning in late 2009, if approved, and finishing in early 2015. The construction phasing schedule for the project was developed with the goal of having new contact gates suitable to accommodate NLA such as the Airbus A380 in operation on the west side of TBIT by the beginning of 2012 while also attempting to achieve a balance between minimizing the nature, extent, and duration of disruption to airport operations in and near the project area, and managing the costs and logistics of completing substantial amounts of work during the nighttime, weekends, holidays, and extended work shifts. The Bradley West Project construction schedule also took into account the construction activities associated with the Crossfield Taxiway Project, the latter portion of which would overlap with the planned construction of the Bradley West Project.

The general sequence of construction activities that is currently anticipated for the proposed project is summarized below.

- The initial phase of construction will focus primarily on development of the new (relocated) Taxiway S, recognizing that the development of the new aircraft gates and concourses on the west side of TBIT will require closure of existing Taxiways Q and S. Activities occurring immediately upon issuance of the contractor's notice to proceed would include placement of a temporary AOA construction fence around the southern half of the work area for future Taxiway S. This area would encompass the Menzies GSE Maintenance Building on the north, the American Eagle Commuter Terminal on the west, the fuel vault on the south, and the ASIG GSE Storage Area on the east. Placement of this fence would convert the area from being on the airside of the AOA to being on the landside of the AOA, which serves to facilitate construction access and movement within the area and minimize potential conflicts with airfield operations nearby. Once the temporary AOA construction fence is in place, demolition of existing structures, apron area, and pavement within the area would occur. This would be followed by excavation, including remediation/removal of any contaminated soil as appropriate, utility line relocations, and site preparation for the new taxiway. Concurrent with the aforementioned activities would be construction of a new loading dock on the north side of the existing central core of TBIT to replace the existing load dock to be eliminated from the west side of the central core.

- Also occurring early in the construction program would be closure of the northern two-thirds of existing Taxiway Q and placement of a temporary AOA construction fence to remove the subject area from airside operations. This would provide a work area for demolition of existing taxiway pavement, excavation and remediation, if necessary, of underlying soils, and utilities work and site preparation for much of the new concourses, as well as for the new bus gate facility proposed at the northern end to accommodate busing operations to and from the west remote gates. This partial closure of Taxiway Q is expected to occur in early 2010 and would leave open the southern third of the taxiway, which has a cross-over connection to existing Taxiway S, thereby allowing air traffic controllers to still effectively use that portion of Taxiway Q for aircraft movements between the north and south airfield complexes. It is anticipated that the southern portion of Taxiway Q would remain open and operational until the completion of the new Taxiway C13 by mid-2010, which would provide the Air Traffic Control Tower (ATCT) with a complete new crossfield taxiway and allow the full closure of Taxiway Q. That would allow for demolition of the southern portion of Taxiway Q and excavation, utility work, and site preparation activities similar to those described above for the northern two-thirds of the taxiway.
- Following shortly after the full closure of Taxiway Q would be the completion of the new bus gate facility, which would replace the existing bus gate facility on the west side of the TBIT's existing central core. Once that happens, all of the area associated with construction of the new concourses, including the contact gates and associated apron areas along the west side of the new concourses, would be encompassed by a temporary AOA construction fence and closed from airside operations. Site preparation for the new north concourse would be well underway, moving towards construction of the building foundations. Excavation for the new western portion of the Bradley West Core would also be underway at that time.
- Also occurring near the time Taxiway Q is fully closed would be the initiation of work within the northern half of future Taxiway S. This would include placement of a temporary AOA construction fence along the perimeter of the work area, utility line work, demolition of existing Fire Station No. 80/ARFF, demolition of existing aircraft apron areas currently utilized for RON aircraft parking and GSE storage, excavation of underlying soils, including remediation of contaminated soils, if necessary, and site preparation for, and construction of, the northern portion of future Taxiway S. It is anticipated that operation of the future Taxiway S will commence in late 2010.
- Once the new (relocated) taxiway is open, existing Taxiway S would be closed and the TBIT temporary AOA construction fence would be extended to the west to include the existing taxiway area. By that time, construction of the new north concourse and associated gates and apron areas would be underway, and foundation work for the new western portion of the Bradley West Core and new south concourse would have begun. It is anticipated that completion of the new north concourse and contact gates and apron areas along the west side would be completed by the beginning of 2012.
- The construction activities would then focus on completion of the western portion of the Bradley West Core, the new south concourse, and the associated new contact gates and apron areas. It is anticipated that work would be completed by mid-2013, and would be followed immediately by demolition of most of the existing north concourse and associated gates and apron areas along the east side. The northern portion of the existing concourse would not be demolished, as it is proposed to connect the new concourse to the new bus gates facility described above. Also occurring at this time would be the start of construction for the new secure/sterile connector corridors between the Bradley West Core and Terminals 3 and 4.
- Between mid-2013 and late-2013, construction of new replacement gates and apron areas along the east side of the new north concourse would occur and the new secure/sterile connector corridors would be completed. Demolition of the existing south concourse, including existing gates and apron areas, would then occur, and site preparation for, and construction of, the new replacement gates and apron areas along the east side of the new south concourse would start. It is anticipated that work would be completed by fall 2013.
- The final phase of the Bradley West Project involves the development of future Taxiway T, beginning with the placement of temporary AOA construction fencing around the entirety of the proposed work

area. That work area would be generally bound on the east by the new vehicle service road that parallels the west side of future Taxiway S, on the south by existing Taxiway C, on the west by the western tip of the American Airlines Low Bay Hangar for the work area south of World Way West and by the eastern third of the former TWA Hangar for the work area north of World Way West, and on the north by the Taxiway D extension. The Taxiway T work area would also include the eastern end of World Way West, which would be reconfigured to loop around at a location west of where it currently turns. Following vacating and demolishing the existing structures and pavement within the subject area, site preparation including utilities work and excavation, including soils remediation, if appropriate, would occur. Construction of the new taxiway would then occur, with completion anticipated to occur in early 2015.

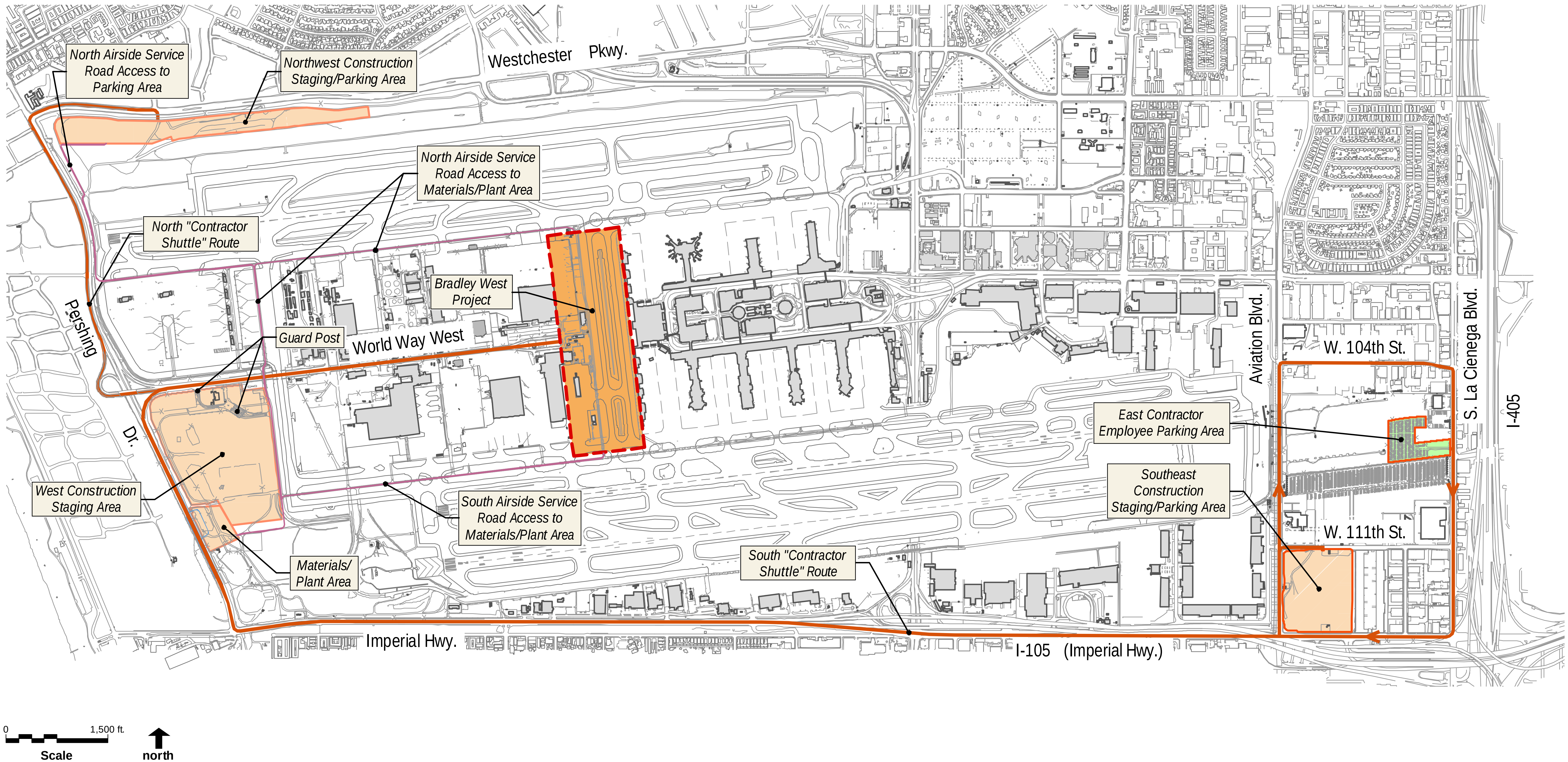
In summary, work on the aforementioned program elements is proposed to begin in the fourth quarter of 2009 and be completed by the first quarter 2015, with the sequence of major construction phases to include development of the future Taxiway S, completion of the new north concourse and associated gates for NLA, completion of the new western portion of the Bradley West Core and new south concourse and associated NLA gates, demolition of the existing concourses and relocation of the existing gates to the new concourses, and development of future Taxiway T. The guidance in FAA Advisory Circular 150/5370-2E, Operational Safety on Airports during Construction, has been incorporated into the project design to address potential impacts on existing airport operations during construction of the Bradley West Project.

2.4.4 Construction Staging, Parking, and Haul Routes

2.4.4.1 Contractor Staging

Construction staging for the proposed project would occur primarily within two areas west of the project site, as shown in **Figure 2-8**. The subject areas include: (1) the Northwest Construction Staging Area - an existing staging area at the northwest edge of the airport, near Pershing Drive and Westchester Parkway, much of which is currently used for the TBIT In-Line Baggage Screening Program construction staging; and, (2) the West Construction Staging Area - an existing staging area at the central west end of the airport near Pershing Drive and World Way West that was used in a similar capacity for the South Airfield Improvement Project and will be used for the Crossfield Taxiway Project. For the most part, the existing Northwest Construction Staging Area is already suitable for use by the Bradley West Project, with the exception of the need for a larger transformer to accommodate the electrical power requirements of the construction trailers planned for the site, and the timing and amount of space needs for the TBIT In-Line Baggage Screening Program are compatible with the construction schedule of the Bradley West Project. Similarly, the existing West Construction Staging Area would require little, if any, modifications to accommodate the Bradley West Project.

Existing pavement, including from existing airfield apron and taxiway areas that are to be demolished as part of the project, would be recycled on-site through the use of a rock crusher and aggregate processing facility within the construction staging area. This processing would also provide for on-site production of concrete instead of having to rely on concrete deliveries trucked from off-site production plants. The processing facility, referred to as a "batch plant" would be located at one or more locations in the West Construction Staging Area.



Source: LAX Development Program Team, 2009.

LAX Bradley West Project Draft EIR	Construction Parking and Staging Areas	Figure 2-8

There is a potential third construction staging area, the Southeast Construction Staging/Parking Area, that could be used during the Bradley West Project's 5+ year construction period. The subject area is the vacant parcel located at the northeast corner of Aviation Boulevard and Imperial Highway, sometimes referred to as the "Continental City" site. Given the location of this parcel, being well removed from the construction work area, it is not anticipated that this area would be actively used for Bradley West Project construction staging, but rather may be used primarily for materials laydown/storage.

2.4.4.2 Contractor Employee Parking

With regard to construction contractor employee parking, it is anticipated three areas would be available for use during all or part of the Bradley West Project construction program. The three areas are shown in **Figure 2-8** and include the Northwest Construction Staging/Parking Area, the East Contractor Employee Parking Area, and the Southeast Construction Staging/Parking Area.

As indicated above, the Northwest Construction Staging/Parking Area is located at the southwest corner of Westchester Parkway and Pershing Drive. A shuttle would be used to transport workers between the parking areas and the Bradley West Project work area. As shown in **Figure 2-8**, the North Contractor Shuttle Route would extend to and from the Northwest Construction Staging/Parking Area and include Westchester Parkway to Pershing Drive, Pershing Drive to World Way West, and World Way West to the project work site. Use of the area for construction staging and lay-down area, as described above, and for worker parking would require removal of existing vegetation within the eastern undeveloped portions of the site; grading of a level surface, with cut and fill anticipated to balance on-site; and placement of gravel or other material to minimize generation of dust and mud while operating.

The other two sites for worker parking are located in the southeast portion of the airport and include the existing contractor employee parking area located at a site north of LAX Parking Lot B on La Cienega Boulevard, shown in **Figure 2-8** as the East Contractor Employee Parking Area, and the Southeast Construction Staging/Parking Area at Imperial Highway and Aviation Boulevard, may be used. The use of either or both of these two areas is proposed to reduce potential traffic impacts, particularly during peak construction periods, by distributing worker parking to two different geographies (i.e., parking at the northwest and southeast ends of the airport). As shown in **Figure 2-8**, the South Contractor Shuttle Route, which would be used for a shuttle to transport construction workers between either or both of these parking areas and the project work site, follows La Cienega Boulevard or Aviation Boulevard south to Imperial Highway, west to Pershing Drive, north to World Way West, and east to the project work site.

2.4.4.3 Contractor Haul Routes

Figure 2-9 delineates the delivery and haul routes proposed to be used during construction of the Bradley West Project. As shown, the primary delivery routes include Imperial Highway, Pershing Drive, and World Way West, with the western end of Westchester Parkway used to access the Northwest Construction Staging/Parking Area and segments of Aviation Boulevard and 111th Street used to access the Southeast Construction Staging/Parking Area. For materials delivered to, and stored at, the Northwest Construction Staging/Parking Area and the West Construction Staging Area, the contractor haul route to and from the Bradley West Project work area would be on the airside of the airport and not on public streets.

2.4.5 Airport Operational Characteristics Before and After Completion of Construction

The subject improvements would not increase or otherwise affect the overall operational capacity of the airport. The Bradley West Project would not alter airspace traffic, runway operational characteristics, or the practical capacity of the airport. The LAX Master Plan evaluated the overall capacity constraints of LAX as a whole. The primary constraint on the airport's practical capacity at present is the limited curbside capacity of the CTA at peak hour, which causes the practical capacity[15] to be approximately 78.7 million annual passengers (MAP).[16] With the LAX Master Plan improvements, the airport's practical capacity in 2015 will be approximately the same, 78.9 MAP, based primarily on the constraints created by reducing the number of aircraft gates at the airport.[17] The Bradley West Project would not change the existing curbside capacity of the CTA, nor would it exceed the aircraft gate limitations identified in the LAX Master Plan and reiterated in the Stipulated Settlement. It is anticipated that the overall level of international travel activity at LAX will increase between late 2008, when the Draft EIR Notice of Preparation was published and the time the proposed Bradley West Project improvements would be completed (2013),[18] but would do so based on overall increases in travel market demands that would occur irrespective of the proposed improvements. Based on an activity level forecast prepared for LAX in 2008, which utilized flight schedules published in the Official Airline Guide (i.e., compilation of all scheduled commercial airline flights) for August 2008 and the June 2009 OAG, and flight schedules projected for each year thereafter through 2013, it was estimated that overall activity levels at LAX would increase from approximately 61 MAP in 2008 to approximately 67.6 MAP in 2013, with the international component being approximately 16.7 MAP in 2008 and approximately 21.8 MAP in 2013.[19] These estimates reflect a projected 5-year growth of approximately 30 percent for international travel and approximately 3 percent for domestic travel. This activity level forecast is based on 2008 data, and is considered conservative in light of the current economic recession and the expected decrease in aviation activity worldwide that would likely occur as a result. Additionally, these passenger activity levels are well below the 78.9 MAP activity level for LAX that is anticipated in the LAX Master Plan and reiterated in the Stipulated Settlement. As such, the environmental impacts associated with the overall market level growth at LAX projected for 2013 have been contemplated and addressed in the LAX Master Plan Final EIR.

The proposed TBIT improvements described above are specifically intended and designed to improve the level and quality of service provided to international travelers at LAX, but would not materially change the overall operational characteristics of the airport. The development of new contact gates along the west side of TBIT would improve passenger convenience, as compared to having to bus passengers and crews between TBIT and the west remote gates, but would not result in additional flights. In light of the existing 2008 flight schedule at LAX and the flight schedule anticipated for 2013 under the LAX Planning Forecast, the existing west remote gates could accommodate all of the scheduled flights even without the new additional contact gates proposed on the west side of TBIT and the other associated improvements. It is projected under the LAX Planning Forecast, however, that without the proposed improvements, there would not be a sufficient number of gates to accommodate the number of new large aircraft anticipated to be arriving and departing during peak periods. It is anticipated that, given the market demand for such flights during those periods under the LAX Planning Forecast, which are characterized by long-distance international flights, the affected airlines would still maintain the scheduled route service, but would use smaller gauge aircraft such as a Boeing 747 or 777. As such, the number of daily flight operations in 2013 is projected under the LAX Planning Forecast to be the same with or without the Bradley West Project, but there would be fewer arriving and departing passengers in 2013 without the project, due to

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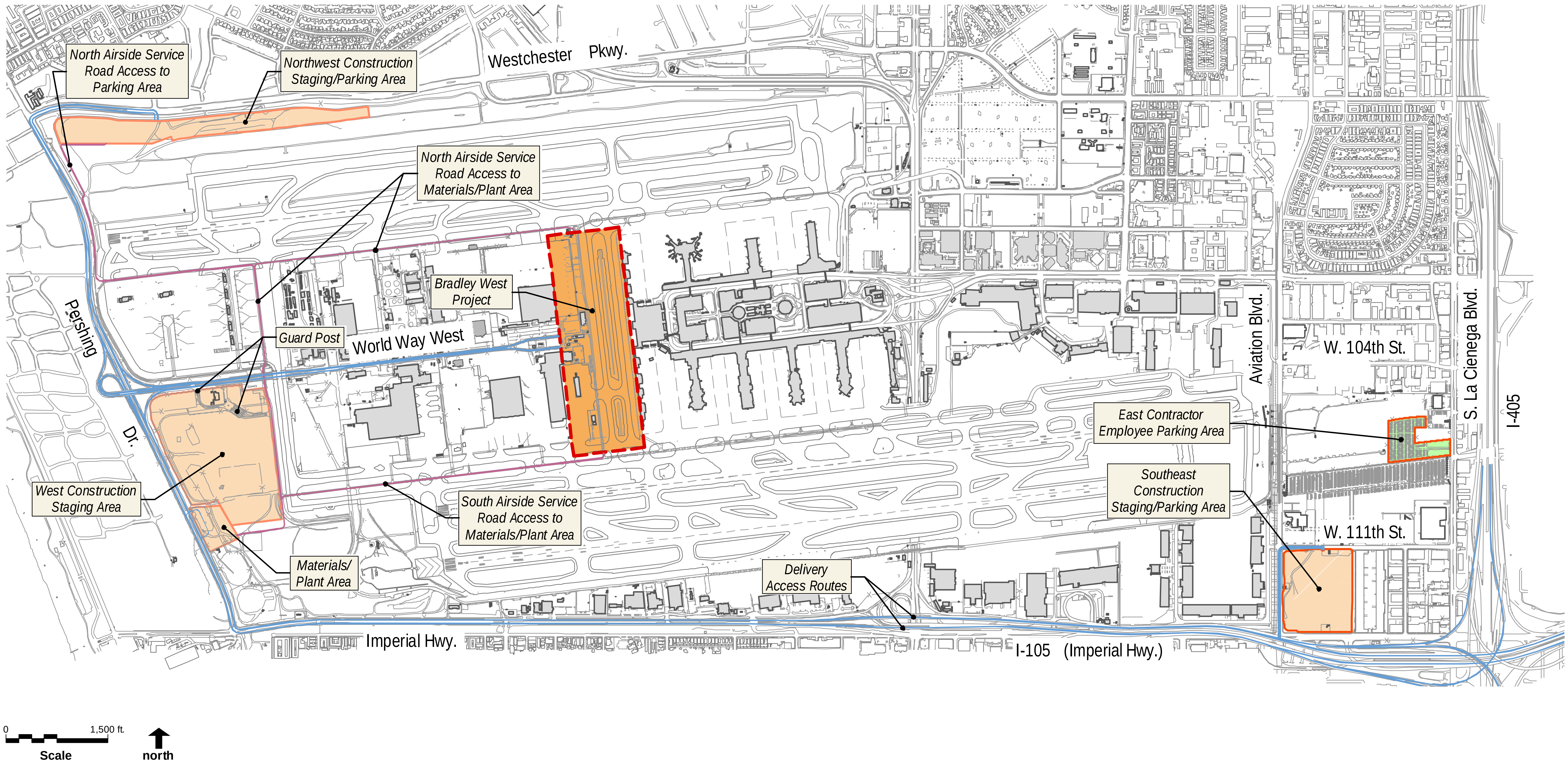
15 Practical capacity is the maximum activity that can be processed by the facility over a specific period at a specified level of delay. (LAX Master Plan Final EIR, Section 2.3.1, Page 2-8.)

16 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004, Executive Summary, page ES-4.

17 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004, Section 3.2.9.

18 Based on the currently proposed construction schedule, it is anticipated that all of the Bradley West Project improvements would be completed by sometime in 2013, with the exception of completion of Taxiway T (i.e., relocation of existing Taxiway S), which would be completed by 2015. Under existing conditions (2008), there are two crossfield taxiways adjacent to TBIT; Taxiways Q and S. By 2013, there would still be two crossfield taxiways; Taxiway S (relocated Taxiway Q) and Taxiway C13 (new taxiway approved in early 2009). As such, any notable change in the operational characteristics of TBIT upon completion of the Bradley West Project, compared to existing conditions, would occur by 2013.

19 Ricondo & Associates, LAX Planning Forecast Documentation, March 2009.



Source: LAX Development Program Team, 2009.

LAX Bradley West Project Draft EIR	Contractor Delivery and Haul Routes	Figure 2-9

the need to use smaller gauge aircraft than otherwise accommodated with the project. For international travel in 2013, the LAX design day schedules project 69,422 passengers with the project and 69,264 passengers without the project; a difference of 158 passengers, or 0.2 percent.[20] That difference would not make an appreciable difference in the overall operational characteristics of the airport. The reliance on using the west remote gates under the 2013-without-project scenario would, however, subject passengers and crews to the inconvenience of having to be bused to and from TBIT. While there would be no appreciable difference in passenger activity levels for 2013 with or without the proposed project, it is anticipated that over time, as a greater number of new generation aircraft including ADG VI aircraft such as the A380 enter the commercial airline fleets, LAX would experience increasing levels of loss in the international travel markets due to other competing airports being able to better accommodate such aircraft.

The proposed expansion and improvement of facilities for the inspection and processing of passengers and baggage arriving on international flights is expected to improve the quality and speed of processing, especially during peak periods, but it is not expected to materially change the overall operational characteristics of the airport (i.e., would not result in additional new flights or a notable change in the timing of flights). The addition of new contact gates at TBIT designed to accommodate new large aircraft and the planned improvements for the processing of arriving passengers and baggage could, however, change the number of arriving passengers reaching curbside within the CTA during peak traffic hours. In other words, the overall number, nature, and timing of international flights at LAX during an average day are not expected to change due to the proposed project; however, the peaking/surge characteristics during peak traffic hours (i.e., AM and PM peak commute hours and airport peak hour) could change as a result of the additional contact gates at TBIT and the reduced passenger/baggage processing time. Such potential changes are addressed in the on-airport traffic and off-airport traffic analyses presented in Sections 4.1 and 4.2, respectively, and in the air quality-related analyses presented in Sections 4.4 through 4.6 of this EIR.

As discussed in Section 2.4.1.3 above, the proposed new contact gates on the west side of TBIT would reduce the need for busing passengers between the existing gates at the West Remote Pads and TBIT compared to 2013 conditions without the Bradley West Project. However, even with this reduction in future busing, with the forecast increase in international operations between 2008 and 2013, the total daily bus trips would still increase from 113 in 2008 to 160 in 2013. (Without the Bradley West Project, the number would increase to 273 daily bus trips.) Therefore, while bus trips would increase as result of increased travel, operation of the proposed project would result in fewer bus trips between the West Remote Pads and TBIT than would occur under conditions in 2013 without the project. Changes in air quality and energy consumption associated with the change in busing activity are addressed Sections 4.4 and 5.7 of this EIR, respectively.

It should be noted that in conjunction with how implementation of the proposed Bradley West Project improvements would change, the passenger processing characteristics of TBIT, as accounted for in the aforementioned traffic analyses, the impacts analysis includes the ambient growth in passenger activity levels projected to occur at TBIT between 2008, when the NOP for the Bradley West Project Draft EIR was published, and 2013, when the TBIT improvements are anticipated to be complete. While such growth during that 5 year period is expected with or without the proposed project, it has been included in the project impacts analysis in order to meet certain CEQA requirements. As indicated above, however, the amount of growth assumed in the EIR analysis to occur between 2008 and 2013 at LAX may actually be less than projected, based on current economic conditions. As such, the impacts analysis presented in this EIR for the Bradley West Project is considered to be conservative and the actual impacts, based on less growth than assumed, would be less than described in the EIR.

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[20] Ricondo & Associates, LAX Planning Forecast Documentation, March 2009.

2.5 Project Alternatives

CEQA requires that an EIR include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6). As discussed in Chapter 4 of this EIR, implementation of the Bradley West Project is anticipated to result in significant impacts related to construction activities, particularly as related to traffic, air quality, and global climate change (i.e., greenhouse gas emissions). Chapter 6 of this EIR addresses several alternatives including an alternative site, an alternative construction approach, alternative designs, an alternative construction staging/parking approach, and a "no project" alternative.

2.6 Intended Uses of This EIR

This EIR will be used by LAWA, the Board of Airport Commissioners, and the Los Angeles City Council to evaluate and consider the potential environmental impacts of the Bradley West Project in taking action on the project. Certification of the Bradley West Project would complete the project-level CEQA compliance review for the Bradley West Project as described in this EIR. Project-level approvals for other future components of the LAX Master Plan will be subject to the appropriate levels of environmental review. Information in this EIR may also be used by LAWA and the construction team as input for permit and other approval applications.

In addition to use of this EIR by the City of Los Angeles, implementation of the proposed Bradley West Project may require various federal, state, and local approvals, for which the approving agencies may use this EIR in their respective decision-making and approval processes. Provided below is an overview of the actions and permits anticipated to be required for the project.

2.6.1 Federal Actions

U.S. Department of Transportation Federal Aviation Administration (FAA)

The FAA issued a Record of Decision (ROD) on the Environmental Impact Statement for Proposed LAX Master Plan Improvements. The specific federal actions that are the subject of the ROD and that relate to the Bradley West Project and have therefore received federal environmental approval, include the following:

- Unconditional approval of the Airport Layout Plan (ALP), as depicted for Alternative D, with the exception of the collateral development project referred to as "LAX Northside." The components of the ALP related to the Bradley West Project are included in the unconditional approval of the ALP.
- A determination that the airport development is reasonably necessary for use in air commerce or in the interests of national defense.
- Airport improvements included under Alternative D, including the reconfiguration of TBIT and associated improvements, as addressed in this project-level EIR.
- Approval of appropriate amendments to the airport certification manual pursuant to 14 CFR Part 139 and any required modifications to the airport security plan pursuant to 14 CFR Part 107. This approval would include any such amendments or modifications specifically required for the construction or operation of the Bradley West Project.
- Approval of the appropriate amendments to the airport certification manual, to maintain aviation and airfield safety pursuant to 14 CFR Part 139.
- Potential eligibility of the Master Plan projects for federal assistance through grants-in-aid authorized by the Airport and Airway Improvement Act of 1982, as amended, and/or for use of revenues collected through passenger facility charges at the airport, pursuant to 49 U.S.C. § 47101 and 49 U.S.C. § 47117.

The ROD documents FAA's finding that the Final General Conformity Determination for Alternative D demonstrates that Alternative D conforms to the State Implementation Plan, because it includes a number of mitigation measures required under CEQA.

Additional FAA actions specific to the Bradley West Project would be needed for either construction activities or for funding approvals and the FAA may consider the EIR in taking these actions. These include:

- Approval of an FAA Notice of Construction or Alteration, to ensure safe and efficient operations during the construction of the Bradley West Project. LAWA and its selected contractor would submit a FAA Form 7460-1, "Notice of Proposed Construction or Alteration," which includes information related to the construction location; duration; type, height, and location of construction; and any other information needed for FAA to make its determination.
- Approval of requests for federal funding. In order for federal funding to be used for the Bradley West Project, FAA would approve grant requests from LAWA and provide grant funding as authorized by the Airport and Airway Improvement Act of 1982, as amended. As described above, the ROD indicates that federal environmental requirements have been met to make LAWA eligible to apply for grant-in-aid funding for those components of the Bradley West Project to which grant funding can be applied. The FAA would also certify plans and specifications prior to the award of grants. FAA's approval and provision of grants-in-aid for the Bradley West Project are subject to availability of funding.
- Approval of requests to use passenger facility charge revenue for project funding. In order for LAWA to apply revenues collected through passenger facility charges at the airport, FAA would be required to approve an application from LAWA to impose and use passenger facility charge revenue for the project. As described above, the ROD indicates that federal environmental requirements have been met to make LAWA eligible to apply for approval to use passenger facility charge revenue for those components of the Bradley West Project to which such revenue can be applied.

Other Federal Agencies

In the ROD, the FAA specifies that consultations with other federal agencies have been completed through the EIS process. With the implementation of the commitments and mitigation measures included in the LAX Master Plan MMRP and the LAX Master Plan Final EIR and the EIS, mitigation requirements would be satisfied. Other than the FAA approvals described above, no other federal agency approvals are anticipated to be required for the Bradley West Project.

2.6.2 State and Regional Actions

California Department of Transportation (Caltrans)

Permits from or actions by Caltrans required for implementation of the Bradley West Project include, but may not be limited to:

- Amended/Corrected Airport Permit. In accordance with California Code of Regulations, Title 21 § 3530, LAWA must submit to Caltrans an Amended/Corrected Airport Permit Application (DOA-0103 [Rev. 04/01]) for approval. The airfield improvements associated with the Bradley West Project would be reflected on the application.

California State Historic Preservation Officer (SHPO)

The FAA completed its consultation with the SHPO, which included the development of treatment plans in the event that historic, archaeological, or paleontological resources are discovered during Bradley West Project construction activities. If such resources were discovered, the appropriate measures involving SHPO would be followed.

State Water Resources Control Board (SWRCB)/Regional Water Quality Control Board (RWQCB)

The California SWRCB and nine RWQCBs administer regulations regarding water quality in the State. Permits or approvals required from the SWRCB and/or RWQCB for the Bradley West Project include, but may not be limited to:

- General Construction Storm Water Permit
- Standard Urban Stormwater Mitigation Plan

South Coast Air Quality Management District (SCAQMD)

The SCAQMD is the regional agency granted the authority to regulate air pollutant emissions from stationary sources in the air basin and has been involved throughout the development of the LAX Master Plan Final EIR, the Final General Conformity Determination for the LAX Master Plan, and this EIR. As described above in Section 2.4.1.6 above, the proposed project includes provisions for building heating and cooling systems that would involve the installation of several boilers fueled by natural gas. Although boilers typically require a permit from the SCAQMD, the use of low-NO_x (oxides of nitrogen). boilers that are less than two million British thermal units (BTU) in size, such as is the case for the currently proposed system, do not require a permit from the SCAQMD.[21] No other new permanent operational stationary sources are currently anticipated to be added as a result of the Bradley West Project; therefore no permits for permanent operational facilities are expected to be required. A permit to Construct and Operate is required for each piece of equipment to be used for construction that is not specifically exempt from the permit requirement. LAWA will coordinate with SCAQMD to determine the applicable permitting requirements.

2.6.3 Local Actions

A number of actions to be taken by departments of the City of Los Angeles were identified in the LAX Master Plan Final EIR relating to the certification of that document, as well as approval of the LAX Master Plan, LAX Specific Plan, and the LAX Plan. A number of those actions have been completed in the context of the LAX Master Plan. Local actions and approvals that may be required for the Bradley West Project include, but may not be limited to the following:

- LAX Plan Compliance Review in accordance with Section 7 of the Los Angeles International Airport Specific Plan.
- Certification of the project-level tiered Final EIR for the Bradley West Project.
- Submittal of the following to the FAA:
    - Form 7460-1 "Notice of Proposed Construction or Alteration" for FAA approval. (The selected contractor would also be required to submit Form 7460-1.)
    - Applications for grants-in-aid, if such funding is to be sought.
    - Applications to apply passenger facility charge revenue to the project, if such funding is to be used for the project.
    - Plans and specifications for the Bradley West Project for certification by the FAA.
- Submittal of a Recycled Water Report to the RWQCB for the use of recycled water as a dust control measure for construction.

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[21] South Coast Air Quality Management District, Available: http://www.aqmd.gov/rules/reg/reg02/r222.pdf, accessed April 6, 2009.

- Preparation of a Project-Specific Storm Water Management Plan or Standard Urban Storm Water Mitigation Plan for approval by the Bureau of Sanitation - Watershed Protection Division. (The Plan should be consistent with the overall Storm Water Pollution Prevention Plan and associated permits.)
- Preparation of a Report of Construction Air Quality Emissions for submittal to SCAQMD.

2.6.4 Miscellaneous Actions and Permits

A number of other actions and permits may be required for the implementation of the Bradley West Project. The list of actions and permits is expected to include, but not be limited to:

- Los Angeles Department of Building and Safety Electrical Permit
- Los Angeles Department of Building and Safety Building Permit for removal, construction, repair, etc., of any structure(s)
- Board of Public Works Sewer/Storm Drain Permit
- Los Angeles Fire Department Plan Check
- Possible modification or condemnation of certain existing on-airport leases

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3. OVERVIEW OF PROJECT SETTING

This chapter provides an overview of the existing land use and environmental setting relevant to the Bradley West Project. More detailed descriptions of the existing setting in the project vicinity related to specific environmental issues are provided in Chapters 4 and 5. In addition to providing an overview of the existing physical setting at and around the project site, this chapter describes other projects proposed in the nearby area that may, in conjunction with the Bradley West Project, result in cumulative impacts on that setting. The description of those other projects focuses, in particular, on other development projects proposed at LAX and explains the relationship between the Bradley West Project and each project in order to provide the basis for the evaluation of cumulative impacts. Additionally, the subject discussion addresses how the projects proposed at LAX, including the Bradley West Project, relate to the LAX Master Plan.

3.1 Land Use Setting

As indicated in Chapters 1 and 2, and depicted in Figure 1-2, the Bradley West Project site is located near the center of LAX, near the midfield portion of the airport. The subject area is, and has long been, actively used for airport operations and is completely occupied and surrounded by airport facilities. On-site land uses include the existing TBIT and adjacent taxiways to the west, a commuter terminal, aircraft parking areas, aircraft hangars, maintenance facilities, and various airport/airfield operations buildings.

Surrounding land uses include the following:

- The north runway complex to the north;
- The Central Terminal Area (CTA) to the east;
- The south runway complex to the south; and
- A variety of airport/airfield buildings and facilities to the west.

The closest land uses in the project vicinity that are not airport-related include the following:

- The community of Westchester north of LAX (over 0.45 mile between the northern end of the Bradley West Project site and the nearest point in Westchester);
- A mix of commercial, hotel, office, and residential uses east of LAX (over 0.75 mile between the eastern edge of the Bradley West Project site and the nearest hotel on Century Boulevard and over 1.75 miles to the western edge of Inglewood);
- Residential, commercial, office, and institutional uses to the south (approximately 0.75 mile between the southern end of the Bradley West Project site and the northern edge of El Segundo); and
- Dockweiler State Beach and Santa Monica Bay to the west (over 1.75 miles between the western edge of the Bradley West Project site and Vista Del Mar).

Compatibility and consistency with applicable federal, state, and local regulations, plans and policies from operation of the airport after completion of the Bradley West Project was addressed as part of the LAX Master Plan Final EIR (see Chapter 4 of LAX Master Plan Final EIR, particularly Section 4.2, *Land Use*).

3.2 Environmental Setting

The following provides an overview of the existing environmental setting at the project site, noting the environmental issues most relevant to the site. Additional information regarding the environmental setting is provided in the discussion of each resource area in Chapters 4 and 5.

- <u>Noise</u> - Being located near the center of the very active midfield area, the existing noise setting is dominated by aircraft activities, primarily commercial jets, occurring throughout the day and evening. This includes noise from aircraft arriving and departing on the north and south runway complexes at each end of the project site, from crossfield aircraft movements on Taxiways S and Q, and from aircraft undergoing maintenance activities to the west that require engine testing (i.e., engine "run-ups"). Average daily noise levels, characterized in terms of Community Noise Equivalent Level (CNEL), at the construction site and main (western) staging area range from 70 to 75 dBA CNEL. There are no noise sensitive receptors at or near the project site; the closest receptors are located in the communities described in the Land Use Setting above and in Section 5.1.2 of this EIR.

- Air Quality - Similar to the noise setting, the existing air quality setting immediate to the project site is dominated by the aircraft activities described above. Other sources of existing air pollutants near the project site include ground support equipment (GSE) operations and maintenance, and vehicle traffic on and off the airfield; however, those pollutant sources are relatively minor compared to the aircraft emissions. There are no sensitive receptors at or near the project site; the closest receptors are located in the communities described in the Land Use Setting above and in Section 5.1.2 of this EIR.
- Traffic - The existing traffic setting at the project site is characterized on the airside by vehicles permitted within the Airfield Operations Area (AOA) and on the landside by vehicles on World Way North and World Way South within the CTA. Operation of vehicles on the AOA is strictly regulated and only drivers that have satisfactorily completed specialized training and have the appropriate clearances from LAWA are allowed to operate vehicles on the airfield. Traffic within the CTA is characterized primarily by a mix of private vehicles, buses, shuttles, taxis, limousines, and LAWA vehicles. Traffic levels and operating conditions vary throughout the day and week, ranging from good to poor.
- Hydrology/Water Quality - The project site consists primarily of impervious surfaces including buildings, airfield apron area, taxiways, roads, and the like, with the only notable exception being an unpaved strip of land between Taxiways S and Q. The site is relatively flat and surface stormwater runoff drains to an existing storm drain system that flows to Santa Monica Bay. Dry weather flows from the project site, as well as the first surge from a storm event, are captured by a retention basin and pumped to the Hyperion Treatment Plant. Due to its largely impervious nature, the project site provides a negligible amount of recharge to the regional groundwater basin. Existing surface water pollutants typically include total suspended solids, oil and grease, metals, and fuel hydrocarbons, as associated with airfield activities and aircraft maintenance.
- Historical/Archaeological Resources - The only building in the general vicinity of the Bradley West Project that meets the typical criteria for historic structures (i.e., 50 years old, possessing significance in American history and culture, architecture, or archaeology at the national, state or local level) is the LAX Theme Building, located approximately one-third mile east of TBIT. The project site is developed and the underlying materials are primarily artificial fill and some alluvium. It is not expected that significant archaeological resources underlie the site.
- Biotic Resources - The Bradley West Project site is extensively developed. With the exception of limited ornamental landscaping on the east side of TBIT and the unpaved strip of land between Taxiways S and Q, the area is largely devoid of vegetation and related biotic resources. However, one special status plant species, southern tarplant (*Centromadia parryi ssp. australis*), a California Native Plant Society List 1B.1 species, was observed on the proposed East Contractor Employee Parking Area and the Southeast Construction Staging/Parking Area.
- Visual/Aesthetic Resources - As noted above, the Bradley West Project site is located within the midfield area of the airport and is characterized by a variety of airport-related facilities and uses. The subject area is not considered to be a scenic resource and is not amidst any designated scenic corridors.

3.3 Development Setting

This section identifies past, present, and reasonably foreseeable related projects, including LAX development projects (LAX Master Plan projects and other LAX projects with independent utility) and non-LAX development projects, that could, in conjunction with the Bradley West Project, result in cumulative impacts to the environment.

3.3.1 LAX Master Plan Development Projects

As described earlier in Chapters 1 and 2, the LAX Master Plan provides a comprehensive plan for a number of improvement projects planned to be implemented over many years throughout the airport. The LAX Master Plan Final EIR addresses the overall effects of all of the improvements, essentially providing a cumulative impacts analysis of all the improvements that comprise the LAX Master Plan, while also identifying the more notable impacts that are attributable to specific components, where appropriate.

The following describes the LAX Master Plan improvement projects that, similar to the Bradley West Project, have been, or are being, advanced into implementation and for which specific design and construction details were completed or are currently being developed or contemplated.

- **South Airfield Improvement Project (SAIP)**: This project provided for the relocation of Runway 7R/25L approximately 55 feet to the south and construction of a new 75-foot wide parallel taxiway between Runways 7R/25L and 7L/25R. Construction of the SAIP began in March 2006 and was completed in June 2008.
- **LAX Crossfield Taxiway Project (CFTP)**: This project includes development of a new taxiway, Taxiway C13, extending north-south between the north airfield complex and the south airfield complex, and the extension of existing Taxiway D. Also included as part of the CFTP are the construction of a new fire station/Aircraft Rescue and Firefighting Facility (ARFF), relocation of an existing aircraft Remain Overnight (RON) area, and development of a new vehicle parking lot to replace an existing lot displaced by development of Taxiway C13 and new RON area. An EIR was completed for the CFTP and the project was approved in early 2009. Construction of the CFTP is anticipated to occur between spring 2009 and summer 2010.
- **Midfield Satellite Concourse Project**: The Midfield Satellite Concourse was identified in the approved LAX Master Plan, along with the associated connector between the Midfield Satellite Concourse, TBIT, and the CTA, as well as construction of Taxiway C12, and a new Central Terminal Processor (CTP) in the CTA. LAWA and the consultant team responsible for the more detailed planning, design, engineering, and management of development projects in the midfield area are in the early stages of preparing plans for the Midfield Satellite Concourse Project. Once the project is proposed, a project-level EIR tiered from the LAX Master Plan EIR will be completed. Construction of this project, if approved, would not occur until after completion of the Bradley West Project.
- **Consolidated Rental Car (RAC) Facility**: This project would provide for the consolidation and centralization of rental car operations at LAX, as contemplated in the approved LAX Master Plan. LAWA has selected a consultant team to help develop the detailed planning, engineering, and design information necessary to implement this project. It is anticipated that a focused EIR tiered from the LAX Master Plan EIR will be completed for this project; however, specific project details have not yet been determined. Construction of this project is not anticipated to begin until after completion of the Bradley West Project.

As indicated above, only the CFTP would be under construction at LAX during construction of the Bradley West Project; hence, the SAIP, the Midfield Satellite Concourse Project, and the Consolidated Rental Car Facility would not contribute to cumulative construction-related impacts. Construction of the CFTP (spring 2009 to summer 2010) would result in a several month overlap with the Bradley West Project, which is projected to begin in late-2009. The resultant potential cumulative impacts are addressed in this EIR.

To the extent implementation of each of the above projects may follow implementation of the Bradley West Project, the combined impacts of these projects, along with other Master Plan projects, have already been addressed and disclosed in the LAX Master Plan Final EIR.

3.3.2 LAX Specific Plan Amendment Study

The LAX Master Plan, approved by the Los Angeles City Council in December 2004, is the strategic framework for future development at LAX. The LAX Specific Plan, approved in December 2004 as part of the LAX Master Plan Program, establishes procedures for approval of all projects defined in the LAX

Master Plan Program. The approval procedures are different for a subset of the LAX Master Plan projects. These projects are commonly referred to as the Yellow Light Projects. Such projects, as delineated in Section 7.H of the LAX Specific Plan, include the following:[22]

- Ground Transportation Center (GTC);
- Automated People Mover (APM) 2 from the GTC to the CTA;
- Demolition of CTA Terminals 1, 2, and 3;
- North Runway re-configuration, including center taxiways; and
- On-site road improvements associated with the GTC and APM 2.

In January 2005, a number of lawsuits challenging the approval of the LAX Master Plan Program were filed. In early 2006, the City of Los Angeles and plaintiffs gave final approval to a settlement of the subject lawsuits. As part of the Stipulated Settlement, LAWA is proceeding with the SPAS process to identify potential alternative designs, technologies, and configurations for the LAX Master Plan Program that would provide solutions to the problems that the Yellow Light Projects were designed to address, consistent with a practical capacity of LAX at 78.9 million annual passengers, the same practical capacity as included in the approved LAX Master Plan. The outcome of the SPAS process is a potential amendment to the approved LAX Specific Plan. LAWA is in the process of preparing a Draft EIR for the SPAS, including giving further consideration to the range of alternatives to be addressed in the Draft EIR. The nature and characteristics of the potential airfield improvement alternatives presented in the Notice of Preparation (NOP) for the SPAS Draft EIR are being reviewed in light of the current status and anticipated completion schedule for the LAX North Airfield Study currently being conducted by the NASA Ames Research Center. The nature and characteristics of the potential ground access system alternatives presented in the NOP are being reviewed to determine if there are other potential system options that would broaden the diversity and range of alternatives.

Section V.F of the Stipulated Settlement provides that, while the LAX SPAS is being processed, LAWA may continue to process and develop projects that are not Yellow Light Projects, consistent with the LAX Specific Plan Compliance Review procedures. The Bradley West Project is not a Yellow Light Project as identified in the LAX Specific Plan. Additionally, the location and design of the Bradley West Project as currently proposed are not dependent on implementation of any of the Yellow Light projects or alternatives to the Yellow Light projects that will be evaluated in the SPAS. Construction of the Bradley West Project does not commit LAWA to proceeding with any of the projects that are currently being evaluated for SPAS. The Bradley West Project provides for the construction of new concourses at TBIT, with the northernmost point of the new north concourse being compatible with the potential relocation of Runway 6R/24L 340 feet south of its current location, as contemplated in the approved LAX Master Plan. The SPAS will evaluate several alternatives for the relocation of Runway 6R/24L; however, it is not anticipated that any of the alternatives to be evaluated would propose moving Runway 6R/24L more than 340 feet to the south. With regard to the proposed relocation of Taxiways Q and S as part of the Bradley West Project, those existing north-south taxiway connections between the north runway complex and the south runway complex would simply be shifted to the west by approximately 500 feet. The points of connection for the relocated taxiways with the north runway complex are based on the current location of Runway 6R/24L; however, those points of connection could be moved to coincide with any potential relocation of that runway, based on the outcome of the SPAS, without any material change to the basic purpose and function of the subject taxiways.

As indicated above, the SPAS process, including completion of the EIR for SPAS, will identify and evaluate potential alternative designs, technologies, and configurations for the Yellow Light Projects. The SPAS process has not yet reached a point where the nature and implementation timing of the Yellow

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[22] Section 7.H of the LAX Specific Plan as approved in December 2004 also included the West Satellite Concourse and associated APM segments; however, those improvements were later removed from that section of the Specific Plan through a Specific Plan Amendment. As such, they are not considered to be Yellow Light Projects, which is consistent with Section V.D.1 of the Stipulated Settlement described herein.

Light Project improvements can be delineated with reasonable accuracy and certainty. It is possible that some of the improvements coming out of the SPAS process would receive the necessary federal, state, and local approvals, undergo the appropriate design, engineering, and construction plans/specifications in time to start construction while development of the Bradley West Project is still underway. It is premature and speculative at this time, however, to say what those improvements would be and when, where, and how they would be constructed in relation to the Bradley West Project. As the SPAS alternatives are refined and advanced through the Draft EIR analysis, a reasonable assessment of the potential cumulative impacts of those improvements, along with the Bradley West Project improvements and other related projects, can be completed.

3.3.3 LAX Development Projects Independent of the Master Plan

It is anticipated that a number of other, stand-alone construction activities at LAX that were not part of the LAX Master Plan would likely be underway concurrent with the construction of the Bradley West Project, including both LAWA and tenant projects. These projects include:

- **Tom Bradley International Terminal (TBIT) Interior Improvements Program**: This project provides for the renovation of interior public spaces within TBIT including the departure lobby, departure concourse, arrival concourse, bus hold room, "meeter-greeter" area, in-transit lounge, in-bound and out-bound baggage systems; upgrade of the building's paging system and Information Technology (IT) systems; and upgrade of the existing elevators, escalators, and moving walks. Construction activities for this project began in February 2007 and are anticipated to be complete by February 2010.
- **Security Program - In-Line Baggage Screening Systems**: This project calls for the construction of in-line baggage screening systems in the CTA terminals pursuant to the requirements of the federal Transportation Security Administration (TSA). The project includes replacement of the existing airline baggage handling spaces, construction of new baggage screening rooms, replacement of the outbound baggage conveyor systems, and installation/integration of TSA-provided Explosion Detection System machines. The project also includes Explosive Trace Detection work stations, On-Screen Resolution Control Rooms and Closed-Circuit Television systems. Construction activities for the installation of in-line baggage screening systems within Terminal 3 began in January 2008 and are anticipated to be complete by January 2010. Similar projects within Terminal 6 will also be implemented between June 2010 and September 2011.
- **Airfield Operating Area (AOA) Perimeter Fence Enhancements -- Phase III (World Way West)**: This project is a continuation of the LAX Perimeter Security Enhancement Program and includes enhancing approximately 6 miles of AOA perimeter fence along World Way West. Fence improvements include the construction/placement of a concrete "K-rail" at the fence base, above which is a green tight-mesh metal section for a minimum height of eight feet, with a V-shaped barbed-wire top. Construction activities for this project are anticipated to occur between February 2009 and February 2010. Similar to the airfield intersection improvements described above, the nature of this project substantially limits the intensity and location of construction activity typical for any given day during the 1-year construction duration. This is due to the fact construction and placement of the new fence sections will occur directly adjacent to the existing fence, which limits the area of active construction and requires certain measures be taken at the beginning and end of each day's construction activities in order to constantly maintain TSA security requirements for LAX.
- **Terminals Improvements Projects**: These projects include various improvements to terminals within the CTA and, to a more limited degree, the west remote gates (i.e., passenger boarding bridge replacements). Provisions for interior design concepts and theme design at individual passenger terminals within Terminal 1 are planned to be implemented between September 2009 and June 2010. More extensive upgrades and renovations are contemplated to occur in Terminals 3 and 6 between December 2011 and December 2012. Additionally, concessions area upgrades are planned for Terminals 2, 4, 5, 7, and 8 to enhance the passenger experience by increasing the variety and choices of concessions available to passengers and by upgrading the adjacent public areas. Completion of the concessions upgrades would occur between November 2009 and April 2010. Also,

passenger boarding bridges would be replaced in select terminals (T1, T3, T6, Remotes) between January 2009 and March 2010, and the baggage claim devices in Terminal 3 would be replaced between June 2009 and June 2011.

- **Airfield Improvement Program (Taxiway/Taxilane/Service Roads)**: This project will reconstruct various taxiways and taxilanes with Portland Cement Concrete (PCC), and includes the removal of existing deteriorated Asphalt Concrete (AC) pavement, subgrade preparation, and construction of new pavement, pavement markings, and signage. The work on this project is anticipated to occur between June 2010 and December 2012.
- **Replacement of Elevators and Escalators**: This project provides for the replacement of existing elevators and escalators within parking structures and terminals. It is anticipated to occur between February 2010 and February 2013.
- **Miscellaneous Improvement within Central Terminal Area**: These projects within the CTA include activities related to Americans with Disabilities Act (ADA) improvements, seismic retrofit of pedestrian and vehicle bridges, expansion joint repair, roadway improvements, security barriers, and sewer line replacement. The ADA improvements are anticipated to occur between February 2009 and February 2013, seismic retrofits between March 2011 and September 2012, and the other improvements occurring between September 2009 and December 2010.
- **Airport Operations Center (AOC)/Emergency Operation Center (EOC)**: This project is to build out, within the existing Telecom building located east of Terminal 8 at LAX, a new AOC/EOC to consolidate LAWA's various operations centers into one location and to serve as a centralized emergency management location during an incident. The new AOC/EOC will house state-of-the-art facilities and will have increased robust operational and emergency management capabilities for resources coordination, data collection, and information processing. Project design has not yet been completed, but it is anticipated that the project will require the configuration of the existing building and could involve the construction of up to 10,000 square feet of additional building space. Construction is anticipated to commence in November 2009 and take approximately one year.
- **Central Utilities Plant (CUP) Replacement Program**: This project would replace the existing, dilapidated CUP with new systems to provide heat/steam and chilled water for space conditioning in terminal and concourse areas at the airport, and would also include a new cogeneration system that would use heat/steam from the CUP to generate electricity. The project would include a new Leadership in Energy and Environmental Design (LEED®)-certified building located just east of the existing facility and state-of-the-art equipment to provide an economic, energy efficient heating and cooling supply to the terminals and other facilities. The project also includes new cooling towers and a new underground thermal energy storage tank, relocation of a Los Angeles Department of Water and Power (LADWP) electrical vault, a new Facility Management System (FMS) and Fire Life Safety System (FLSS) to provide master controls for the terminals and other facilities in the CTA, and demolition of the existing CUP facilities. In conjunction with replacement of the CUP, this project includes the construction of a utility tunnel between the new CUP building and the existing tunnel sections at each terminal, as well as the replacement of both chilled and hot water piping including isolation valves, maintenance access structures, and insulated piping, among others. The project also includes replacement of fans, coils, duct cleaning, enclosures, condensate pans, dampers, motors, UV lighting within fan enclosures, and mechanical equipment including all pumps, motors, compressors, piping and valves within mechanical rooms in the terminal buildings. Construction of these improvements is anticipated to occur between May 2010 and April 2013.
- **Terminal/Apron Electrical Service Capacity Upgrades**: This project adds a new LADWP Substation and associated switchgear outside Terminals 2 through 8 on the apron to accommodate all GSE, including facilitation of systems to accommodate electric GSE consistent with Master Plan requirements; increases electrical capacity in Terminal 4 by a total of 3000 ampere (A) including upgrading the LADWP transformers from two 2500 kilovolt-ampere (KVA) to two 3750 KVA transformers that can deliver a total of 9000A; and, provides an accessible hatch to bring equipment

from the apron to the basement LADWP vault or main electrical room. Construction of these improvements is anticipated to occur between December 2010 and June December 2011.

- **K-9 Training Facility**: This project builds a new facility capable of handling 26 Airport Police dogs and an additional 10 dogs from the Los Angeles Police Department (LAPD), along with handlers and supervisory staff. This new facility will include office space, locker room facilities for the handlers and supervisors, 20-kennel runs, open space for dog training, including a section of simulated tarmac, and a grooming area. Construction of the new facility is anticipated to begin in March 2013 and take approximately one year.
- **Bus Wash Rack Facility**: This facility will provide a bus wash facility for LAWA buses, including the buses that transport passengers and crews to and from the west remote aircraft gates. Construction of this facility is anticipated to occur between December 2009 and December 2010.
- **Renovation of Former United Airlines Commuter Facility**: Various interior and exterior improvements are proposed for the existing commuter terminal formerly operated by United Express located just east of Terminal 8. Such improvements include: (1) installation of a new electrical transformer and/or switchgear to upgrade the existing 800 AMP (amperes) service to 4,000 AMP service, which, among other things, would allow preconditioned air and electricity to be provided to parked aircraft instead of having to rely on the use of aircraft on-board auxiliary power units/generators, and would also support new charging stations for electric ground service equipment (eGSE); (2) upgrading of building electrical, plumbing, and mechanical systems to meet applicable code requirements; new carpet, paint, and other interior renovations; (3) installation of jetways (i.e., enclosed corridors) that will convert seven of the 18 existing aircraft hard-stand gates (i.e., aircraft parking positions that passengers and crew reach by walking across the apron area) to contact gates; and, (4) the installation of a large outdoor metal canopy to provide shading and weather protection for the baggage claim area and for eGSE parking/charging. The development of seven contact gates, as replacements for seven hard-stand gates, at the subject facility would not change the existing number of commuter gates (18) assigned to that area. It is anticipated that renovation of the subject facility would begin around June 2009 and take approximately 3-6 months to complete.
- **GSE Fuel Station**: This project proposes the installation of a new fuel facility that will serve GSE, providing unleaded gasoline, #2 diesel fuel oil, and propane fuels. The exact location for the subject facility has not yet been determined, although consideration is being given to potential locations in the vicinity of the United Airlines cargo complex in the eastern portion of the airport. It is anticipated that installation of the new facility would occur in the latter half of 2009.
- **Westchester Golf Course Three-Hole Expansion Project**: LAWA is planning to add three holes to the existing 15-hole Westchester Golf Course, located in the northern portion of the airport property within the area known as LAX Northside. Construction of the proposed improvements will take approximately six months from the start of construction to opening of the holes. The most notable construction activities, including demolition of existing pavement and rough grading and trenching, would occur within the first two weeks of construction. This would be followed by approximately nine weeks of fine grading. The balance of the construction period for the Westchester Golf Course Three-Hole Expansion Project will be used for hydroseeding and placement of sod, growth and maturation of the course, and for finish work, such as lighting installation. Although construction of the golf course improvements may be complete, or substantially complete, before Bradley West Project construction begins, in order to provide a conservative cumulative analysis, it was assumed that construction of the Westchester Golf Course would be initiated in fall 2009.
- **Korean Air Cargo Terminal Improvement Project**: This project includes additional warehouse and office space, as well as a more efficient truck loading and docking area at the existing Korean Air facility at LAX, which is located on West Imperial Highway within the South Cargo Complex East. Specific improvements include the addition of 16,350 square feet of warehouse space, the addition of 8,800 new square feet of office space, and the conversion of 6,657 square feet of existing office space to warehouse space, for a total net increase in warehouse square footage of 23,007 and in office space of 2,143 square feet. Upon completion, the facility would have a square footage of 183,506, a net increase of 25,150 square feet. In addition, the project includes the remodel of the

existing truck docking area. At this time, it is estimated that construction would begin in early 2010 and take approximately one year to complete.

- **West Aircraft Maintenance/Aircraft Parking Area**: With the advent of the Airbus A380, which was put into commercial service at LAX in late 2008, and the pending release of the Boeing 747-8 and 787, there is growing market interest by airlines and aircraft maintenance/service providers in the development of areas at major airports where service and maintenance of new large aircraft (i.e., Airplane Design Group "ADG" VI aircraft) can occur. One such area of interest at LAX is an area at the west end of the airfield, between Pershing Drive and Taxiway AA south of World Way West. LAWA is currently formulating plans for the development of the 60-acre site to include a 200,000-square-foot maintenance hangar sized to accommodate (fully enclose) an A380, an aircraft parking/apron area of 50 acres with sufficient thickness to bear the weight of an A380, a 1.5-acre employee parking lot with 200 vehicle parking spaces, a 29,000-square-foot maintenance shop, and a 121,000-square-foot ground run-up enclosure (GRE)[23] sized to accommodate an A380. Construction of the project, if approved, would occur between October 2013 and February 2015.
- **Miscellaneous Construction and Maintenance Activities**: As part of ongoing construction and maintenance at LAX, and in accordance with its Capital Improvement Program, LAWA expects to undertake a number of projects within the CTA, the airfield, and other portions of the airport. These projects consist of routine upgrades and enhancements to existing facilities, and are generally smaller in scale than the other projects identified in this section.

In addition to the projects identified above, there are several projects in the planning stages that may occur on LAX property but are not related to the airport and are being undertaken by independent agencies or parties. These projects are described below.

- **Westchester Rainwater Improvement Project**: This project would treat urban runoff from the 2,400-acre watershed that currently flows into the Argo Drain and ultimately to Dockweiler State Beach and coastal waters. The project would add stormwater treatment facilities on LAX property near the intersection of Pershing Drive and Westchester Parkway. Project components would include stormwater flow diversion structures, debris removal, and underground detention and infiltration facilities that would remove bacteria and other pollutants, such as trash, oil and grease, metals and pesticides, from urban runoff. Construction of the project is anticipated to begin in May 2009 and extend until approximately March 2010.
- **Metro Bus Maintenance and Operations Facility**: The development of a Metro bus maintenance and operations facility is being considered for a 24-acre parcel located on the west side of La Cienega Boulevard near Lennox Boulevard. Should the project move forward, the facility would house a bus division with approximately 234 standard and 106 articulated buses, a dispatch center and maintenance shop. It would also support bus storage, fueling and related routine maintenance operations activity. In addition, approximately 525 parking spaces would be provided for employees, non-revenue vehicles and visitors. Construction of the project, if advanced to implementation, would begin in spring 2011 and extend through the end of 2012.

In addition to these projects, there is a project currently being considered by LAWA that, while not involving any construction activity at LAX or elsewhere, could indirectly affect LAX in a way that could result in cumulative impacts when combined with the Bradley West Project. Specifically, the Van Nuys Airport Noisier Aircraft Phaseout Project proposes to prohibit certain operations at Van Nuys Airport by aircraft that exceed specified takeoff noise levels. Van Nuys Airport is a general aviation municipal airport located approximately 22 miles north of LAX. It is anticipated that the phased implementation of that project, if approved, would result in the affected aircraft operators choosing to utilize other airports in the region including, but not limited to, LAX. Based on a survey of the potentially affected operators regarding which other regional airports would they likely use instead of Van Nuys Airport, it is estimated

[23] A "ground run-up enclosure" is a walled structure within which an aircraft is placed following certain maintenance activities, and the engines of the aircraft are operated at various thrust settings to confirm that they meet appropriate specifications. The walled enclosure serves to shield surrounding areas from the high noise levels of the engines during testing.

that a total of approximately 31 flights, representing 31 landing and takeoff operations (LTOs) or 62 total operations, would go to LAX per year. This equates to a daily average of approximately 0.2 additional flights at LAX. As noted above, the Van Nuys Airport Noisier Aircraft Phaseout Project does not involve any construction activities; hence, it does not pose the potential to contribute to cumulative construction-related impacts when combined with the Bradley West Project and the other projects described above. It does, however, present the potential for cumulative operations-related impacts at LAX that may relate to those of the Bradley West Project, specifically as related to aircraft operations. As described in Section 4.4 of this EIR, implementation of the proposed Bradley West Project would have a negligible impact to the overall aircraft ground movement operations at LAX. The potential addition of 0.2 flights per day at LAX due to the Van Nuys Airport Noisier Aircraft Phaseout Project would not materially affect the overall aircraft ground movement operations at LAX. The two subject projects, individually or combined, would not result in any notable change in the overall aircraft ground movement operations at LAX.

3.3.4 Non-LAX Planned Development

A list of other development projects in the City of Los Angeles and neighboring communities within the vicinity of the study area is presented in **Table 3-1**. The list was prepared to document and describe all known local area development projects that may contribute traffic to the Bradley West Project study area. The list is based on consultation with representatives of the Los Angeles Department of Transportation (LADOT), Culver City, El Segundo, Hawthorne, Inglewood, Los Angeles County, and Manhattan Beach. The construction schedules and specific dates of occupancy for most of the developments were not provided.

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
1	Baldwin Hills Scenic Overlook Park	Hetzler Road	10,300 sq. ft. visitor center, passive recreation area	CC	Completed per City of Culver City
2	Baldwin Site	12803 W. Washington Boulevard	New 3-story mixed use development totaling 37,308 sq. ft.	CC	Empty lot per field visit of 1/14/2009
3	Brentwood Site Mixed Use	8810/8840/8850 Washington Boulevard	New mixed use development w/preliminary concept of up to (approx.) 133 residential units and 17,084 sq. ft. retail	CC	Existing closed auto dealership per field check of 1/15/2009
4	Brooke Kaufman	4227 Ince Boulevard	6 condo units on 3 lots	CC	Existing homes
5	Child Care Center	4024/4026 Wade St.	Conversion of a 1,371 sq. ft. duplex into a day care; no new square footage	CC	Completed per City of Culver City
6	Condominiums	3846 Bentley Avenue	4 units	CC	Existing single family home per field visit of 1/14/2009
7	Condominiums	3873 Bentley Avenue	2 units	CC	Construction complete per field visit of 1/14/2009
8	Condominiums	3862 Huron Avenue	5 units	CC	Building permit; existing home per field visit of 1/14/2009
9	Condominiums	4048 Lincoln Avenue	3 townhome condominiums	CC	In construction per field visit of 1/14/2009
10	Condominiums	9650 Lucerne Avenue	5 townhome condominiums	CC	Existing apartments per field visit of 1/14/2009
11	Condominiums	4058 Madison Ave.	4 units	CC	Existing home. Notice of pending development per field check of 1/14/2009
12	Condominiums	4228 Madison Avenue	2 units	CC	Building permit; no such address per field visit 1/14/2009
13	Condominiums	3972 Tilden Avenue	4 units	CC	Under construction per field visit of 1/14/2009
14	Condominiums	4014 Van Buren Place	4 units	CC	In construction per City of Culver City

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
15	Condominiums	4025 Wade Street	4 units	CC	Under construction per field visit of 1/14/2009
16	Condominiums (Former Burger King site)	13340 Washington Boulevard	41 unit condominium development with 6 live/work condominium units in Culver City and 35 units in LA	CC/LA	Fenced empty lot per field of 1/14/2009
17	Czuker Site Mixed Use	8770 Washington Boulevard	New mixed use development w/preliminary concept of up to (approx.) 115 residential units, 41,600 sq. ft. retail; 1,400 sq. ft. cafe; 53,500 sq. ft. office	CC	Pre-application stage
18	Distribution & Warehouse	3434 Wesley Street	10,500 sq. ft. office, warehouse and distribution	CC	Empty fenced lot per field check of 1/14/2009
19	Dr. Brenord Dutt	5800 Uplander Way	Add 3 stories; 57,050 sq. ft. to a 2-story office	CC	Notice of pending development posted per field check of 1/14/2009
20	Radisson Office Tower	6161 Centinela Avenue	342,409 sq. ft. office tower and 9-level parking structure	CC	Entitlements pending
21	FAYNSOD Family Trust	11501-11509 Washington Blvd.	Mixed Use: 3 Retail (2,359 sq. ft.), 1 Office (937 sq. ft.), & 2 Apts. (1,867 sq. ft.)	CC	Parking lot with fenced storage area per field check of 1/14/2009
22	Fire Station No. 3	6030 Bristol Pkwy	Two-story, 12,156 sq. ft. fire station	CC	Under construction per field check of 1/14/2009
23	Glencoe/Washington Mixed Use	13365 Washington Blvd.	4,183 sq. ft. retail and 19 condominium units	CC	Building permit; existing closed restaurant per field visit 1/14/2009
24	Greg Reitz	8665 Hayden Place	63,679 sq. ft. of office	CC	Existing storage warehouse per field check of 1/14/2009
25	Hampton Inn	3954 Sepulveda Blvd.	77-unit hotel	CC	Building permit
26	Huron Townhouses	3823-3833 Huron Avenue	15 new townhouses; 3 existing units to be removed	CC	Completed per City of Culver City
27	Irving Residential/Office	4043 Irving Place	Four story; 26 residential units and 3 office units	CC	Entitlements pending
28	Live/Work Lofts	10839 Washington Blvd.	3 Live/Work units and 12 parking spaces	CC	Appeared to be completed per field visit of 1/14/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
29	Lux @ 9910 Mixed Use	9901 Washington Boulevard	14,112 sq. ft. mixed use development with 131 dwelling units; 12,178 sq. ft. of retail and three levels of subterranean parking with 244 parking spaces	CC/LA	Entitlement stage
30	New vehicle repair shop	11167 Washington Place	Construction of a new vehicle repair shop with 1,196 sq. ft. of repair area with two service bays and 191 sq. ft. of office	CC	Entitlement stage
31	Office Building	9919 Jefferson Boulevard	113,467 sq. ft. 3-story office building	CC	Empty lot per field check of 1/14/2009
32	Office & Retail Bldg.	700-701 Corporate Pointe	240,612 sq. ft. of office and 4,242 sq. ft. of retail	CC	Vacant lot per field visit of 1/14/2009
33	Parcel B	9300 Culver Boulevard	74,600 sq. ft. of office, 21,700 sq. ft. of restaurant and 21,700 sq. ft. of retail	CC	Surface parking lot per field visit of 1/14/2009
34	Modification to CUP, expanding school	12095-12101 Washington Boulevard	Conversion of a 28,000 sq. ft. office building into classrooms and administrative offices; addition of 2,000 sq. ft.	CC	No construction per field visit of 1/14/2009
35	Sony	10202 Washington Blvd.	Approved to build net new 100,000 sq. ft. of office, post-production, stage, and support uses	CC	Under construction per field visit of 1/14/2009
36	Southbay Ventures	4139/4145 Duquesne Avenue	6 units on 2 lots	CC	Fenced lot per field visit of 1/14/2009
37	Triangle Site - Washington/National Transit Oriented Development	NW corner of Washington and National Boulevards	New transit oriented development to include light rail station and mixed use development (preliminary concept includes up to 290 dwelling units; 149 room hotel; 70,000 sq. ft. office; 31,500 sq. ft. retail and 10,000 sq. ft. restaurant	CC	Empty lot per field visit of 1/15/2009
38	Turning Point School (K through 8)	8794 National Boulevard	Addition/remodel of net 9,000 sq. ft.	CC	Closed school; no construction per field visit of 1/14/2009
39	Union 76	10638 Culver Boulevard	Gas station and convenience store with new car wash; 2,500 sq. ft.	CC	Existing gas station (no car wash) per field visit of 1/14/2009
40	Uptown Lofts	9900 Culver Boulevard	5,457 sq. ft. of office and 18 condominium units	CC	Under construction per field visit of 1/14/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
41	Warner Parking Structure	8511 Warner Drive	51,520 sq. ft. retail/restaurant; 784 parking spaces on 5 levels	CC	Surface parking lot per field visit of 1/14/2009
42	11957 Washington Boulevard Office Project	11957 Washington Boulevard	73,569 sq. ft., 4-story office building	CC	Empty lot per field visit of 1/14/2009
43	Washington Place Office Condos	12402 Washington Place	42,000 sq. ft. 4-story office and retail building; 9,300 sq. ft. of retail; 30,400 sq. ft. of office	CC	Closed auto repair per field visit of 1/14/2009
44	Westfield Fox Hills Mall Expansion	200 Fox Hills Mall	293,786 sq. ft. of retail and 427 parking spaces	CC	Under construction; Completion 10/2009
45	West Los Angeles Community College Master Plan	Overland Avenue at Freshman Drive	Approx. 291,300 sq. ft. of new building and renovation. Anticipate future student population of approx. 18,904 students and 1,248 employees by Fall 2022. Project includes second access road, parking structures, landscaping and development of athletic facilities	CC/CO	Parking lot completed; math/science bldg. under construction per field check 1/2009
46	Best Western Jamaica Bay Inn (Parcel 27R)	4175 Admiralty Way	Renovation & expansion 42-room hotel by an additional 69 rooms	CO	No construction per field visit of 1/9/2009
47	Boat Central (Parcels 52 and GG)	13501 Fiji Way	Dry-stack boat storage of 345 parking spaces; boat trailer storage of 24 parking spaces; mast-up sail boat storage of 30 parking spaces	CO	No construction per field visit of 1/9/2009
48	Del Rey Shores Apartments (Parcels 100 and 101)	4247-4275 Via Marina	544 apartments (202 existing units to be removed)	CO	No construction per field visit of 1/9/2009
49	Diner (Parcel 33)	4211 Admiralty Way	351 apartments; 24,500 sq. ft. retail; 10,000 sq. ft. restaurant (existing restaurant to be removed)	CO	Existing Panifico's Restaurant per field visit of 1/9/2009
50	Fisherman's Village (Parcels 55, 56 & W)	13715 Fiji Way	26,570 sq. ft. of specialty retail; 785-seat restaurant; 132-room hotel; 9 boat slips	CO	No construction per field visit of 1/9/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
51	Gateway Marina Del Rey (Parcel 95)	404-514 Washington Boulevard	16,350 sq. ft. specialty retail center; 9,160 sq. ft. high turn-over, sit-down restaurant with 240 seats; 7,890 sq. ft. of general office building, 6,100 sq. ft. walk-in bank 72 apartments; 337 Parking Spaces (removal of 7,500 sq. ft. drive-up bank)	CO	No construction per field visit of 1/9/2009; Existing Islands restaurant and Caldwell Bank
52	Government Office Building	Panay Way and Via Marina	26,000 sq. ft.	CO	No construction per field visit of 1/9/2009
53	Villas Apartments	4170 Admiralty Way (Admiralty Way and Palawan Way, NW Corner)	Congregate Care Facility 114 Occupied DU's, 5,000 sq. ft. of specialty retail; parking lot with 94 parking spaces, 6,000 sq. ft. of general office/commercial; parking structure with 447 parking spaces; removal of 6,000 sq. ft. health club	CO	Construction completed per field visit of 1/9/2009
54	Legacy Partners Neptune Marina Apartments/Woodfin Suites Hotel (Parcels 10R, FF & 9U)	Marquesas Way and Via Marina	526 apartments (removal of 136 apartments); 288-room hotel; 1.47-acre public park	CO	No construction per field visit of 1/9/2009
55	Lincoln Boulevard Mixed Use Project	4363 Lincoln Boulevard	158 high-rise residential condominium units; 3,178 sq. ft. of specialty retail; parking structure with 409 parking spaces. Beverly Hills Rent-a car facility (48,000 sq. ft.) to be removed	CO	Existing rent-a-car facility per field visit of 1/9/2009
56	Lloyd Taber Marina del Rey Library (Parcel 40)	4533 Admiralty Way	Library	CO	Existing Library. No construction per field visit of 1/9/2009
57	Marina City Club Towers Marina del Rey	4333 Admiralty Way	600 units	CO	No construction per field visit of 1/9/2009
58	Marina del Rey Apartment Community (Parcels 12 & 15)	Panay Way and Via Marina	940 apartments; 82 units senior apartments; 4,000 sq. ft. retail; 6,000 sq. ft. commercial	CO	No construction per field visit 1/9/2009
59	Marina Del Rey Center (Parcel 97)	514-586 Washington Boulevard	Replace two 1-story commercial structures with two larger 1-story structures (+486 sq. ft.)	CO	Existing strip mall. No construction per field visit of 1/9/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
60	Marina del Rey Residential Project (Parcels 12, 15 and FF)	Panay Way and Via Marina	1201 residential units on 2 parcels on the west side of Marina Del Rey	CO	No construction per field visit of 1/9/2009
61	Marina Expressway Homes	Marina Expressway Eastbound & Mindanao Way	28 Single family condominiums	CO	No construction per field visit of 1/9/2009
62	Marriott Residence Inn (Parcel IR)	Admiralty Way and Via Marina	149-room hotel. Existing Marriott hotel on NE corner	CO	No construction per field visit of 1/9/2009
63	Sea Glass Town Homes	6719 Pacific Av	36 condominiums	CO	No construction per field visit of 1/9/2009
64	Villa Venetia Residential (Parcel 64)	13900-13910 Fiji Way	478 mid-rise apartments (removal of 224 existing apartments); 34 boat slips; 5,000 sq. ft. restaurant	CO	No construction per field visit of 1/9/2009
65	Waterside Shopping Center (Parcels 50 and 83)	13555 Fiji Way	4,880 sq. ft. of specialty retail, with removal of 2,400 sq. ft.	CO	Existing West Marine Boats appears to be a new facility
66	The Aerospace Corp. (Office and Laboratory)	2350 E El Segundo Boulevard	150,000 sq. ft. office and 15,000 sq. ft. lab	ES	Final stages of construction
67	Commercial Buildings	126, 130, 134 & 138 Lomita St	4 new commercial buildings	ES	Nearing end of construction per field visit of 1/7/2009
68	Condominiums	347 Concord Street	3 units	ES	Existing apartments (project not begun) per field visit of 1/7/2009
69	Condominiums	425 & 429 Indiana Street	8 units	ES	Empty lot per field visit of 1/7/2009
70	Condominiums	1700 Mariposa Avenue	11 units	ES	Empty lot per field visit of 1/7/2009
71	Condominiums	412 Richmond Street	4 units	ES	Existing apartments (project not begun) per field visit of 1/7/2009
72	Condominiums	203 Whiting Street	4 units	ES	Under construction per field visit of 1/7/2009
73	Corporate Headquarters Office	455/475 Continental Boulevard	330,000 sq. ft. office; 22,500 sq. ft. research and development	ES	Existing office building (project not begun) per field visit of 1/8/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
74	El Segundo Corporate Campus	700-800 N Nash Street	1,740,000 sq. ft. office; 75,000 sq. ft. retail; 7,000 sq. ft. child care; 7,000 sq. ft. medical office; 19,000 sq. ft. health club; 75,000 sq. ft. restaurant; 100-room hotel; 25,000 sq. ft. light industrial, 75,000 sq. ft. research & development; 65,000 sq. ft. technology/telecommunications	ES	Partially completed. Health club and hotel components are on hold
75	Electronics Superstore	Aviation Boulevard and Utah Ave/ 135th St	152,504 sq. ft. electronics superstore in place of 90,243 sq. ft. R&D, 51,209 sq. ft. office, and 11,502 sq. ft. warehouse	ES	Existing office building (project not begun) per field visit of 1/8/2009
76	High Bay Lab	901 N Nash St	55,772 sq. ft.	ES	Construction close to completion
77	Northrup-Grumman	SE corner of Mariposa Ave and Douglas Street	190,000 sq. ft. industrial uses	ES	Under construction
78	Office	888 N Sepulveda Boulevard	120,000 sq. ft.	ES	Empty lot per field visit of 1/8/2009
79	Office	141 Main Street	commercial	ES	Existing closed restaurant per field visit of 1/7/2009
80	Plaza El Segundo Phase 2A	NE Corner of Sepulveda Blvd and Rosecrans Ave	commercial	ES	Empty lot per field visit of 1/8/2009. Project on hold
81	Segundo Business Park	222 Kansas Street (at Grand Avenue)	commercial	ES	Demolition permit only received by the City
82	Xerox Phase IV	1951-1961 El Segundo Blvd	255,242 sq. ft. office; 350-room hotel	ES	Existing office building and surface lot per field visit 1/8/2009; Project on hold
83	Condominiums	13429-31 Kornblum Avenue	6 units	HA	Existing single family home per field visit of 1/7/2009
84	Condominiums	14629 Lemoli Avenue	3 units	HA	Construction completed per field visit of 1/7/2009
85	Condominiums	11533 Freeman Avenue	5 unit conversion	HA	Project completed per field visit of 1/7/2009
86	Condominiums	11975 Manor Drive	3 units	HA	Vacant lot per field visit of 1/7/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
87	Condominiums/Office	13806 Hawthorne Blvd	171 units and 32,500 sq. ft. of office space	HA	Closed mortuary per field visit of 1/7/2009
88	Condominiums	11418 Grevillea Avenue	7 units	HA	Existing lawn mower business per field visit of 1/7/2009
89	Hotel Extensions	4334 W. Imperial Highway	165 rooms	HA	Under construction, per field check of 1/7/2009
90	L.A. Air Force Base - Lawndale Annex	East of Aviation Blvd and South of Rosecrans Avenue	285 condominium units	HA	Fusion Development at Aviation Blvd and 149th Place is completed. No other condominium projects seen per field visit of 1/7/2009
91	LA Air Force Base - Area A	SE corner of El Segundo Bl and Aviation Bl	625 condominiums	HA	Under construction per field visit of 1/8/2009
92	LA Air Force Base - Area B	NW corner of El Segundo Bl and Aviation Bl	63,000 sq. ft. warehouse; 560,000 sq. ft. office park; 93,750 sq. ft. base exchange; 43,125 sq. ft. health club; 34,463 sq. ft. medical office	HA	Existing surface parking lot per field visit of 1/8/2009
93	Prestige Villas	4500 116th Street	116 condominium units	HA	Existing closed RFK Medical Center per field visit of 1/7/2009
94	Recycling Center at Ralph's Grocery Store	11873 Hawthorne Blvd	Recycling center	HA	No construction per field visit 1/7/2009
95	Single Family Homes	14000 Yukon Avenue	6 units	HA	Four existing single family homes per field visit of 1/7/2009
96	Wiseburn School District	5403 W. 138th St and 5309 W. 135th St and 13500 Aviation Blvd	School Renovation. Existing Peter Burnett School at 5403 W. 138th Street	HA	Construction at Juan Cabrillo Elementary School (5309 W. 135th Street) completed per field visit 1/7/2009
97	Adult School and Day Care	106 East Manchester Blvd.	27,477 sq. ft.; office conversion	IN	Construction completed per field visit of 1/9/2009
98	Auto Sales and Retail	Prairie Avenue and Imperial Highway, NE Cor	49,000 sq. ft.	IN	Under construction per field visit of 1/9/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
99	Commercial Building Addition	234 W. Manchester Boulevard	12,029 sq. ft.	IN	Construction completed per field visit of 1/9/2009
100	Condominiums	501 East 99th Street	12 units	IN	Existing home per field visit of 1/9/2009
101	Condominiums	940 North Cedar Street	14 units	IN	Existing apartments per field visit 1/9/2009
102	Condominiums	448 North Edgewood Street	6 units	IN	Existing home per field visit of 1/9/2009
103	Condominium	417- 420 N. Market Street	12 units	IN	Fenced lot per field visit of 1/9/2009
104	Condominiums	450 N. Market Street	12 units	IN	Existing abandoned building per field visit of 1/9/2009
105	Condominiums	912 S. Myrtle Avenue	7 units	IN	Existing apartments per field visit of 1/9/2009
106	Condominiums	927 South Osage Avenue	7 units	IN	Existing home per field visit of 1/9/2009
107	Condominium	222 W. Spruce Avenue	10 units	IN	Vacant lot per field visit of 1/9/2009
108	Hollywood Park Mixed-Use Development	1050 South Prairie Avenue	2,995 dwelling units; 300-room hotel; 620,000 sq. ft. retail; 75,000 sq. ft. office/commercial; 10,000 sq. ft. of civic use; 300-room hotel with 20,000 sq. ft. of meeting space. Pavilion/casino would be maintained on the project site.	IN	Draft EIR released fall 2008
109	Mixed retail/restaurant	Florence Avenue and La Brea Avenue, SE corner	49,800 sq. ft.	IN	Vacant lot per field visit of 1/9/2009
110	Mixed retail/restaurant	Southwest corner of Century/Prairie (Haagen)	97,490 sq. ft.	IN	Existing Taco Bell per field visit of 1/9/2009
111	Residential	704 N. Market Street	6 units	IN	Vacant lot per field visit of 1/12/2009
112	Retail and Office	10318 S. Prairie Avenue	10,000 sq. ft.	IN	Under construction per field visit of 1/12/2009
113	Senior Center and Housing	111 N. Locust Street	95,188 sq. ft.	IN	Vacant lot per field visit of 1/12/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
114	Shopping Center	11441 S. Crenshaw Boulevard	101,323 sq. ft.	IN	Burlington Coat Factory store completed; further construction pending per field visit of 1/12/2009
115	Shopping Center	433 North Centinela Avenue	7,384 sq. ft.	IN	Vacant lot per field visit of 1/12/2009
116	Shopping Center	10922 South Prairie Avenue	8,416 sq. ft.	IN	Vacant paved lot per field visit of 1/12/2009
117	Single Family Homes	11901 S. Yukon Avenue	9 units	IN	In construction per field visit of 1/12/2009
118	Transitional Housing	733 Hindry Avenue	232,966 sq. ft.	IN	Existing transitional housing per field visit of 1/12/2009
119	Transitional Housing	812 S. Osage Avenue	20 units	IN	Vacant lot per field visit of 1/12/2009
120	Ambrose Hotel	901 Abbot Kinney Boulevard	57-room hotel, 1,200 sq. ft. of retail and 4,300 sq. ft. restaurant	LA	No construction. Existing building for lease per field check of 1/14/09
121	Animo High School	841 California Avenue	420-student Charter School	LA	Under construction per field visit of 1/14/09
122	Bank of America	7215 W. Manchester Avenue	Walk-in bank	LA	Empty lot per field visit of 3/23/2009
123	Car Wash	9204 Airport Boulevard	15,251 sq. ft. of car rental facility to be removed	LA	No construction per field check of 1/12/2009
124	Central Region Elementary School	Teale Street E/O Lincoln Boulevard	650 students	LA	Empty lot per field visit of 1/14/2009
125	Chevron Gas Station	6101 W. Manchester Avenue	1,000 sq. ft. gas station with a drive through Starbucks; 2,000 sq. ft. 24-hour convenience store	LA	Under construction
126	Condominiums	7430 Arizona Avenue	43 units	LA	Under construction
127	Daycare Center	7900 S. Loyola Boulevard	16 student daycare center	LA	Daycare construction complete. William H. Hannon Library under construction per field visit of 1/14/2009
128	Grosvernor Court	5550 Grosvenor Boulevard	208 condo units	LA	Existing surface parking lot per field visit of 1/14/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
129	Lincoln Boulevard Mixed Use	4004 S. Lincoln Boulevard	98 unit condos & 6,020 sq. ft. retail	LA	Existing strip mall per field visit of 1/14/2009
130	Lincoln Boulevard/ Manchester Avenue	7280 - 7298 W. Manchester Avenue	Apartments to replace specialty retail	LA	Existing realtor and other structure per field check of 1/12/2009
131	Metro Bus Facility	La Cienega Boulevard at Lennox Boulevard	Metro bus maintenance facility with approx. 234 standard and 106 articulated buses, a dispatch center and maintenance shop	LA	Environmental review
132	Office Building	5901 Center Drive (at Howard Hughes Pkwy)	249,020 sq. ft., five-story office building	LA	Building permit application in review but no start date. Will be built to suit
133	Private School	5401 Beethoven Street	420 students	LA	Construction completed per field visit of 1/14/2009
134	Radisson Hotel	6225 W. Century Blvd	340 room hotel; 2,544-space parking structure w/1,733 spaces for airport parking	LA	Project buildout year is 2012
135	Residential Mixed Use Project	8601 Lincoln Boulevard (at Manchester Avenue)	527 apartments, 12 live/work units, 22,600 sq. ft. of ground retail uses and 8,000 sq. ft. of restaurant.	LA	Construction nearing completion per field visit of 3/23/09
136	Villa Allegra	Sepulveda Blvd, W/S, south of Howard Hughes	Townhomes	LA	Under construction per field visit of 1/13/2009; Spring 2009 opening
137	The Village at Playa Vista (Playa Vista Phase II)	Jefferson Boulevard between McConnell Drive and Centinela Avenue	2,600 residential units; 175,000 sq. ft. office; 150,000 sq. ft. retail; 40,000 sq. ft. community serving	LA	Three office buildings in construction per field visit of 1/14/2009
138	Warehouse and Office	12700 Braddock Drive	134,557 sq. ft. warehouse; 1,357 sq. ft. office; 58,323 sq. ft. of University of CA laundry building to be removed	LA	Existing storage facility per field visit of 1/14/2009
139	Washington Square	300 Washington Blvd (at Via Dolce)	123 unit condominiums; 6,000 sq. ft. office space. (Existing 176,671 sq. ft. office building to be removed)	LA	Under construction per field visit of 1/14/2009
140	Westchester Lutheran School Expansion	7831 Sepulveda Boulevard	600 students	LA	Under construction per field visit of 1/14/2009

Table 3-1

List of Other Related Projects

No.	Project Name	Address	Description	City[1,2]	Comments
141	Bank and Retail	1129 N. Sepulveda Boulevard	4,000 sq. ft. bank and 2,000 sq. ft. retail; demolition of existing gas station	MB	Fenced structure per field visit of 1/7/2009
142	Mixed-Use Project (former Good Stuff restaurant)	1300 Highland Avenue	15,000 sq. ft. commercial/office/condominium	MB	Under construction per field visit of 1/7/2009
143	Medical Plaza	222 Sepulveda Blvd (NE Corner of Sepulveda Blvd and 2nd St)	12,000 sq. ft. medical office building and 1,000 sq. ft. retail. (Existing 5,000 sq. ft. auto repair shop to be removed)	MB	Existing limousine detailing business per field visit of 1/7/2009
144	Retail	1727 Artesia Boulevard	5,800 sq. ft. retail	MB	Construction nearing completion per field visit of 1/7/2009
145	Retail	1700 Rosecrans Avenue	10,000 sq. ft. retail (from warehouse)	MB	Construction complete per field visit of 1/7/2009
146	Rite Aid Store	1100 Manhattan Beach Blvd	13,000 sq. ft. retail (Existing 8,600 sq. ft. gas station to be removed)	MB	Fenced empty lot per field visit of 1/7/2009
147	Walgreens	2400 Sepulveda Boulevard	15,000 sq. ft. retail (demolition of vacant Albertsons store)	MB	Not started per field visit of 1/7/2009

[1] CC = Culver City; CO = County of Los Angeles; ES = El Segundo; HA = Hawthorne; IN = Inglewood; LA = City of Los Angeles; MB = Manhattan Beach

[2] Projects in Culver City from "Culver City Related Projects List" dated November 6, 2008 and sent by Ms. Diana Chang, Sr. Management Analyst/Transportation Planner, City of Culver City staff to LAWA. Projects in the City of Los Angeles updated via e-mail from Mr. Eddie Guerrero, Transportation Engineer, LADOT on March 25, 2009. Projects in County of Los Angeles from "Related Projects List," dated April 3, 2008, developed and prepared by Suen Fei Lau, Associate Civil Engineer, Los Angeles County Department of Public Works. Updates to projects in El Segundo provided by Maryam Jonas, El Segundo Public Works Department, on January 21, 2009 via e-mail to LAWA staff. Projects in City of Hawthorne were based on the the City's website: http://www.cityofhawthorne.com/depts/planningcommdev/pending_applications/default.asp dated January 15, 2009 and updated via an e-mail from Mr. Christopher Palmer, Planning Assistant, City of Hawthorne, on January 20, 2009 to LAWA staff. Projects in Inglewood from "Related Projects" list dated 3/27/08. Projects in Manhattan Beach sent from Manhattan Beach City staff to LAWA in May 2008.

Source: Fehr & Peers, 2009.

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4. SETTING, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

This chapter describes the analytical framework for the environmental review of the Bradley West Project, including a description of (1) program level versus project level environmental review, (2) the baseline for determining whether the potential impacts of the Bradley West Project would be significant, (3) the method by which mitigation measures and LAX Master Plan commitments have been, and will be, incorporated into this project-level analysis and as conditions of approval to the project to avoid or minimize potential impacts of the Bradley West Project, including potentially significant impacts, and (4) the cumulative impacts analysis conducted for the Bradley West Project.

Program Level versus Project Level Environmental Review

As described in Chapter 1, in April 2004 LAWA published a Final EIR that analyzed the potential environmental effects associated with the implementation of comprehensive long-term plans to modernize LAX (the LAX Master Plan), including the processing of "program level" entitlements, such as a general plan amendment and zoning regulations (the LAX Plan and LAX Specific Plan). The LAX Master Plan included the Bradley West Project as an implementing project of the Plan, and thus the Master Plan EIR analyzed the potential impacts of the Bradley West Project to the extent feasible and appropriate at that time.

As discussed under Section 15146(b) of the State CEQA Guidelines, an EIR prepared for program level entitlements, "need not be as detailed as an EIR on the specific construction projects that might follow." The CEQA Guidelines incorporate the "rule of reason" and advise public agencies to avoid "speculative analysis of environmental consequences for future and unspecified development."

Consequently, the LAX Master Plan Final EIR addresses the more general level of detail that is required for program level entitlements under CEQA. In an effort to be as comprehensive and thorough as possible, the Final EIR nonetheless also contains extensive "project level" analysis that is beyond the level of detail normally found in a program level environmental document.

Where a program level environmental document has been prepared, CEQA encourages the public agency to "tier" subsequent project level environmental analyses. Pub. Res. Code § 21093. Section 15152(a) of the CEQA Guidelines describe this approach as follows:

> "Tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.

Because the Bradley West Project was analyzed in the Master Plan EIR, this EIR is "tiered" from, and incorporates by reference, the LAX Master Plan Final EIR.[24] This EIR provides project-specific information on the development of the Bradley West Project, focusing on potentially significant environmental effects that may not have been fully addressed in the prior EIR at the project level of detail. This methodology is consistent with CEQA Guidelines Section 15168, which is discussed in greater detail in Section 1.2.3 of this EIR. As identified in the Notice of Preparation (NOP) published on December 17, 2008 for this project-level EIR, LAWA initially determined, based on an preliminary review of the Bradley West Project, that five categories of environmental resources could potentially be affected by construction of the project and require additional review that was not otherwise provided in the LAX Master Plan Final EIR. These five categories of environmental resources included traffic, air quality (including human

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[24] City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004. The Final EIR (State Clearinghouse No. 1997061047) was certified by the Los Angeles City Council on December 7, 2004.

health risks), noise, surface water quality, and biological resources. Additional review conducted in conjunction with the preparation of this EIR determined that minimal additional analysis was required for the topic of surface water quality, beyond that provided in the LAX Master Plan Final EIR. This determination is confirmed by the assessment of the Bradley West Project's impacts to hydrology/water quality provided in Chapter 5 of this EIR.

An assessment of impacts to surface transportation, air quality, human health risk, global climate change, biotic resources, and noise from implementation of the Bradley West Project is provided in Sections 4.1 through 4.8 of this chapter, respectively.

In accordance with Sections 15152(a) and 15168 of the CEQA Guidelines, Chapter 5 of this EIR addresses environmental resources for which further review confirms that the impacts of the Bradley West Project were accounted for and addressed in the LAX Master Plan Final EIR and Addenda to the Final EIR. Resource categories addressed in Chapter 5 include land use, socioeconomics, hydrology/water quality, cultural resources, endangered and threatened species, wetlands, energy supply and natural resources, solid waste, aesthetics, earth and geology, hazards and hazardous materials, public utilities, public services, and schools.

Baseline for Determining Significant Environmental Impacts

For this EIR, the environmental baseline used for determining significant impacts normally consists of the physical conditions that existed when the NOP for the Bradley West Project (formerly called the TBIT Reconfiguration Project) Draft EIR was published in December 2008.[25] Although these environmental baseline conditions described in this EIR are sometimes the same as, or similar to, the environmental baseline conditions analyzed in the LAX Master Plan Final EIR, where circumstances have changed, this EIR provides updated information for 2008.

In conjunction with evaluating the significance of impacts associated with the proposed project, the EIR analysis also accounts for the fact that the improvements proposed by the project would not be completed for several years, at a future point in time when the affected physical conditions would be materially different from those in 2008. This is particularly true relative to evaluating project impacts to the on-airport surface transportation network and the off-airport surface transportation network. It is anticipated that the most notable operations-related elements of the Bradley West Project, including the addition of new contact gates on the west side of TBIT, development of the new (replacement) concourses, and passenger processing improvements within the Bradley Central Core, would be completed sometime in 2013. Between 2008 and 2013, traffic volumes on on-airport and off-airport roads are projected to increase due to background ambient growth and future (2013) traffic conditions would change from existing, independent of the proposed project. As such, an "adjusted baseline" is used for the evaluation of project-related operational traffic impacts to the on-airport surface transportation network and the off-airport surface transportation network. Additional details regarding the applicability of an adjusted baseline for the analysis of on-airport traffic and off-airport traffic are provided in Sections 4.1 and 4.2, respectively.

As described in Section 2.5.4 of this EIR, the projected increase in passenger activity levels assumed in the Bradley West Project EIR impacts analysis is based on an aviation activity forecast for LAX that was developed in mid-2008. That forecast projected a substantial (30 percent) increase in passenger levels at TBIT between 2008 and 2013. This activity level forecast is based on 2008 data, and is considered conservative in light of the current economic recession and the expected decrease in aviation activity worldwide that would likely occur as a result.

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25 Section 15125(a) of the CEQA Guidelines states that "[a]n EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published." Furthermore, the Guidelines state that "[t]his environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant."

Incorporation of LAX Master Plan Commitments and Mitigation Measures into the Environmental Analysis

In conjunction with approval of the LAX Master Plan and certification of the Final EIR, in December 2004, the Los Angeles City Council adopted a Mitigation Monitoring and Reporting Program (MMRP) to ensure that mitigation measures and LAX Master Plan commitments identified in the Final EIR are implemented.[26]

Mitigation measures are activities, policies or practices designed to avoid or minimize significant environmental impacts. Due to the programmatic nature of the LAX Master Plan Final EIR, in some cases, mitigation features could not be identified with specificity until additional design work was undertaken. In these situations, performance standards were established and a range of options for meeting the standard provided.

Besides mitigation measures, the MMRP for the LAX Master Plan includes Master Plan commitments. LAX Master Plan commitments were determined to be more appropriate than mitigation measures where: (1) standards and regulations exist with which compliance is already required by the applicable regulatory agency; (2) potential impacts would be adverse but not significant; and (3) design refinements could be incorporated into the project to reduce or avoid potential impacts. In some cases, Master Plan commitments also include performance standards and a range of options for meeting the standard.

The timing of implementation of mitigation measures and Master Plan commitments is set forth in the MMRP. This EIR describes the mitigation measures and Master Plan commitments that are applicable to the Bradley West Project and provides project level information when necessary to evaluate the potentially significant environmental effects of this project.

All MMRP mitigation measures and Master Plan commitments that are applicable to the Bradley West Project are described in the text, along with project specific information as necessary. The environmental analysis assumes that these measures will be implemented in conjunction with the Bradley West Project as required in the MMRP. To the extent that these measures would not reduce significant environmental effects to a less than significant level, and project level information has revealed additional feasible mitigation measures, new mitigation measures are separately identified after the various impact conclusions and proposed for adoption as conditions of approval.

Description of Cumulative Impacts

Cumulative impacts are the impacts of the project in conjunction with past, present, and reasonably foreseeable future projects. The environmental impacts of the project may be individually minor, but collectively significant when considered in conjunction with other projects. In accordance with the State CEQA Guidelines, the LAX Master Plan Final EIR evaluated the contributions of the LAX Master Plan to cumulative impacts for each environmental discipline to determine if they would be significant. The Bradley West Project is consistent with the entitlements approved for the LAX Master Plan, and thus, the cumulative effect of this project has been adequately addressed in the LAX Master Plan Final EIR for most environmental topics.[27] Pursuant to sections 15130(d) and 15152(f) of the CEQA Guidelines, no further evaluation of these topics is required. However, because adequate construction-level information was unavailable at the time, the LAX Master Plan did not include a construction-level analysis of human

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26 *See* Cal. Pub. Res. Code Section 21081.6; *see also* Cal. Code Regs. Title 14, Sections 15091(d), 15097. In addition, the LAX Specific Plan, approved by the City Council to establish zoning and development regulations, requires in each specific project approval a finding that appropriate mitigation measures are being adopted as a condition of approval. Further, the LAX Specific Plan requires that LAWA prepare and submit to the City Council, among others, annual reports indicating the status of implementation of the MMRP. FAA also requires, as a condition of its final approval in the Record of Decision, that LAWA and the City implement the mitigation measures as contemplated in the MMRP. Mitigation measures and LAX Master Plan commitments are applicable to the extent that the use of airport revenue to fund such measure is permissible under federal law and policies, or the ability of LAWA to develop other state or federal funding sources.

27 The environmental impacts expected to occur during construction of the LAX Master Plan are described in Section 4.20 of the LAX Master Plan Final EIR.

health risks, including a cumulative analysis of construction-related human health risks. Such an analysis is included in this EIR. Additionally, this EIR provides an analysis of cumulative surface transportation impacts associated with construction of the Bradley West Project in conjunction with other nearby construction projects for which relevant detailed project information was not available at the time of the LAX Master Plan EIR analysis. In addition to evaluating cumulative impacts associated with human health risk and surface transportation, this EIR also includes information related to past, present, and reasonably foreseeable future projects in its analysis of construction impacts related to air quality, global climate change, biotic communities, and noise.

As described in Chapter 3 of this EIR, construction of several non-Master Plan LAX development projects and two non-LAWA projects on airport property are likely to occur simultaneously with the Bradley West Project construction. These projects, considered in this EIR's cumulative impact analysis, include the TBIT Interior Improvements Program, In-Line Baggage Screening Systems, Airfield Improvement Program - Taxiway/Taxilane Pavement Upgrades, the Airfield Operating Area (AOA) Perimeter Fence Replacements - Phase III, Airport Operations Center/Emergency Operation Center, Korean Air Cargo Terminal Improvement Project, K-9 Training Facility, Central Utility Plant (CUP) Replacement Program, Terminals Improvement Projects including Miscellaneous Improvements within the Central Terminal Area, Replacement of Elevators and Escalators, Bus Wash Rack Facility, Renovation of Former United Airlines Commuter Facility, GSE Fuel Station, Westchester Golf Course Three-Hole Expansion Project, Terminal/Apron Electrical Service Capacity Upgrades, West Aircraft Maintenance/Aircraft Parking Area, miscellaneous routine construction and maintenance projects, the Bureau of Engineering's Westchester Rainwater (Stormwater) Improvement Project and the Los Angeles County Metropolitan Transportation Authority's Bus Maintenance and Operation Facility. These projects are described in Section 3.3.3 of this EIR. Non-LAX planned development, including projects specifically identified above as well as other past, present, and reasonably foreseeable projects located in the general vicinity of LAX, is identified in Section 3.3.4 of this EIR.

As described in Chapter 3 of this EIR, in addition to the Bradley West Project, several LAX Master Plan improvement projects have recently been approved or are currently undergoing project design. These projects include the Crossfield Taxiway Project, which was approved in March 2009, and the Midfield Satellite Concourse Project and the Consolidated Rental Car (RAC) Facility, which are both currently in the design process. As indicated in Chapter 3, neither the Midfield Satellite Concourse Project nor the Consolidated RAC Facility is expected to be under construction at LAX during the Bradley West Project construction period, which is anticipated to start around late 2009. Hence, these projects are not expected to contribute to cumulative construction-related impacts. The only LAX Master Plan project that is anticipated to be under construction concurrent with construction of the Bradley West Project is the Crossfield Taxiway Project. The resultant potential cumulative impacts are addressed in this chapter.

As described in Section 3.3.2, certain LAX Master Plan projects are currently undergoing review as part of the LAX Specific Plan Amendment Study Process. These projects include the Ground Transportation Center (GTC), Demolition of Central Terminal Area (CTA) Terminal 1, 2, and 3, the Automated People Mover (APM) 2 between the GTC and CTA, the North Runway Reconfiguration, and On-site Road Improvements Associated with the GTC and APM2. Alternatives to these projects will be evaluated as part of the LAX SPAS EIR, currently underway.

4.1 On-Airport Surface Transportation

4.1.1 Introduction

As described in Chapter 2 of this EIR, the Bradley West Project would result in terminal building, aircraft apron, and taxiway improvements at LAX to accommodate new aircraft contact gates on the west side of TBIT. These contact gates would provide a more efficient and desirable option to the existing "hardstand" aircraft parking positions where aircraft park remotely and passengers are bused to and from the terminal building. In addition, the federal inspection services (FIS) facilities, such as U.S. Customs and Border Protection services, within TBIT would be improved as part of the project to provide increased and more efficient processing of arriving international passengers.

This section documents the on-airport traffic analyses of the departures (upper) and arrivals (lower) level roadways and curbsides prepared to assess potential traffic-related impacts associated with future operation of the new facilities being constructed as part of the Bradley West Project. Section 4.3 of this EIR addresses construction-related impacts of construction vehicle traffic (i.e., construction employees and delivery vehicles) using the off-airport intersections that are anticipated to be potentially impacted by construction-related traffic activity. Construction employee parking and construction delivery vehicles are not anticipated to access the CTA roadway system. Therefore, on-airport traffic impacts from construction would not be expected and are not addressed in this EIR. Section 4.2 of this EIR addresses the project's operations-related impacts to the off-airport transportation network.

This on-airport surface transportation analysis was conducted to estimate the impacts on operation of the TBIT curbsides and Central Terminal Area (CTA) intersections and roadway links that would result from anticipated changes in traffic accompanying the changes in passenger demand and peaking characteristics following construction of the contact gates that would accommodate New Large Aircraft (NLA) such as the Airbus A380 and improved FIS processing. The CEQA basis for identifying and evaluating project impacts is a comparison between Future (2013) With Project traffic conditions and Future (2013) Without Project traffic conditions. While the physical environmental setting that exists when starting the preparation of an EIR (i.e., 2008 for this EIR) is normally the "baseline" used to determine significant impacts, it is not appropriate for assessing the on-airport surface transportation impacts of the Bradley West Project. A 2008 baseline would not capture the aviation activity levels and on-airport traffic levels that would be present when the proposed Bradley West Project improvements are anticipated to be in place. As such, an "adjusted" baseline is used as the basis for evaluating on-airport surface transportation impacts. The adjusted baseline assumes: (1) the existing (2008) physical conditions and configuration of TBIT (i.e., TBIT without any of the proposed Bradley West Project improvements); (2) the international passenger levels and daily flight schedules projected to occur in 2013 independent of the proposed Bradley West Project (i.e., ambient growth in international travel projected to occur between 2008 and 2013); and (3) the on-airport traffic levels projected for 2013, which include the additional traffic from increased domestic and international aviation activity levels at LAX independent of the Bradley West Project. The analysis of impacts to that adjusted baseline accounts for the project-related improvements to TBIT, including addition of contact gates, construction of new concourses, and improvement of the central core, which are expected to be completed in 2013.

Based on the airline schedule analysis prepared to support this EIR, it is anticipated that the aircraft arrivals and departures schedules for the TBIT and other CTA terminals for the Future (2013) With Project and Future (2013) Without Project conditions would be essentially the same, with minor variations. As further described in Section 2.4.5 of this EIR, it is anticipated that the Bradley West Project improvements described above would have minimal effect on the number of daily airline passengers that would access TBIT or any of the other terminal buildings in the CTA in 2013, given that the airline schedules are comparable. It is also anticipated that the daily airline passenger volumes in 2013 for the With Project conditions would be essentially the same as the Without Project conditions, with an approximately 30 percent increase in the number of international passengers at LAX projected to occur between 2008 and 2013 for both conditions. In light of those considerations, it is estimated that the 2008 to 2013 increase in daily roadway traffic volumes for TBIT would be approximately the same for the two future scenarios.

The anticipated differences between the With Project and Without Project conditions as they relate to CTA roadway and curbside traffic activity are summarized below:

- TBIT Arriving Passengers - As described previously, the Bradley West Project includes new contact gates that would allow passengers to process off the aircraft at a faster rate than is possible when passengers are required to be bused from a remotely parked aircraft to TBIT. Furthermore, it is anticipated that the improved arrivals process would allow more efficient passenger processing through the reconfigured TBIT compared with the existing FIS facilities. Although the improved processing rate at TBIT would not affect daily passenger activity, it is anticipated that the more rapid processing rate as passengers are offloaded from aircraft and processed through the TBIT FIS facilities could affect the rate at which airline passengers and associated vehicles transporting these passengers access the TBIT curbside and circulate within the CTA roadway system.
- TBIT Employees - TBIT is being reconfigured to include more building square footage, which would result in an increase in employee activity at TBIT. Although additional employee traffic would be generated as a result of the reconfiguration, it is anticipated that parking for these employees would be accommodated in remote facilities such as the LAWA-operated Lot D North and Lot E from which employees use the existing shuttle bus system to access the terminal building. It is anticipated that changes in TBIT employment would be accommodated within the future 2013 shuttle bus fleet analyzed for this study.

As described above, it is anticipated that implementation of the Bradley West Project would affect only the peaking characteristics of airline passenger activity and would not affect the overall number of passengers accessing the airport. As such, other landside facilities, such as the capacity of public parking facilities, would not be affected by the Bradley West Project and were, therefore, not analyzed as part of this EIR.

4.1.2 Methodology

As noted above, this section focuses on the project-related impacts to the TBIT curbsides and CTA intersections and roadway links engendered by the improved off-loading of aircraft accessing the terminal via contact gates and the anticipated increase in FIS processing rates based on simulation results that could allow more passengers to reach the curbside sooner and in a more "peaked" condition as compared to the traffic conditions that would be experienced if these facilities were not improved. Improved TBIT FIS processing rates were assumed based on a simulation of TBIT arrivals activity performed as part of this study.[28] Although the anticipated passenger and traffic patterns may be different under the 2013 With Project and 2013 Without Project conditions, the daily passenger volumes would remain essentially the same.

The traffic demand estimates prepared for this study were developed using a trip-generation and trip distribution model that provides traffic volume estimates for all roadway links and curbside links within the CTA roadway system for multiple peak hour conditions for Existing (2008) conditions and for Future (2013) With Project and Without Project conditions. These traffic volume estimates were then imported into a micro-simulation model that has been developed to simulate the operation of these traffic volumes throughout the airport roadway and curbside system. For purposes of consistency with the types of on-airport traffic analyses conducted for the LAX Master Plan, the following general analyses were conducted:

- **Curbside Capacity Analysis--**Airport curbside facilities serve as the primary destination for vehicular traffic accessing the CTA departures (upper) and arrivals (lower) level roadways. As such, the linear length of these curbside facilities to accommodate stopped vehicles and provide adequate room to maneuver into and out of a stopping position is a critical measure in assessing the capacity of the airport roadway system. Curbside capacity at the TBIT arrivals (lower level) and departures (upper level) curbsides was directly assessed for this analysis. The methodology for assessment of these curbside facilities is unique to the airport environment and requires the use of analytical

[28] Jacobs Consultancy, TBIT Terminal Simulation of TBIT Arrivals Activity, October 2008.

methodologies that differ from the standard intersection and roadway capacity analysis used for the off-airport analysis (see Section 4.2 of this EIR). For this study, the simulation model was used to determine the number of vehicles that would access the curbside which were then summed on a minute-by-minute basis. The total vehicles at curbside were then compared to the length of the curbside in order to assess the operation of the curbside. This curbside analysis technique provides a direct measure of the ability of the curbside to accommodate the anticipated vehicular demand.

- **CTA Intersection Analysis--**CTA intersections were analyzed to assess the potential implication of changes in TBIT activity throughout the terminal area. It is critical to analyze vehicular intersections given these facilities meter traffic throughout the CTA roadway system and are a key limiting factor for vehicle throughput on the on-airport roadways. Intersections with two or more directions of travel were evaluated for this analysis. For the purpose of this discussion, intersection movements are defined as through, left or right turn movements.
- **CTA Roadway Link Analysis--**Key CTA roadway links were also analyzed to assess the potential implication that changes in TBIT activity would have on overall terminal area throughput. Key roadway links were analyzed to assess potential congestion on both the upper level and departures level of the CTA roadway system.

For purposes of quantifying levels of service and potential impacts associated with curbside, intersection and roadway links, this study uses the impact thresholds used for the LAX Master Plan Final EIR surface transportation analysis[29] which is also consistent with the thresholds defined in Los Angeles Department of Transportation (LADOT) Traffic Study Policies and Procedures.[30]

4.1.2.1 Delineation of Existing (2008) Traffic Conditions

The delineation of Existing (2008) on-airport traffic conditions was based primarily on CTA traffic volume and intersection turning movement volume inventories collected in August 2008, which represent the most current comprehensive set of traffic counts completed by LAWA. August also represents the peak month for roadway traffic accessing the CTA. The following methodology and data were used to determine the Existing (2008) traffic conditions:

Determine TBIT and Overall Airport Peak Hours - Passenger early arrival and late departure profiles were determined based on historical data and were applied to the airport domestic and international air passengers schedules for August 2008 to predict when passengers arrive on the curbside. This data was reviewed to determine the TBIT and overall airport peak departure and arrival hours based on air passenger activity. The peak CTA vehicle traffic hours were assumed to coincide with the peak air passenger activity hours.

On-Airport Traffic Data Collected in 2008 - The in-pavement vehicle loop detector system and the Automatic Vehicle Identification (AVI) system which uses transponders on commercial vehicles were used to obtain roadway traffic counts within the CTA. These counts representing Existing (2008) conditions were collected by LAWA for Fridays in August 2008. Fridays are typically the busiest day of the week for the airport roadway system. The intersection turning movement counts were collected during a.m. and p.m. peak commuter hours as well as the airport peak hour in August 2008, which is considered to be the peak month for airport-related passenger and traffic activity at LAX; therefore, additional seasonal adjustments were not required to convert volumes to peak month conditions. Video from August 2008 obtained at the entrance to the CTA and at the departure level roadway in front of TBIT from the airport's Closed Circuit Television (CCTV) system was also provided to serve as a source for traffic counts and vehicle classification.

Determine Existing (2008) Balanced Roadway Traffic Volumes - Traffic volumes for the peak hours identified from the air passenger activity data were reviewed for this study. To estimate the balanced CTA roadway traffic for a typical Friday during August 2008, the intersection turning movement, loop

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29 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004, Section 4.3.

30 Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002.

detector, and AVI counts provided by LAWA were used to create the balanced traffic volumes for the CTA roadway network. The balanced roadway network included estimated vehicle volumes for all individual roadway links as well as each intersection within the CTA. Balanced roadway volumes were used to provide a snapshot of traffic activity within the CTA and a measure to calibrate the existing conditions Trip Distribution and VISSIM modes. For a more detailed discussion of the balanced roadway traffic volumes see Section 4.1.3.6 below.

Prepare Model of Study Area Roadways and Intersections - A traffic model of study area roadways and intersections was developed to assist with curbside, intersection, and roadway link capacity analysis. The roadway model provides a quantitative representation of the traffic operations associated with the CTA curbsides, roadways, and intersections as needed to assess the potential effects of project traffic. The airport roadway model was developed using VISSIM,[31] a commercially available micro-simulation time step and behavior based model developed to analyze urban traffic and public transit operations. However, with the addition of new logic modules, such as vehicle parking and vehicle pedestrian interaction, the software capabilities have been expanded to include assessment of airport curbside operations. VISSIM simulation outputs were post-processed to calculate curbside levels of service (LOS) for each peak period. This process involved obtaining model output providing the number of vehicles stopped at the curbside on a minute-by-minute basis. The linear distance representing these stopped vehicles was then divided by the linear curbside length to calculate a ratio that is used to define curbside LOS which is further discussed in Section 4.1.3.7 below. The CTA intersections were analyzed using TRAFFIX,[32] a commercially available traffic analysis program designed for preparing traffic forecasts and analyzing intersection and roadway capacity. The model uses widely accepted traffic engineering methodologies and procedures, including the Transportation Research Board Critical Movement Analysis (CMA) Circular 212 Planning Method,[33] to calculate intersection LOS which is the required intersection analysis methodology for traffic impact studies conducted within the City of Los Angeles.

4.1.2.2 Delineation of Future (2013) Traffic Conditions

For this study, future traffic conditions were analyzed to address the impact of additional future traffic from TBIT, as well as potential changes in peak traffic characteristics, in 2013 combined with on-airport traffic increases from natural growth predicted to occur by 2013 from the other terminals within the CTA. In light of essentially all on-airport traffic being associated with TBIT and the other terminals within the CTA, the increases in future traffic volumes would be cumulative in nature. Cumulative traffic conditions are defined as, pursuant to Section 15355 of the CEQA Guidelines, "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." For this traffic study, cumulative traffic conditions are accounted for at the TBIT curbsides and CTA intersections relative to four time periods during the course of a day, as follows:

- **Future (2013) Traffic During the TBIT Departures Peak** - This scenario represents the anticipated traffic activity during the peak period for TBIT passenger departures. This scenario also includes growth from background traffic generated by the other CTA terminals based on changes to the airline passenger schedule.
- **Future (2013) Traffic During the TBIT Arrivals Peak** - This scenario represents the anticipated traffic activity during the peak period for TBIT passenger arrivals. This scenario also includes growth from background traffic based on changes to the airline passenger schedule.

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31 PTV America, Inc., VISSIM Version 5.0, 2008.

32 Dowling Associates, TRAFFIX Version 7.7. Based on information provided by Dowling Associates in May 2, 2008, over 425 site TRAFFIX licenses are owned by public and private entities, including licenses owned by 44 cities, 5 countries, and Caltrans within the state of California.

33 Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

- **Future (2013) Traffic During the Overall Airport Departures Peak** - This scenario represents the anticipated traffic activity during the overall airport peak for passenger departures. This scenario also includes growth from background traffic based on changes to the airline passenger schedule.
- **Future (2013) Traffic During the Overall Airport Arrivals Peak** - This scenario represents the anticipated traffic activity during the overall airport peak for passenger arrivals. This scenario also includes growth from background traffic based on changes to the airline passenger schedule.

The reason for these four analysis perspectives is that the timing of the peak period for TBIT departures is different from the timing of the peak period for TBIT arrivals, and the timing of each of those two peak periods is different from the timing of the departures peak and arrivals peak for the overall airport (i.e., TBIT and other terminals in the CTA combined). In other words, the cumulative traffic impacts analysis conducted for the project reflects four points in time during a projected typical Friday in August 2013.

The analysis of project-related traffic impacts in 2013 addresses impacts associated with the project, based on changes to passenger processing characteristics and increased trips that are directly attributable to the proposed improvements, as well as cumulative impacts by accounting from ambient growth at TBIT and the other terminals within the CTA.

4.1.2.3 Delineation of Impacts and Mitigation Measures

The following steps were conducted to calculate curbside and intersection levels of service for existing and future conditions, and identify impacts, as well as identify potential mitigation measures, if necessary:

Prepare TBIT Curbside Level of Service Analysis - Level of service analyses for the TBIT curbsides were prepared using VISSIM and post processing the simulation output to calculate a curbside utilization factor. Curbside utilization factor is the calculated ratio of curbside demand in linear feet divided by the existing curbside length. The utilization factor provides an indication of the amount of double and triple parking that would result for a given space demand, and the level of service associated with a given utilization rate recognizes that drivers do not park vehicles uniformly along the curbside. Curbside level of service was analyzed for the following conditions:

- Existing (2008) TBIT Departures Peak Hour
- Existing (2008) TBIT Arrivals Peak Hour
- Existing (2008) Overall Airport Departures Peak Hour
- Existing (2008) Overall Airport Arrivals Peak Hour
- 2013 With Project TBIT Departures Peak Hour
- 2013 With Project TBIT Arrivals Peak Hour
- 2013 With Project Overall Airport Departures Peak Hour
- 2013 With Project Overall Airport Arrivals Peak Hour
- 2013 Without Project TBIT Departures Peak Hour
- 2013 Without Project TBIT Arrivals Peak Hour
- 2013 Without Project Overall Airport Departures Peak Hour
- 2013 Without Project Overall Airport Arrivals Peak Hour

Prepare CTA Intersection Level of Service Analysis - Level of service analyses for the CTA intersections were prepared using TRAFFIX. Intersection level of service was estimated using the Critical Movements Analysis (CMA) planning level methodology as defined in Transportation Research Board Circular 212,[34] in accordance with LADOT Traffic Studies Policies and Procedures guidelines,[35] and the

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34 Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

35 Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002.

L.A. CEQA Thresholds Guide.[36] Intersection level of service was analyzed for the same peak hour conditions described above in the TBIT Curbside analysis section.

Prepare CTA Roadway Link Level of Service Analysis - Level of service analyses for the key roadway links within the CTA were prepared by calculating the ratio of roadway volume to capacity. Traffic volumes were determined from the roadway model described previously. CTA roadway capacities are consistent with the assumptions used for the on-airport roadway link analysis prepared for the LAX Master Plan Final EIR. Roadway links were analyzed for the same peak hour conditions described above in the TBIT Curbside analysis section.

Identify Project Impacts - Project-related impacts associated with construction of the Bradley West Project were identified. Intersections that were anticipated to be significantly impacted by the project were identified according to the criteria established in the L.A. CEQA Thresholds Guide.[37] Impacts were determined based on a comparison between Future (2013) With Project Conditions and Future (2013) Without Project Conditions.

Identify Potential Mitigation Measures - For impacts determined to be significant, mitigation measures to avoid or reduce such impacts were considered, including measures that may call for operational and physical modifications to the on-airport roadway network.

4.1.3 Existing (2008) Conditions

The Existing (2008) conditions are characterized by the facilities and general conditions that existed at the start of the EIR preparation.

4.1.3.1 Traffic Analysis Study Area

The on-airport traffic analysis study area is depicted in **Figure 4.1-1**. The CTA curbside and roadway system consists of a two level roadway; the upper level is dedicated to departing passenger activities, and the lower level is primarily dedicated to arriving passenger activities.[38] The CTA roadway network provides access to the airport's CTA public parking garages, which are intended to accommodate the short-term and daily parking customers.

4.1.3.2 On-Airport Landside Facilities

The on-airport landside facilities are comprised of the curbsides, roadways, and public parking facilities. The two-level on-airport curbside and roadway network is accessed from the following three off-airport roadways:

- Century Boulevard
- Sepulveda Boulevard
- 96th Street Bridge/Sky Way

Each of these roadways provides vehicular access to both the departures (upper) level or the arrivals (lower) level curbsides and roadways. On-airport access from the departures level to the arrivals level is provided via a recirculation ramp located at the eastern end of the CTA and a ramp at the western end of Center Way, connecting to West Way. Access from the arrivals level to the departures level is provided via the ramp at the western end of Center Way, connecting to West Way (upper level). The departures level and arrivals level outer roadways are both signed for a speed limit of 25 miles per hour.

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[36] City of Los Angeles, Department of City Planning, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analysis in Los Angeles, 2006.

[37] City of Los Angeles, Department of City Planning, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analysis in Los Angeles, 2006.

[38] As the result of construction activities at LAX at the time this analysis was conducted, Mexicana de Aviacion's departing passenger operations at TBIT were being conducted on the lower (arrivals) level.

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On-Airport Traffic Analysis Study Area

Figure
4.1-1

Departures Level Curbsides and Roadways

The departures level roadway curbside consists of a striped 22-foot-wide stopping lane for vehicles dropping off passengers, and three 10-foot-wide travel lanes for bypass vehicles. There are five traffic signals on the departures level roadways, the first is at the intersection of World Way North and Sky Way, the second is on World Way North between TBIT and Public Parking Structure Three (P3), the third is on World Way South between TBIT and Public Parking Structure Four (P4), and the fourth and fifth signals are at the intersections of World Way South with West Way and East Way, respectively. The second and third traffic signals are pedestrian signals used to stop traffic in front of TBIT and allow pedestrians to cross between TBIT and the public parking structures. TBIT is the only terminal at LAX where pedestrians are allowed to walk between the terminal building and the public parking facilities on the upper level. At all other airport terminals, overhead walkways provide a grade-separated travel path between the terminals and the respective parking structures.

Direct access to the departures level of the CTA roadway network from the off-airport roadway network is provided by northbound Sepulveda Boulevard, southbound Sepulveda Boulevard (via Sky Way), and Century Boulevard. Direct access from the departures level roadway to southbound Sepulveda Boulevard and eastbound Century Boulevard is available, but northbound Sepulveda Boulevard traffic must use the ramp to Center Way and exit the airport with arrivals level traffic to access the northbound Sepulveda Boulevard ramp.

Arrivals Level Curbsides and Roadways

The arrivals level is served by two curbside and roadway systems, separated by a 10-foot-wide concrete pedestrian median. The inner curbside and roadway are reserved for private vehicle and taxicab pick up, and the outer curbside and roadway are reserved for commercial vehicle passenger pick up and for use by other vehicles bypassing a terminal. The inner curbside roadway consists of a single 10-foot-wide loading lane and two 10-foot-wide travel lanes. The outer roadway consists of a 20-foot-wide lane adjacent to the commercial loading median and three to five additional travel lanes. There are five traffic signals and 16 pedestrian crossing signals on the outer roadway connecting the terminal buildings with the parking facilities.

Direct access to the arrivals level of the CTA roadway network from the off-airport roadway network is provided by northbound and southbound Sepulveda Boulevard, and westbound Century Boulevard. Direct access from the arrivals level roadway to northbound and southbound Sepulveda Boulevard, as well as eastbound Century Boulevard, is also provided.

Curbside Allocation

While the departures level curbside is signed with the names of the airlines located in each of the respective terminals, vehicles are permitted to drop off passengers at any point along the curbside. There are six designated employee bus stop locations on the departures level.

On the arrivals level, space along the inner or outer curbside is allocated by vehicle mode. The inner curbside is allocated to private vehicles and taxicabs picking up passengers, while the outer curbside is allocated to commercial vehicles (e.g., parking shuttles, hotel and rental car shuttles, shared ride vans,[39] LAX shuttles, and FlyAway and long-distance buses). **Figure 4.1-2** illustrates the vehicle mode allocations along both the inner and outer arrivals level curbsides at LAX.

Parking Facilities

The airport currently provides a total of 16,992 public parking spaces. Eight parking structures are located within the CTA, providing a total of 8,577 spaces. Outside the CTA, Lots B and C provide approximately 8,415 parking spaces. In addition, LAWA owns and operates the 1,900-stall parking

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[39] The shared ride van stop for Terminal 1 was relocated from the outer curbside to the inner curbside in February 2009 on a trial basis to evaluate the operational impact on the Terminal 1 curbsides and roadways.

structure at the southeast corner of Avion Drive and Century Boulevard. Currently, LAWA leases monthly parking at this facility. **Table 4.1-1** presents the number of public parking spaces in each facility.

Table 4.1-1

LAX Public Parking Capacities

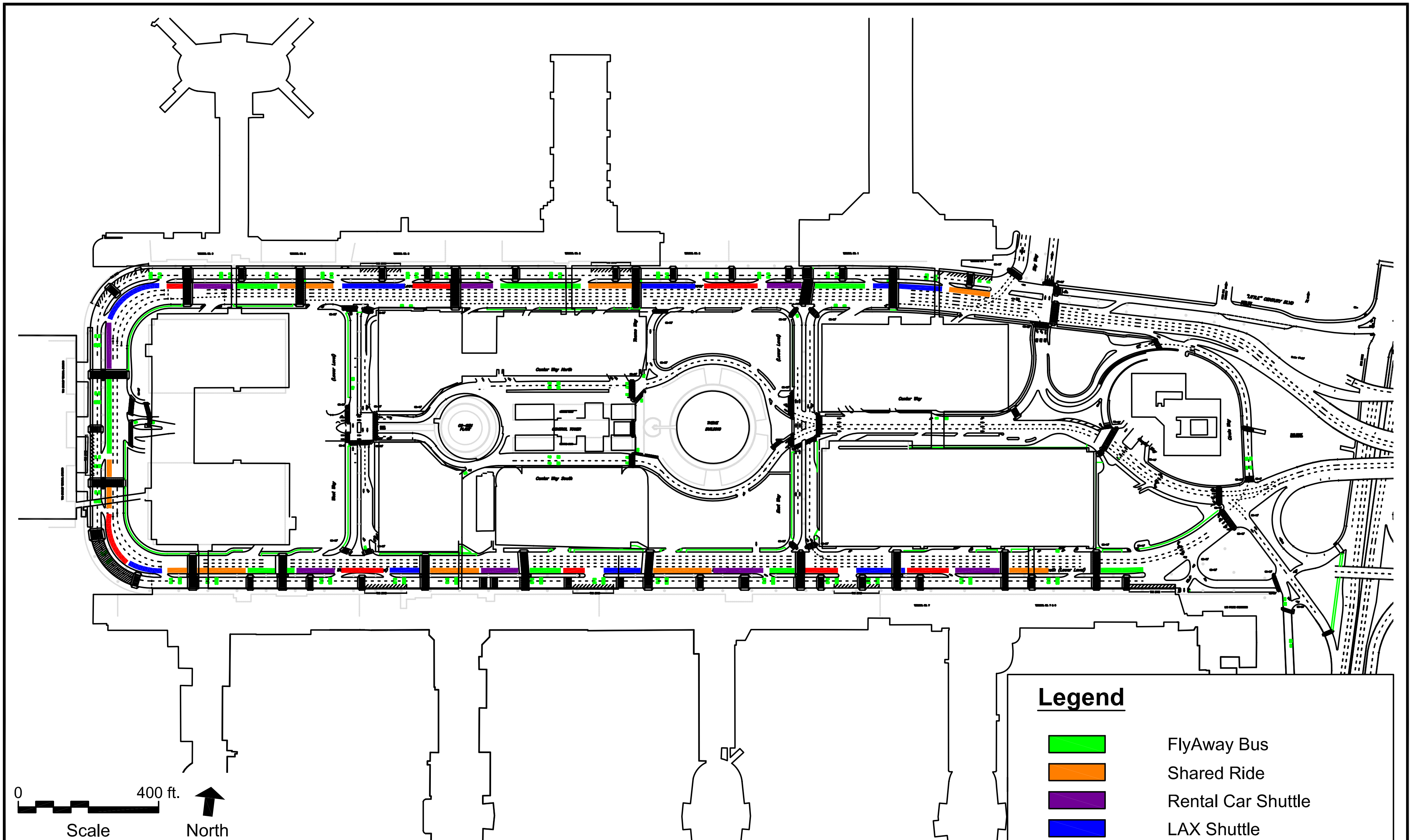
Facility	Spaces
CTA Parking Structure	
P1	1,491
P2	790
P2A	658
P3	1,170
P4	1,057
P5	878
P6	746
P7	1,787
CTA Total	**8,577**
Lot B	3,092
Lot C	5,323
Grand Total	**16,992**

Source: Los Angeles World Airports, 2009.

Vehicular access from the departures level roadways to six of the eight CTA public parking structures is provided from either East Way or West Way. Access to parking structures P3 and P4 is provided from World Way, across from TBIT. Vehicular access from the arrivals level roadways to the CTA public parking structures is provided from North Way, South Way, East Way, and West Way. Egress from the CTA public parking structures is provided primarily via Center Way. A currently unused exit is also located from parking structure P2 onto West Way.

4.1.3.3 Peak Month Activity

Monthly traffic data in the vicinity of LAX over the past 9 years were reviewed to identify the typical peak month of traffic activity associated with airport operations. The average daily traffic (ADT) volumes accessing the CTA by month for January 2000 through December 2008 are provided in **Table 4.1-2**. As shown, CTA traffic reached peak activity during the summer months of July and August. August is typically the peak month for airport roadway traffic followed closely by July. For the purpose of this analysis, August 2008 was used as the peak month for traffic data.



Source: Los Angeles World Airports, September 2008.
Prepared by: Ricondo & Associates, Inc., March 2009.

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Curbside Vehicle Allocation - Arrivals Level

Figure 4.1-2

Table 4.1-2

CTA Average Daily Traffic Volumes

Monthly Traffic	2000	2001	2002	2003	2004	2005	2006	2007	2008
January	82,136	90,683	65,135	66,039	61,775	69,554	67,727	66,999	67,483
February	79,791	87,509	61,148	60,808	59,802	60,930	63,715	65,339	64,924
March	86,627	93,186	66,794	59,921	64,431	63,748	69,034	68,380	69,819
April	92,863	96,566	68,164	60,434	68,164	64,771	69,230	70,268	69,184
May	98,052	96,341	70,867	64,306	68,155	68,982	70,303	71,599	72,022
June	102,392	101,585	72,282	65,903	74,650	75,699	72,647	73,669	75,118
July	106,445	**105,842**	75,433	74,047	**78,674**	75,635	75,895	78,342	75,640
August	**108,871**	103,308	**79,427**	**76,556**	77,986	**79,046**	**78,236**	**82,193**	**76,434**
September	95,917	59,987	66,630	60,762	66,276	68,151	67,171	68,316	65,227
October	92,169	42,370	65,166	59,904	66,395	66,607	66,981	68,152	64,260
November	96,308	56,579	62,264	59,944	65,525	68,200	70,326	72,098	64,128
December	94,551	60,649	71,845	68,666	73,107	70,700	71,978	71,900	70,972
Total Annual	**1,136,122**	**994,605**	**825,155**	**777,290**	**824,940**	**832,023**	**843,243**	**857,255**	**835,211**
Average Daily Traffic	94,692	82,884	68,763	64,774	68,901	69,335	70,270	71,438	69,601
% Annual Change	--	-12.5%	-17.0%	-5.8%	6.4%	0.6%	1.3%	1.7%	-2.6%
Million Annual Passengers	67.3	61.6	56.2	55.0	60.7	61.5	61.0	61.9	59.8
% Annual Change	--	-8.5%	-8.8%	-2.1%	10.4%	1.3%	-0.8%	1.5%	-3.4%

Source: City of Los Angeles, Los Angeles World Airports, Ground Transportation Report, Ground Transportation Planning and Design, February 2009.

4.1.3.4 Data Collection and Data Sources

LAWA was the primary source of the traffic data, facility drawings, and traffic signal timing plans for this study. To supplement this data, detailed field surveys of both the departures and arrivals level curbsides and roadway systems were conducted to ensure a clear understanding of the Existing (2008) conditions and commercial vehicle, private vehicle, and passenger operations. The data provided by LAWA staff for this project were used to create a snapshot of vehicle and passenger activity for a typical Friday in August 2008. LAWA provided the following data for this project:

- August 2008 Airline Passenger Schedule
- Passenger Load Factors
- 2006 Air Passenger Survey
- CTA Vehicle Counts
- CTA Vehicle Classification which includes other category counts comprised of private vehicles, rental cars, service vehicles, and any other vehicle not equipped with an AVI transmitter.
- Parking Structure Vehicle Count Data
- Closed Circuit Television (CCTV) Footage

Figures 4.1-3 and **4.1-4** identify the locations where the traffic data were collected around the CTA.

4.1.3.5 Determination of Traffic Analysis Peak Hours

The August 2008 airline schedule was used to estimate a rolling hour[40] of originating (i.e., outbound flight) and terminating (i.e., inbound flight with LAX as the final destination) passenger volumes for each

40 A "rolling hour" is a 60-minute duration that is not based on a specific start or end time such as at the top of the hour (12:00).

terminal. Originating passenger volumes throughout each hour of the day were adjusted to account for the time passengers arrived at the curbside prior to the departure time of their flight. These adjustments were made based on "early arrivals curves" used in airport facilities planning. These curves took into account the differences in domestic and international passenger early arrival characteristics. Similarly, terminating passenger volumes from the airline schedule were adjusted to represent the time passengers arrived at the curbside following the arrival of their flight. Terminating passenger arrivals curves were used to reflect domestic passenger arrivals characteristics at LAX. The international terminating passenger arrival data used for this analysis was generated as direct output from passenger simulations prepared for TBIT based on (a) the geometric configuration and operational conditions in place in 2008 and (b) future configurations and operational conditions that would be in place after the completion of the Bradley West Project.[41] Originating and terminating passenger volumes at the curbside were calculated for domestic and international passengers for a 24-hour period in 10-minute increments. Each six successive 10-minute passenger counts were added to generate a rolling hourly passenger count total. From these data, the departures, arrivals, and overall airport peak hour passenger volumes by time of day were determined. **Figures 4.1-5** and **4.1-6** depict rolling hourly originating and terminating passenger volumes in 2008 for the curbside at TBIT and for the total curbsides at all terminals, respectively. **Table 4.1-3** summarizes the 2008 peak hour passenger arrivals and departures data presented in **Figures 4.1-5** and **4.1-6**.

Table 4.1-3

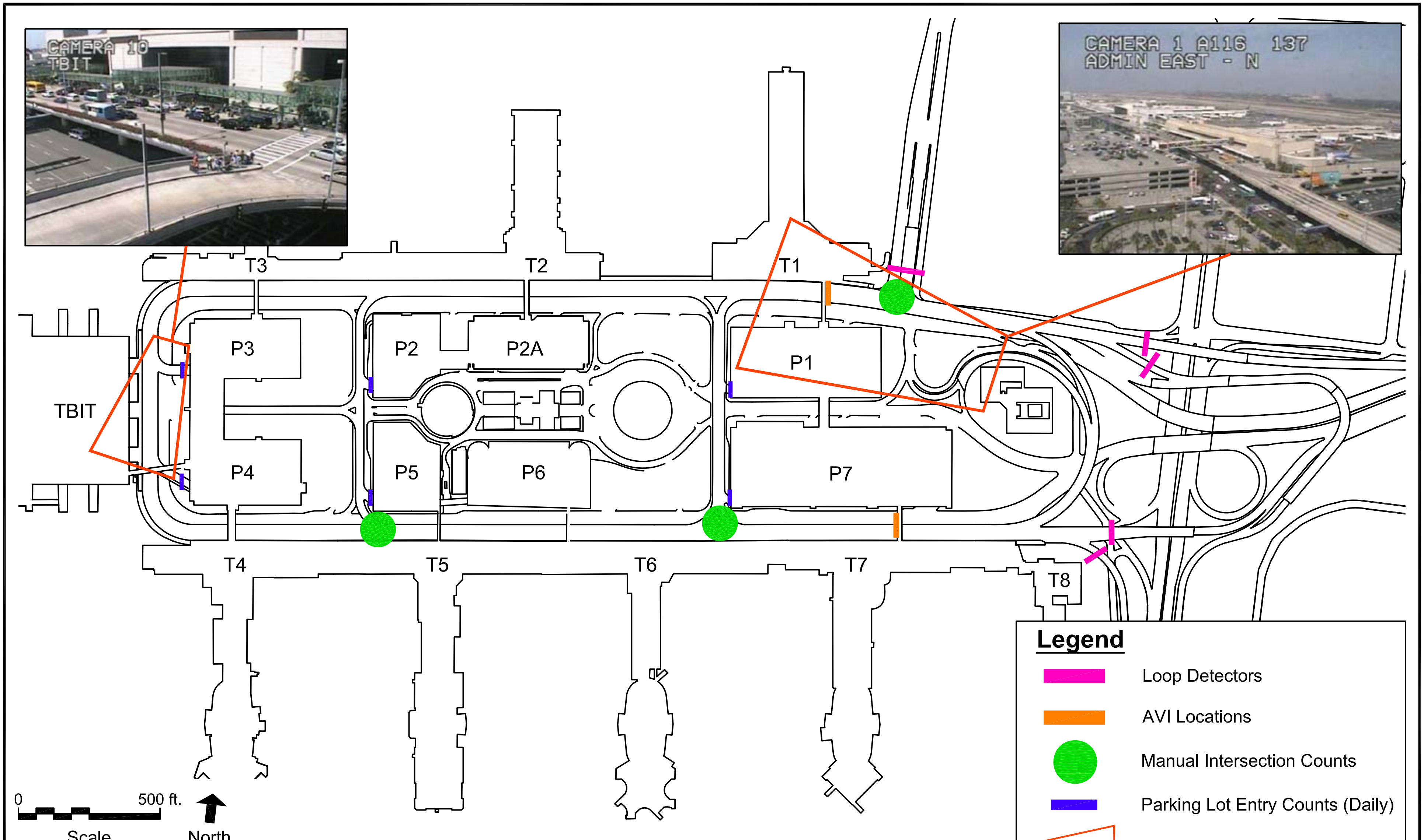
Existing (2008) Peak Period Conditions Based on Airline Passenger Activity

	TBIT		Overall Airport	
Existing (2008)	**Peak Hour**	**TBIT Passengers**	**Peak Hour**	**Total Passengers**
Arrivals	17:00 - 18:00	1,487	21:00 - 22:00	6,461
Departures[1]	11:00 - 12:00	1,341	11:10 - 12:10	5,976

[1] Peak periods determined based on passenger volumes at the curbside. Absolute 2008 peak passenger departures activity (1,343) occurred between 21:20 p.m. and 22:20 p.m., but 11:00 a.m. to 12:00 p.m. passenger activity (1,341) was essentially the same and was used for the analysis because of the availability of traffic data for this time period. Intersection turning movements were not available for the evening hours.

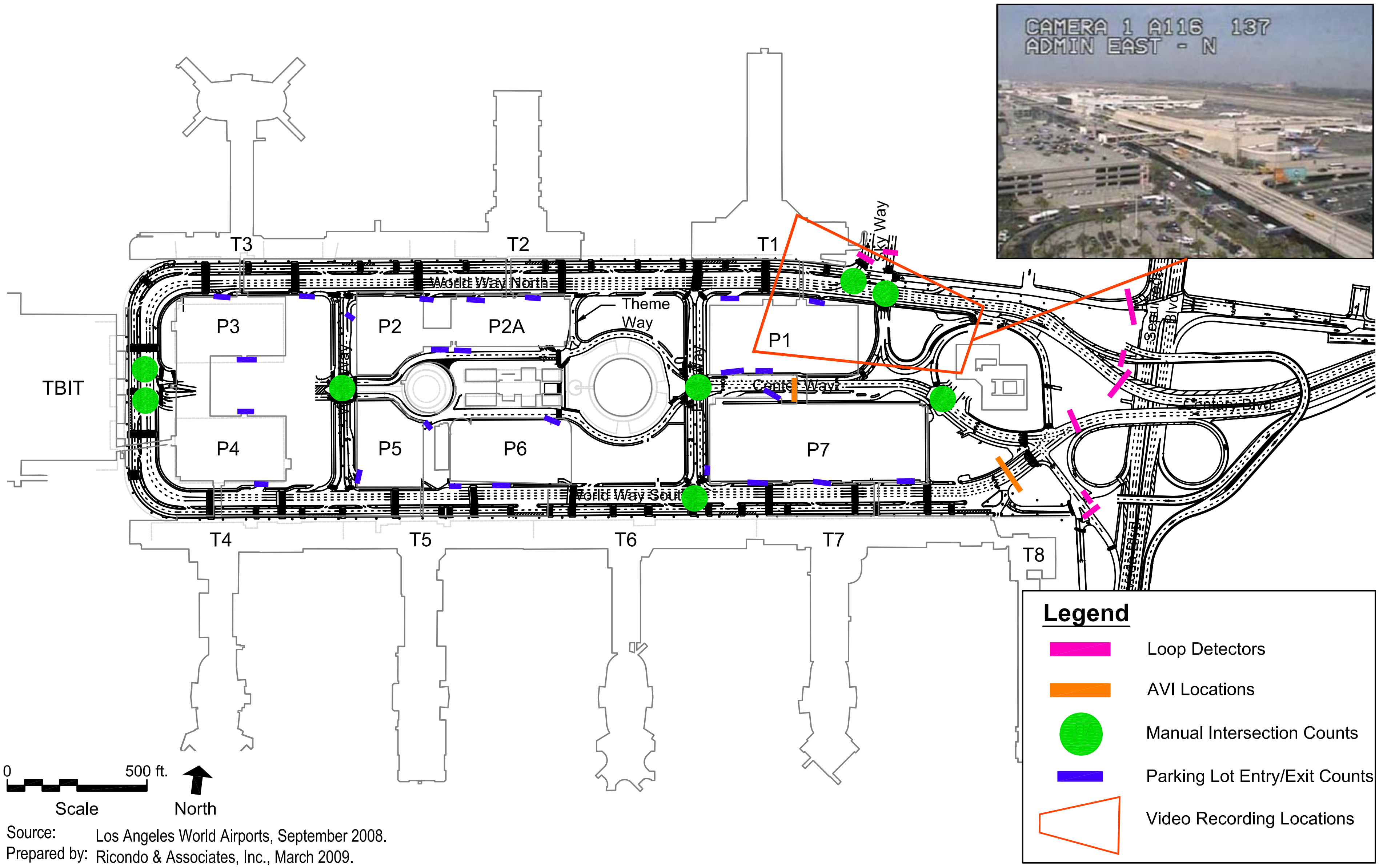
Sources: Jacobs Consultancy, TBIT Terminal Simulation of TBIT Arrivals Activity, October 2008; Ricondo & Associates, Inc., Passenger Schedule Analysis for TBIT Departures and All Other CTA Terminals, October 2008.

[41] TBIT simulation model outputs were provided by Jacobs Consultancy, 2008.



Source: Los Angeles World Airports, September 2008.
Prepared by: Ricondo & Associates, Inc., March 2009.

LAX Bradley West Project Draft EIR	Data Collection Locations - Departures Level	Figure 4.1-3



Source: Los Angeles World Airports, September 2008.
Prepared by: Ricondo & Associates, Inc., March 2009.

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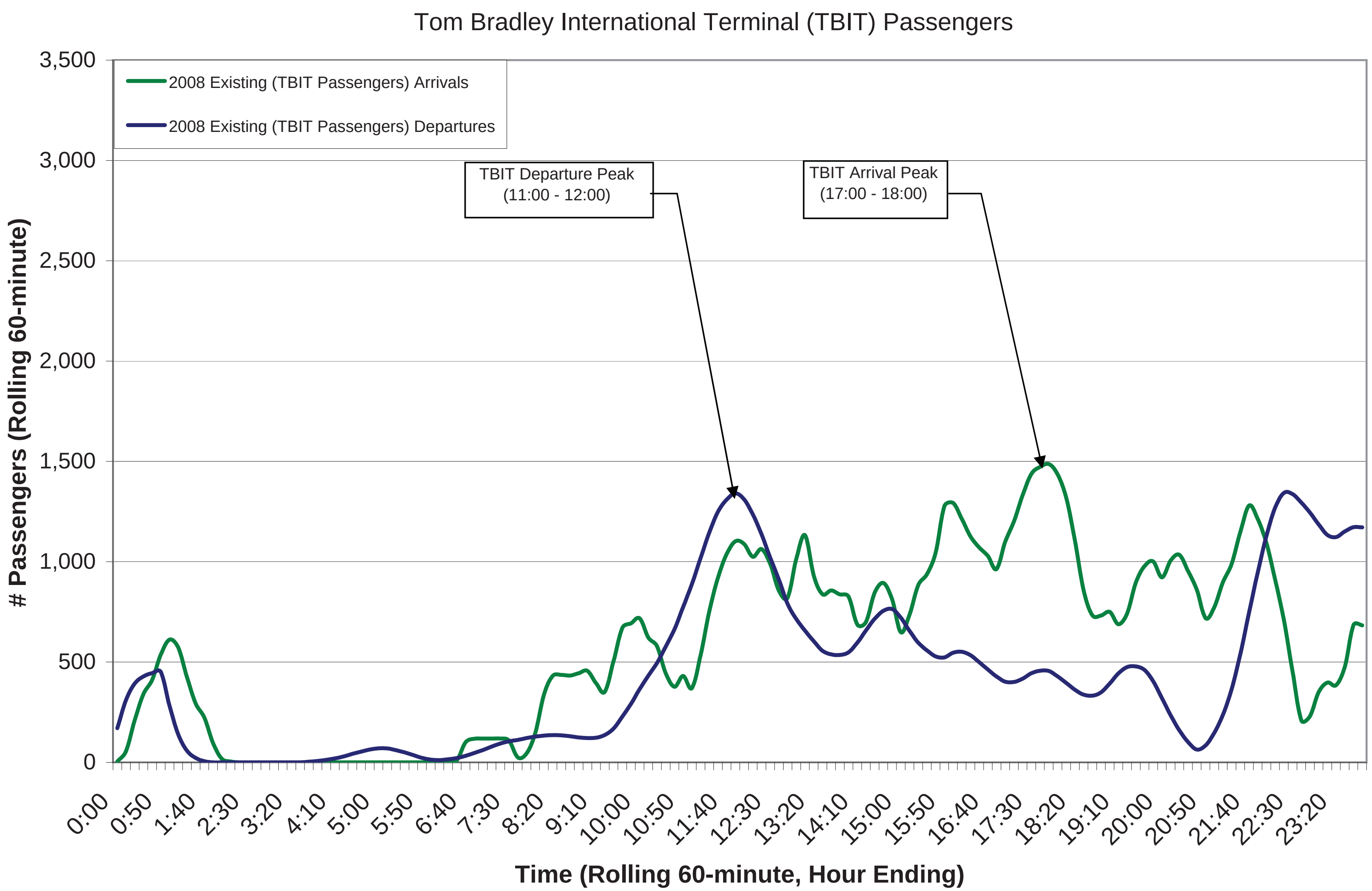
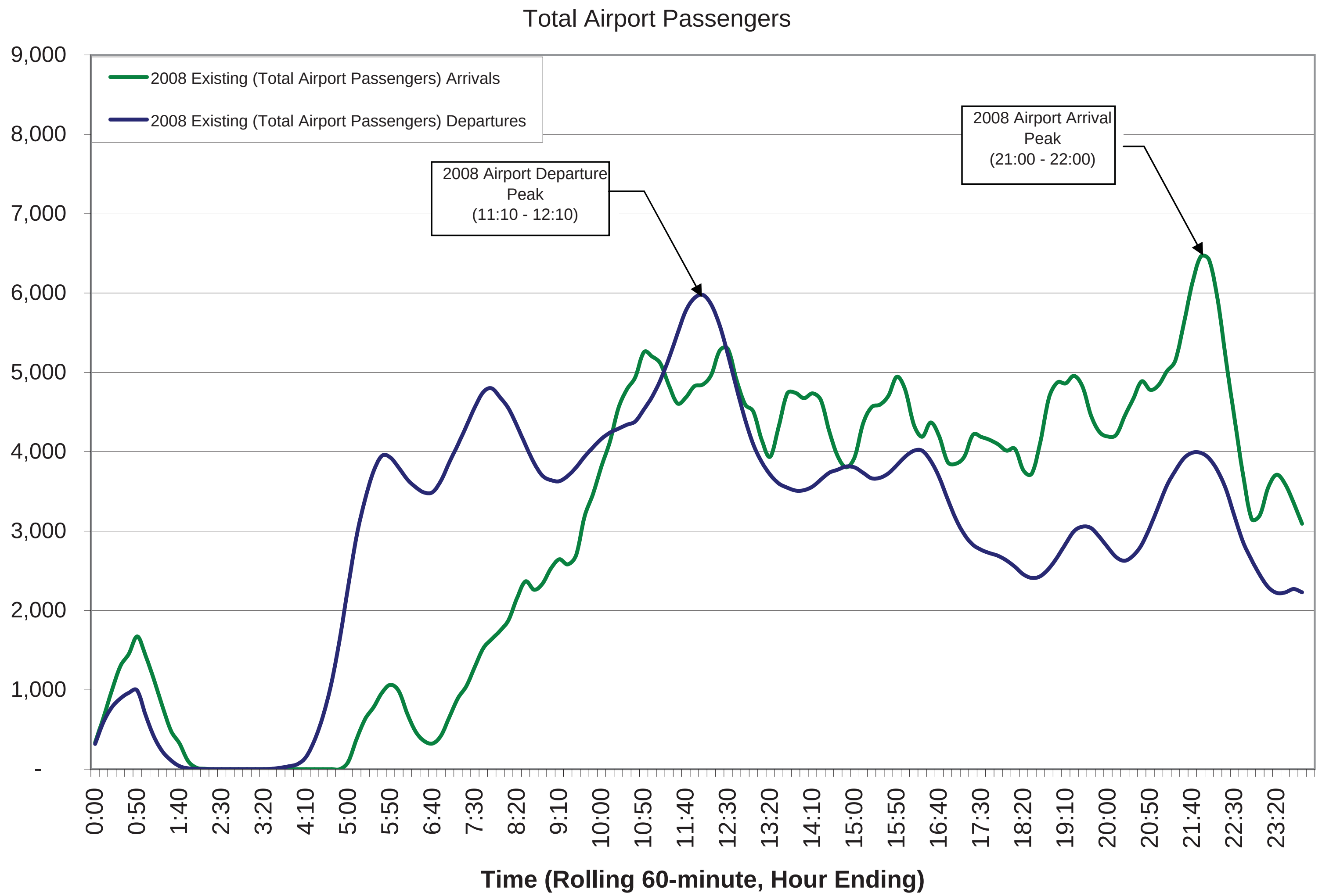
Data Collection Locations - Arrivals Level

Figure

4.1-4



Sources: Jacobs Consultancy (Terminal Simulation); Ricondo & Associates, Inc., February 2009 (Passenger Schedules).
Prepared by: Ricondo & Associates, Inc., March 2009.



Sources: Jacobs Consultancy (TBIT Simulation); Ricondo & Associates, Inc., February 2009 (Passenger Schedules).
Prepared by: Ricondo & Associates, Inc., March 2009.

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Total Airport Passenger Flow at Curbside Existing (2008)

Figure
4.1-6

4.1.3.6 Determination of Existing (2008) Traffic Volumes

Data collected and discussed in the previous section were compiled, reviewed, and analyzed. Given the multiple sources of data, it is necessary to compile these sources and conduct detailed analysis in order to prepare a "balanced" network of traffic activity during the Existing (2008) peak hours. A balanced network is simply a composite snapshot view of traffic activity throughout the CTA such that the addition or subtraction of traffic volumes as lanes merge and diverge remains in balance throughout the roadway system. In other words, there is an accounting and reconciliation of vehicles turning onto different routes within the CTA and arriving at and departing from the various curbside areas within the CTA. To estimate the balanced Existing (2008) CTA roadway traffic for a typical Friday during August 2008, the intersection turning movement, loop detector, and AVI counts provided by LAWA were compiled and analyzed to create the balanced traffic volumes for the CTA roadway network.

To estimate balanced Existing (2008) traffic volumes for the CTA roadway network on a typical Friday in August 2008, the peak hours for traffic using the TBIT departures curbside and the TBIT arrivals curbside were identified in order to represent the peak period for curbside activity at TBIT. For purposes of summarizing these data for analysis, both the departures and arrivals level roadways were subdivided and defined by individual links as depicted in **Figures 4.1-7** and **4.1-8**. The TBIT peak hour departures and arrivals Existing (2008) traffic volumes for each roadway link are presented in **Table 4.1-4**. The traffic volumes for roadway links on the upper level represent activity during the TBIT departures peak hour (11:00 to 12:00) and the traffic volumes for roadway links on the lower level represent activity during the TBIT arrivals peak hour (17:00 to 18:00). A similar table representing Existing (2008) traffic activity during the overall airport peak arrivals period is provided in Appendix B of this EIR. The overall airport peak departures period coincides with the TBIT peak departures period.

Table 4.1-4

Existing (2008) Peak CTA Traffic Volumes During the TBIT Peak Hours

Roadway Link[1]	Description	Volumes[2] (number of vehicles)
UA	Westbound World Way North, east of East Way (upper level roadway entrance)	2,596
UB	Southbound East Way, exiting from World Way	382
UC	Southbound East Way, south of P1 entrance	330
UD	Southbound East Way, south of P7 entrance	264
UE	Westbound World Way North, west of East Way intersection	2,348
UF	Southbound West Way, exiting from World Way	462
UG	Southbound West Way, south of P2 entrance	389
UH	Westbound exit ramp from West Way to Center Way	10
UI	Eastbound entrance ramp from Center Way to West Way	85
UJ	Southbound West Way, south of Center Way ramp	464
UK	Southbound West Way, south of P5 entrance - entering World Way South	389
UL	Westbound World Way, west of southbound West Way exit	1,886
UM	Southbound World Way, south of P3 entrance	1,766
UN	Southbound World Way, south of P4 entrance	1,646
UO	Eastbound World Way South, east of West Way	2,035
UP	Northbound East Way - exit from World Way South, entrance to World Way North	134
UQ	Eastbound World Way South, east of East Way	2,165
UR	Upper level exit (south and east)	1,651
US	Upper level recirculation/exit (north)	514
UT	Transfer to lower level and exit (north)	430
UU	Upper level recirculation	84
UV	Upper level recirculation and entrance	1,841
UW	Entrance from Sky Way	755
UX	Entrance from east/south	1,787
EP1	Upper level entrance to P1	52
EP2	Upper level entrance to P2/P2A	73
EP3	Upper level entrance to P3	120

Table 4.1-4

Existing (2008) Peak CTA Traffic Volumes During the TBIT Peak Hours

Roadway Link[1]	Description	Volumes[2] (number of vehicles)
EP4	Upper level entrance to P4	120
EP5	Upper level entrance to P5/P6	75
EP7	Upper level entrance to P7	66
CA	Entrance from lower level north	118
CB	Ramp from upper level	n/a
CC	Ramp to upper level	n/a
CD	Entrance from lower level south	n/a
CE	Center Way North, east of P4 exit	358
CF	Center Way South, east of P6 exit	233
CG	Northbound West Way, south of Center Way	55
CH	Northbound West Way, north of Center Way	55
CI	Southbound West Way, south of lower level roadway	300
CJ	Southbound West Way, south of P4 exit	330
CK	Southbound West Way, south of Center Way	260
CL	Southbound West Way, south of P16 exit	230
CM	Center Way North, east of West Way intersection	428
CN	Center Way South, east of West Way intersection	233
CO	Center Way North, east of P3 exit	468
CP	Center Way South, east of P7 exit	262
CQ	Center Way North, east of P2 exit	548
CR	Theme Way from outer curb	n/a
CS	Theme Way to Center Way South	n/a
CT	Theme Way to Center Way North	n/a
CU	Center Way North, east of Theme Way intersection	548
CV	Center Way South, east of P8 exit	330
CW	East Way northbound, north of Center Way	150
CX	East Way northbound, south of Center Way	150
CY	East Way southbound, north of Center Way	170
CZ	East Way southbound, south of Center Way	160
CAA	East Way southbound, south of P19 exit	160
CAB	Center Way, east of East Way intersection	888
CAC	Center Way, east of P1 exit	1,051
CAD	Center Way, east of P10 exit	1,051
CAE	Return/exit roadway, north of Center Way	n/a
CAF	Center Way, east of exit to return/exit	1,051
CAG	Center Way, east of P11 exit	1,219
CAH	Center Way, east surface public parking lot P22 exit	1,219
CAI	Center Way, east of upper level ramp	1,440
CAJ	Center Way, east P12 exit	1,440
CAK	Return/exit roadway, north of Center Way	493
CAL	Return/exit roadway, west of Century Boulevard entrance/exit	118
CAM	Upper level ramp to eastbound Center Way	221
CAN	Upper level ramp to return/exit	379
CAO	Return/exit roadway, south of lower level roadway	497
CAP	Exit to Sky Way	200
EP8	Lower level entrance to P1 (entrance 1)	40
EP9	Lower level entrance to P1 (entrance 2)	45
EP10	Lower level entrance to P2A	40
EP11	Lower level entrance to P2	35
EP12	Lower level entrance to surface lot	n/a
EP13	Lower level entrance to P3	165
EP14	Lower level entrance to P4	160
EP15	Lower level entrance to surface lot	n/a
EP16	Lower level entrance to P5	30
EP17	Lower level entrance to P6	70
EP18	Lower level entrance to surface lot	n/a
EP19	Lower level entrance to P7 (entrance 1)	n/a
EP20	Lower level entrance to P7 (entrance 2)	40
EP21	Lower level entrance to P7 (entrance 3)	40

Table 4.1-4

Existing (2008) Peak CTA Traffic Volumes During the TBIT Peak Hours

Roadway Link[1]	Description	Volumes[2] (number of vehicles)
EP22	Lower level entrance to surface lot	n/a
XP1	Exit from P1 to Center Way	163
XP2	Exit from P2A to Center Way	80
XP3	Exit from P2 to Center Way	40
XP4	Exit from P2 to southbound West Way	30
XP5	Exit from P3/surface lot to Center Way	240
XP6	Exit from P4/surface lot to Center Way	233
XP7	Exit from P5 to Center Way	29
XP8	Exit from P6/surface lot to Center Way	68
XP9	Exit from surface lot to lower level roadway	n/a
XP10	Exit from P7 to Center Way (entrance 1)	n/a
XP11	Exit from P7 to Center Way (entrance 2)	168
XP12	Exit from surface lot to Center Way	n/a
LA	Lower level roadway entrance	2,664
LB	Terminal 1 outer curb, west of P8 exit	2,624
LC	Terminal 1 outer curb, after inner curb exit 1	2,520
LD	Terminal 1 outer curb, west of P9 exit and inner curb exit 2	2,371
LE	Terminal 1 outer curb, west of East Way intersection	2,351
LF	Outer curb, west of inner curb entrance from Terminal 1	2,599
LG	Terminal 2 outer curb, west of exit to inner curb	2,569
LH	Terminal 2 outer curb, west of Theme Way	2,569
LI	Terminal 2 outer curb, west of P10 exit	2,529
LJ	Terminal 2 outer curb, west of inner curb entrance from Terminal 2	2,559
LK	Terminal 2 outer curb, west of exit to inner curb	2,524
LL	Terminal 2 outer curb, west of P11 exit	2,489
LM	Terminal 2 outer curb, west of inner curb entrance from Terminal 2	2,524
LO	Terminal 2 outer curb, west of West Way intersection	2,279
LP	Terminal 2 outer curb, west of exit to inner curb	2,214
LQ	Terminal 3 outer curb, west of P12 exit	2,214
LR	Terminal 3 outer curb, west of P13 exit	2,049
LS	Terminal 3 outer curb, west of entrance from inner curb	2,114
LT	TBIT outer curb, south of exit to inner curb	1,611
LU	TBIT outer curb, south of Center Way intersection	1,493
LV	TBIT outer curb, south of exit to inner curb	1,421
LW	TBIT outer curb, south of entrance from inner curb	1,924
LX	Terminal 4 outer curb, east of exit to inner curb	1,674
LY	Terminal 4 outer curb, east of P14 exit	1,514
LAA	Terminal 4 outer curb, east of P15 exit	1,514
LAB	Terminal 4 outer curb, after entrance from inner curb	1,836
LAC	Outer curb, east of West Way intersection	2,011
LAD	Terminal 5 outer curb, after exit to inner curb	1,939
LAE	Terminal 5 outer curb, east of P17 exit	1,869
LAF	Terminal 5 outer curb, east of inner curb entrance/exit	1,616
LAG	Terminal 6 outer curb, east of P18 exit	1,616
LAH	Terminal 6 outer curb, east of P9 exit	1,616
LAI	Terminal 6 outer curb, east of exit to inner curb	1,435
LAJ	Outer curb, east of East Way intersection	1,595
LAK	Terminal 7 outer curb, east of inner curb entrance/exit	1,813
LAL	Terminal 7 outer curb, east of P20 exit	1,773
LAM	Terminal 7 outer curb, east of exit to inner curb	1,773
LAN	Terminal 7 outer curb, after P21 exit	1,733
LAO	Terminal 7 outer curb, after entrance from inner curb	1,833
LAP	Terminal 7 outer curb, after P13 exit	1,833
LAQ	Terminal 8 outer curb, east of inner curb entrance/exit	1,871
LAR	Terminal 8 outer curb, after inner curb entrance	1,871
LAS	Lower level exit 1 (south)	1,155
LAT	Lower level exit 2 (east)	1,663
LAU	Entrance from Sky Way	506
IA	Terminal 1 inner curb, east	40

Table 4.1-4

Existing (2008) Peak CTA Traffic Volumes During the TBIT Peak Hours

Roadway Link[1]	Description	Volumes[2] (number of vehicles)
IB	Terminal 1 inner curb, center	144
IC	Terminal 1 inner curb, west	248
ID	Inner curb between Terminal 1 and Terminal 2	n/a
IE	Terminal 2 inner curb, east	30
IF	Terminal 2 inner curb, center	n/a
IG	Terminal 2 inner curb, center west	35
IH	Terminal 2 inner curb, west	n/a
II	Terminal 3 inner curb, center	65
IJ	Terminal 3 inner curb, west	n/a
IK	TBIT inner curb, center	503
IL	TBIT inner curb, south	575
IM	Inner curb between TBIT and Terminal 4	75
IN	Terminal 4 inner curb	322
IO	Terminal 5 inner curb, west	n/a
IP	Terminal 5 inner curb, center	72
IQ	Terminal 6 inner curb, center	325
IR	Terminal 6 inner curb, east	356
IS	Terminal 7 inner curb, west	138
IT	Terminal 7 inner curb, center	138
IU	Terminal 8 inner curb	38
IV	Connection to outer curb, east of Terminal 8	n/a
IW	Connection to outer curb, east of exit to parking	n/a
IX	Connection to outer curb, east of entrance from service road	n/a

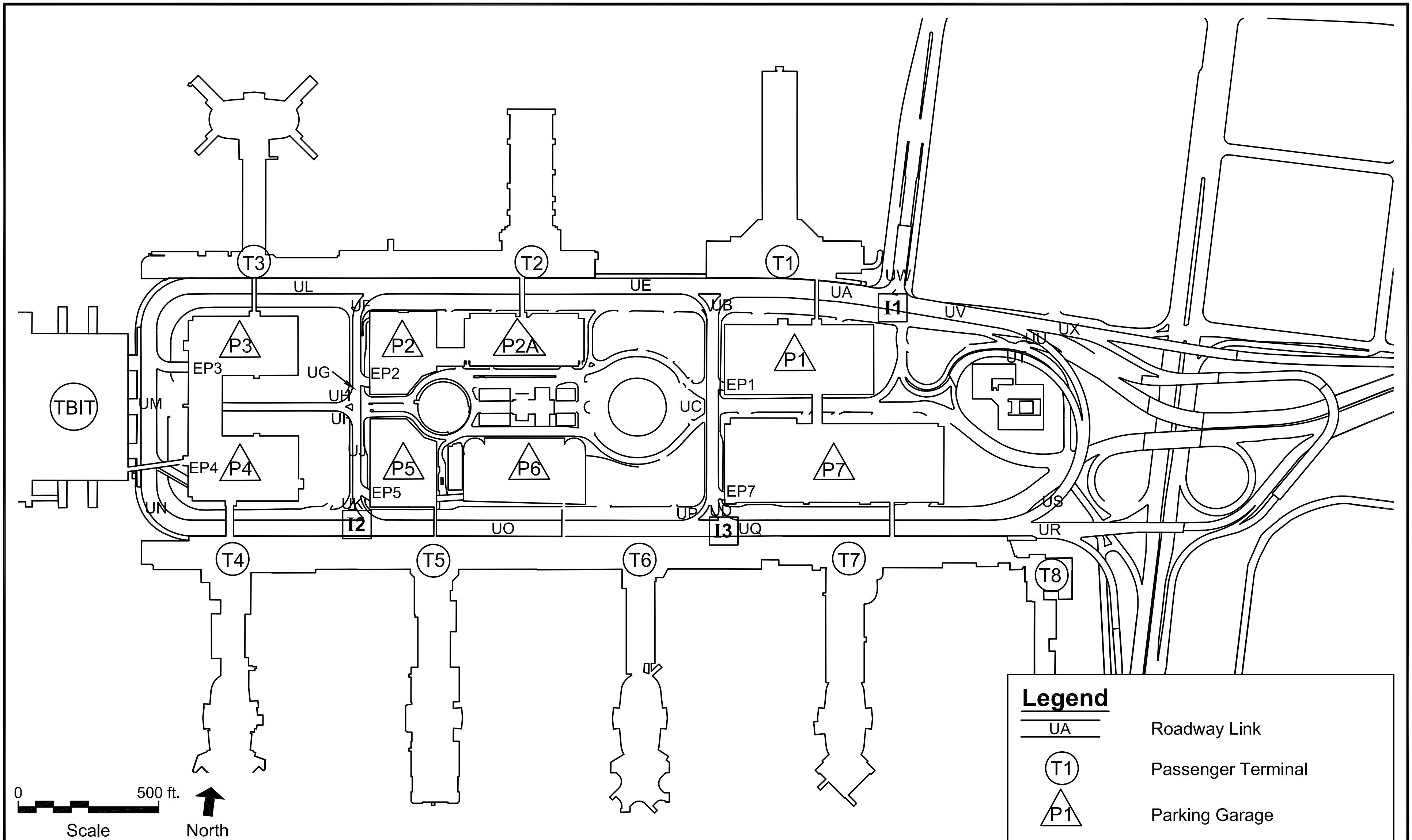
1 As identified in Figures 4.1-7 and 4.1-8.

2 Traffic volumes on the upper level links represent activity during the TBIT departures peak hour (11:00 to 12:00) and volumes on the lower level links represent activity during the TBIT arrivals peak hour (17:00 to 18:00); both periods represent activity during a typical busy Friday in August 2008.

Source: Ricondo & Associates, Inc., 2009.

VISSIM Model

A simulation model was developed using VISSIM to provide a more detailed assessment of the curbside and roadway operations associated with Existing (2008) conditions and future scenarios (2013 With Project and 2013 Without Project). The VISSIM model used in this analysis was initiated by LAWA for other airport-related purposes and provided for use in analyzing the Bradley West Project. This initial model included much of the existing physical geometry of the CTA roadway system (roadway configurations, lanes, and intersections); however, the model was refined for use in the Bradley West Project analysis. As part of this process, the model was evaluated and expanded to provide a complete physical representation of the CTA roadway system through field verification, as well as detailed review of video, photographs, and scaled drawings of the existing CTA roadway system depicting lanes and other physical features. Key physical characteristics, including lane width, design speed, slope, and horizontal curvature, among other features, were incorporated in the model. The model was refined to include new vehicle types, assignments, routes, volumes, and public parking trip distributions based on passenger activity at each of the terminals. The location and configuration of vehicle curbside parking spaces adjacent to each terminal building in the CTA were also assigned within the model, with varying levels of desirability depending upon the location of parking spaces relative to doorways, baggage check-in locations, and other features.



Source: Los Angeles World Airports, September 2008.
Prepared by: Ricondo & Associates, Inc., March 2009.

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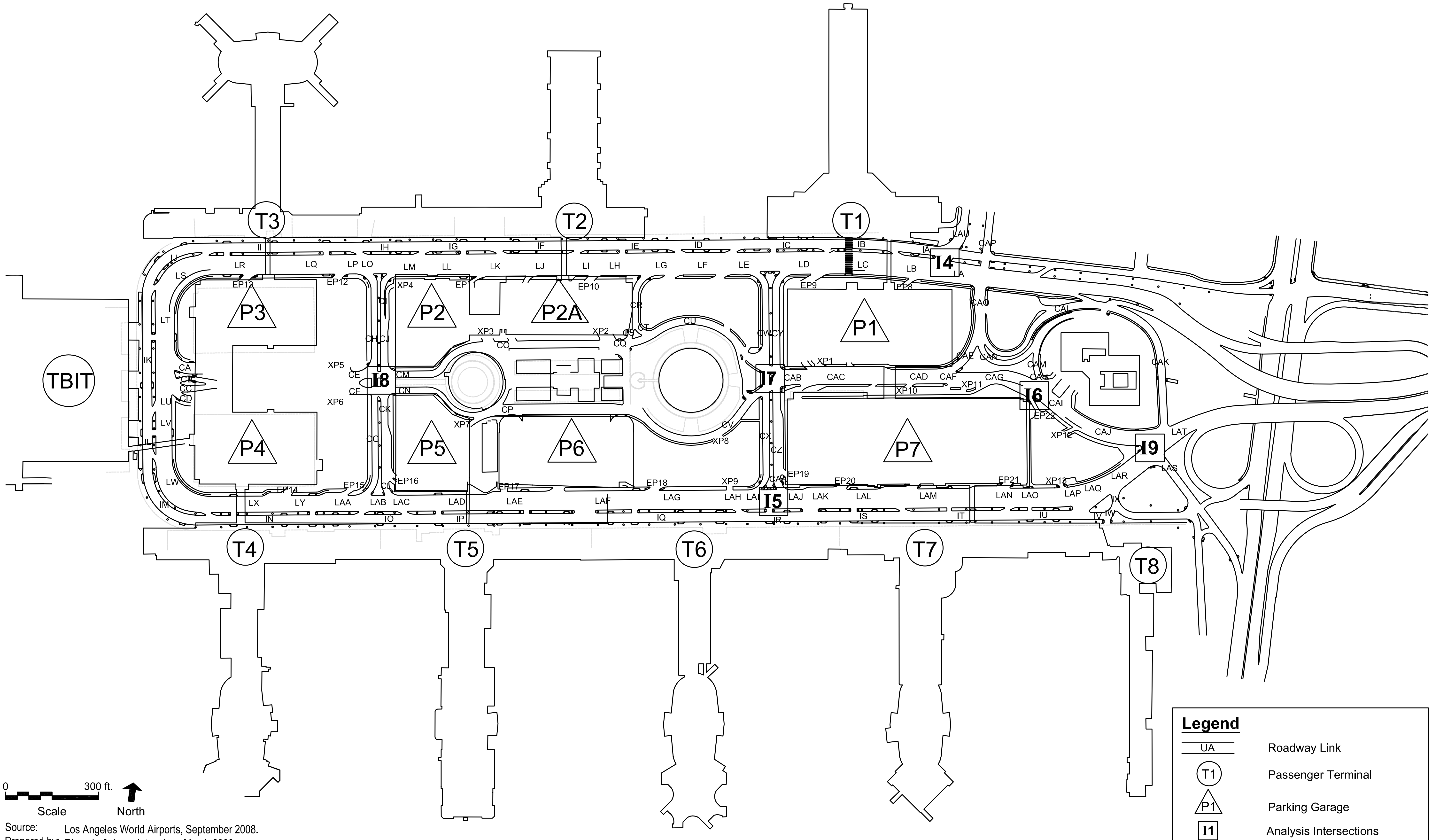
CTA Roadway Links and Key Intersections - Departures Level

Figure 4.1-7



Source: Los Angeles World Airports, September 2008.
Prepared by: Ricondo & Associates, Inc., March 2009.

LAX Bradley West Project Draft EIR	CTA Roadway Links and Key Intersections - Arrivals Level	Figure 4.1-8

Additional information, such as signal timing and phasing for signalized intersections provided by LAWA, was included in the model. Pedestrian counts recorded during a site visit as well as from CCTV videos provided by LAWA were used to estimate the number of pedestrians crossing the CTA roadways at TBIT. Pedestrian volumes at the arrivals level crosswalks at the other seven terminals in the CTA were estimated using passenger allocation percentages for each terminal and crosswalk data from the previously mentioned data collection efforts. Pedestrian arrival rates at the signalized crosswalks were based on a normal distribution used to arrive at the pedestrian crossing and activate the pedestrian crossing signal.

To define the vehicle characteristics and trip assignments to be input into the VISSIM model, the assumptions developed for the spreadsheet-based vehicle trip generation model described previously were used to ensure consistency between the analyses. These assumptions related to the types of vehicles accessing each terminal, the total number of vehicles by mode, and the associated paths used by each vehicle mode for the peak arrivals and peak departures conditions. These individual trip assignments were coded into the VISSIM model for each vehicle mode representing each destination along the travel path. For example, a typical path may consist of a vehicle entering the CTA roadway system, followed by a stop at one of the terminal curbsides to drop off a passenger, and then proceeding to that terminal's parking garage. For each vehicle type, characteristics such as average dwell time, driver aggressiveness characteristics, and desired curbside stopping locations were defined.

The passenger volumes associated with each peak hour condition considered in this analysis were input to the trip generation model, from which hourly vehicle volumes for each roadway link were generated. These hourly vehicle volumes were distributed into 10-minute equivalent volumes based on the 10-minute airline passenger volume distributions at each terminal to account for passenger peaking within the analysis peak hour. This approach provided a more realistic arrival rate for passengers and vehicles to the curbside throughout the hour. These hourly vehicle volumes were then used as input for the existing conditions VISSIM model. This calibration was necessary to ensure that the VISSIM model was generating the proper number and type of vehicle trips throughout the CTA roadway network because this model would serve as the basis for developing the VISSIM models for future conditions.

VISSIM Model Calibration

The calibration process involved running the VISSIM model, observing the simulation's animation to visually confirm that the model was performing as expected, and comparing the output statistics to the balanced roadway volumes at numerous locations throughout the roadway network. Comparing the model's roadway traffic output to the balanced roadway traffic volumes using the same locations to confirm that the model is generating the correct traffic volumes is a key step in the calibration process. Similar to the vehicle trip generation and distribution modeling process, key model inputs were adjusted to obtain volumes within the desired Root Mean Square Test (RMST) tolerance of the balanced roadway traffic volumes. The visual output of the model was also reviewed and compared to actual video and field observations to confirm that modeled and actual congestion points and levels of vehicle queuing were of similar magnitude. Upon satisfactory calibration of the model, it was determined that the model had been validated for use in developing future year analyses. This process was completed for TBIT and for overall airport peak arrivals and peak departures models.

Vehicle Trip Generation and Distribution Model

A vehicle trip generation and distribution model was developed to project future traffic volumes on the airport's roadway system based on future passenger activities. The model was calibrated to the balanced Existing (2008) CTA roadway vehicle volumes to ensure the model is accurately replicating the Existing (2008) conditions. The trip generation models outputs were compared to Existing (2008) values to determine if the model generated values are within an acceptable range. The trip generation model uses factors such as passenger arrival characteristics, vehicle volumes, mode split (i.e., the proportion of traffic volume comprised of various modes including private vehicles, taxicabs, limousines, etc.), and vehicle occupancy characteristics to develop relationships between each of these factors to project vehicle volumes from a passenger volume input. The estimated mode choice percentages and vehicle occupancies used in the vehicle trip generation model for both the passenger arrivals and departures peak periods were developed from data collected as part of this project and the 2006 Air Passenger Survey. The estimated mode choice percentages and vehicle occupancies are provided in **Table 4.1-5**.

Table 4.1-5

Existing (2008) Conditions Mode Share

	Upper Level[1]		Lower Level[2]	
Mode Split	**Mode Split**	**Vehicle Occupancy (no. of people)**	**Mode Split**	**Vehicle Occupancy (no. of people)**
Private Vehicles				
Departures Curb Only	36.2		23.9	
Departures Curb and Parking	8.1		0.0	
Central Parking Only	5.6		27.0	
Subtotal	**49.9**	**1.6**	**50.9**	**1.2**
Rental Cars (to Departures Curb)	0.7	2.3	1.1	1.2
Taxicabs	8.5	1.7	7.9	1.4
Limousines	1.9	2.1	3.6	1.4
FlyAway Bus/Long Distance Vans (Green)	5.5	16.0	3.8	8.0
Shared Ride Vans	6.9	5.0	6.4	4.0
Rental Car Shuttle	11.9	9.0	10.8	4.0
LAX Shuttle	2.7	7.3	1.7	4.0
Hotel/Courtesy Shuttle	5.5	10.3	3.4	4.0
Private Parking Shuttle	6.5	5.0	10.4	3.4
Total	**100.0%**		**100.0%**	

1 Represents the assumed mode split and vehicle occupancy during the departures peak period.
2 Represents the assumed mode split and vehicle occupancy during the arrivals peak period.

Source: Ricondo & Associates based on information obtained from the (1) AVI data and (2) Applied Management & Planning Group, 2006 Air Passenger Survey Final Report Los Angeles International Airport, December 2007.

The model assigns each vehicle an origin, a route through the CTA, and a destination. The model estimates vehicle volumes on each roadway link within the CTA to allow spot checks, which ensure that the appropriate volume and type of vehicles are assigned to each link. Once the model is calibrated to existing conditions for TBIT's departures and arrivals peak hours, future passenger activity levels can be input into the model to project traffic volumes and vehicle composition on each link of the CTA roadway network.

Vehicle Trip Generation and Distribution Model Calibration

The purpose of developing the vehicle trip generation and distribution model is to have a tool that accurately projects future vehicle volumes based on a future passenger volume. Before the model can be used to project future peak hour traffic volumes, it was necessary to calibrate the model to ensure that the results would reliably predict actual observed traffic conditions as represented by the balanced roadway volumes. This process involved comparing model output for the TBIT and overall airport departures peak hour and the TBIT and overall airport arrivals peak hours with roadway and curbside traffic data from the balanced roadway network. A review of the passenger data for August 2008 indicated that, for model validation purposes, the TBIT departures peak hour occurred between 11:00 a.m. and 12:00 p.m., and the TBIT arrivals peak hour occurred between 5:00 p.m. and 6:00 p.m.

Mode split data and drop off/parking information for the TBIT and overall airport departures peak hour, as well as the TBIT and overall airport arrivals peak hours, were developed using data from both the 2006 Air Passenger Survey and data collected as part of this analysis. Both models also included originating/terminating passenger splits by arrival mode based on the estimated percentages of vehicles entering/exiting the airport via the upper level and lower level roadways.

The CTA roadway links used to compare the model results to the balanced roadway volumes are as follows:

- Gateway links (model entrance and exit links)
- Parking facility entry links
- Entrance and exit volumes to both departures and arrivals levels
- Multiple locations around the CTA based on balanced CTA roadway volumes

The calibration process required a series of iterative adjustments to mode splits, passenger drop off versus direct to parking percentages, originating-terminating passenger splits, and passenger occupancies to further refine the model output relative to the actual counts and to improve the calibration. A comparison of the projected trips from the model compared with the balanced roadway network traffic volumes is provided in Appendix B.

4.1.3.7 Analysis of Existing Conditions

This section describes how the results from the vehicle trip generation and VISSIM models were used to characterize Existing (2008) traffic conditions for the CTA roadway system. Analysis of the on-airport roadway system can be summarized into three functional areas consisting of an evaluation of (a) TBIT curbside capacity, (b) intersection capacity of the key CTA intersections, and (c) roadway link capacity at key locations within the CTA.

TBIT Curbside Analysis

Airport curbside facilities serve as the primary destination for vehicular traffic accessing the CTA departures (upper) and arrivals (lower) level roadways. As such, the linear length of these curbside facilities to accommodate stopped vehicles and provide adequate room to maneuver into and out of a stopping position is a critical measure in assessing the capacity of the airport roadway system. The TBIT curbside analysis is a measure of vehicle demand at the curbside compared to available curbside frontage. Curbside frontage demand is a theoretical measurement of the peak accumulation of vehicles waiting at the curbside if they were aligned nose-to-tail in a single queue. For existing conditions, a "utilization" factor can be derived, which is the calculated ratio of curbside demand in linear feet divided by the existing curbside length. The utilization factor provides an indication of the amount of double and triple parking that would result for a given space demand, and the level of service associated with a given utilization rate recognizes that drivers do not park vehicles uniformly along the curbside.

The curbside utilization factor is an indicator of the amount of congestion at the curbside, as well as the resulting level of service provided. This study analyzed curbsides where curbside pick up and drop off activity is discouraged but occurs in multiple lanes (arrivals inner curbside) and curbsides which restrict vehicle activity to a single lane (commercial vehicle zones using the arrivals outer curbside). Multi-lane activity typically occurs along curbsides accommodating private vehicle passenger loading/unloading, while curbsides accommodating commercial vehicle passenger loading/unloading is frequently restricted to allowing passenger pick up and drop off only at the curbside sidewalk. Assumed utilization ranges for each type of curbside facility are different based on the number of functional curbside loading/unloading lanes. **Tables 4.1-6** and **4.1-7** provide the utilization ranges and levels of service for curbsides where passengers load/unload from multiple lanes and curbsides where passenger loading/unloading is restricted to a single lane. In the case of curbsides where multiple lane loading/unloading occurs, a very low utilization indicates that vehicles are easily accommodated along the inner curbside lane without the need to double park. This level of utilization would equate to an excellent level of service (e.g., LOS A). Conversely, very high utilization equates to double and triple parking along the entire curbside, restricting vehicle movements and resulting in a poor level of service (e.g., LOS E). The same is true for curbsides with single lane passenger loading/unloading where a very low utilization indicates vehicles can easily access and depart a curbside equating to an excellent level of service (e.g., LOS A). Curbsides with single lane loading/unloading are not considered to be operating at a poor level of service when all of their available curbside length is being used (100 percent utilization). This is because when a single lane curbside is 100 percent utilized, parked vehicles may still depart and access the curbside, and are not blocked by vehicles stopped in a second parking lane. For curbsides with single lane passenger loading/unloading, double parking or queuing along 30 percent of the adjacent travel lane constitutes a failing level of service (e.g., LOS F). Curbside level of service is a qualitative measure that describes traffic operating conditions along a curbside (e.g., delay, curbside utilization, congestion).

Table 4.1-6

Curbside Demand Levels of Service and Utilization Ranges for Curbsides with Multiple-Lane Passenger Loading/Unloading

Level of Service (LOS)	Utilization Range[1]	Equivalent Volume/ Capacity Ratio[2]	Description
A	0% - 90%	0 - 0.45	EXCELLENT: Drivers experience no interference from pedestrians or other motorists
B	91% - 110%	0.46 - 0.55	VERY GOOD: Relatively free flow conditions with limited double parking
C	111% - 130%	0.56 - 0.65	GOOD: Double parking near doors is common with some intermittent triple parking
D	131% - 170%	0.66 - 0.85	FAIR: Vehicle maneuverability restricted due to frequent double/triple parking
E	171% - 200%	0.86 - 1.0	POOR: Significant delays and queues; double/triple parking throughout curbside
F	> 200%	>1	FAILURE: Motorists unable to access/depart curbside; significant queuing along entry road

1 Utilization is the ratio of curbside space demand in linear feet divided by available curbside length.
2 The equivalent V/C ratio is calculated as the utilization for a given LOS range divided by the maximum utilization at capacity, or LOS E. The equivalent V/C ratio is calculated for purposes of providing a compatible threshold measure for determining potential project impacts in accordance with LADOT significance thresholds.

Source: Ricondo & Associates, Inc., based on information published by the Transportation Research Board and Federal Aviation Administration Advisory Circular 150/5360-13, Planning and Design Guidelines, January 19, 1994.

Table 4.1-7

Curbside Demand Levels of Service and Utilization Ranges for Curbsides with Single Lane Passenger Loading/Unloading

Level of Service (LOS)	Utilization Range[1]	Equivalent Volume/ Capacity Ratio[2]	Description
A	0% - 70%	0 - 0.54	EXCELLENT: Drivers experience no interference from pedestrians or other motorists
B	71% - 85%	0.55 - 0.65	VERY GOOD: Relatively free flow conditions with limited double parking
C	86% - 100%	0.66 - 0.77	GOOD: Double parking near doors is common with some intermittent triple parking
D	101% - 115%	0.78 - 0.88	FAIR: Vehicle maneuverability restricted due to frequent double/triple parking
E	116% - 130%	0.89 - 1.00	POOR: Significant delays and queues; double/triple parking throughout curbside
F	> 130%	>1	FAILURE: Motorists unable to access/depart curbside; significant queuing along entry road

1 Utilization is the ratio of curbside space demand in linear feet divided by available curbside length.
2 The equivalent V/C ratio is calculated as the utilization for a given LOS range divided by the maximum utilization at capacity, or LOS E. The equivalent V/C ratio is calculated for purposes of providing a compatible threshold measure for determining potential project impacts in accordance with LADOT significance thresholds.

Source: Ricondo & Associates, Inc., based on information published by the Transportation Research Board and Federal Aviation Administration Advisory Circular 150/5360-13, Planning and Design Guidelines, January 19, 1994.

For curbsides that permit either single or multi-lane passenger loading/unloading, LOS C is generally a desirable condition for peak period operations at major airports for most days of the year. LOS D conditions may be acceptable during peak seasonal periods.

The VISSIM model provides a simulation of the anticipated traffic volumes accessing the curbside and the effects of the interaction of vehicles stopping and maneuvering within the terminal area curbside pick up and drop off zones during the peak hour conditions analyzed. The model simulates the anticipated congestion and traffic operations that would be expected considering the effects of peaking around terminal building doorways, curbside check-in counters, traffic signal control occurring near the curbsides, and other physical features of the curbside.

Curbside operations were assessed to quantify the existing and future curbside levels of service. The assessment was based on a minute-by-minute count of the number of vehicles by mode that would be stopped at the curbside during the peak hour periods analyzed. For each count, the number of vehicles by mode were multiplied by the average length of the vehicles by vehicle type and then summed to provide an equivalent linear total on a minute-by-minute basis. The vehicle lengths used for the analysis include an allowance of space to account for normal separation of vehicles stopped at the curbside and parking inefficiencies observed at curbsides which will tend to provide a conservative assessment of total linear demand. The total linear demand was then divided by the available curbside length to provide a numerical calculation of the curbside utilization percentage. The curbside utilization percentage calculation presented in this analysis does not include the first 900 seconds (15 minutes) of simulation results. This is the seeding time which allows the model to reach an equilibrium condition before the analysis begins. The simulations were run three times and the results were averaged to provide an estimate of curbside utilization on a minute-by-minute basis. These calculated utilization percentages were then compared to the curbside LOS utilization ranges defined previously in this section to provide an assessment of curbside level of service per minute during the peak hours analyzed for the Existing (2008) condition, as well as for the future conditions that are described later in this section.

Table 4.1-8 summarizes the simulation results for the Existing (2008) conditions for the TBIT curbsides. **Figure 4.1-9** provides a detailed allocation of commercial vehicle parking locations along the arrivals level outer curbside. The TBIT departures level curbsides were analyzed using the departures level peak hour volumes, while the TBIT arrivals level curbsides were analyzed using the arrivals level peak hour volumes. Because the TBIT departures level curbside does not provide dedicated curbside for specific vehicle types, the LOS calculation for the overall departures curbside is presented. The TBIT arrivals level curbside, however, is comprised of dedicated zones serving specific vehicle modes. Therefore, the results are reported both on an overall average basis and for specific commercial vehicle zones at TBIT to provide a more thorough assessment of the operations along this curbside. This curbside analysis is conservative for the following reasons:

1. Commercial vehicle shuttle buses, (i.e., hotel/motel, rental car, parking, inter-terminal circulation bus, shared ride vans) were assumed to stop at each terminal on both the departures and arrivals levels. In particular, this is a conservative approach as commercial vehicles typically will not stop at a given terminal on the departure level if no passengers are destined for that terminal.
2. VISSIM parking logic used to simulate vehicle behavior at the curbside is conservative as the model may force drivers to increase the time they wait to access a specific curbside space. In reality, drivers may chose to drop off or pick up their party further down the curbside or in a lane farther from the curbside but adjacent to their desired terminal access location.
3. The curbside utilization calculation provides a conservative assessment of linear demand given that the assumed vehicle length includes a large proportion of distance that represents gaps between vehicles and non-uniform parking at the curbside. For example, passenger cars are typically on the order of 16.5 feet in length, which is the length used to simulate passenger cars. An additional 1.5 feet is assumed in the VISSIM model to represent the space between the adjacent vehicle in front or behind the parking vehicle which results in a total of 19.5 feet to complete the parking movement. However, to provide an additional level of conservatism and to

address additional operational inefficiencies that occur in the curbside environment, the assumed equivalent vehicle length used to calculate the curbside utilization factor and equivalent volume/capacity ratio is based on an assumed 25 feet per vehicle.

Table 4.1-8

Existing (2008) TBIT and Airport Peak Period Curbside Analysis Results

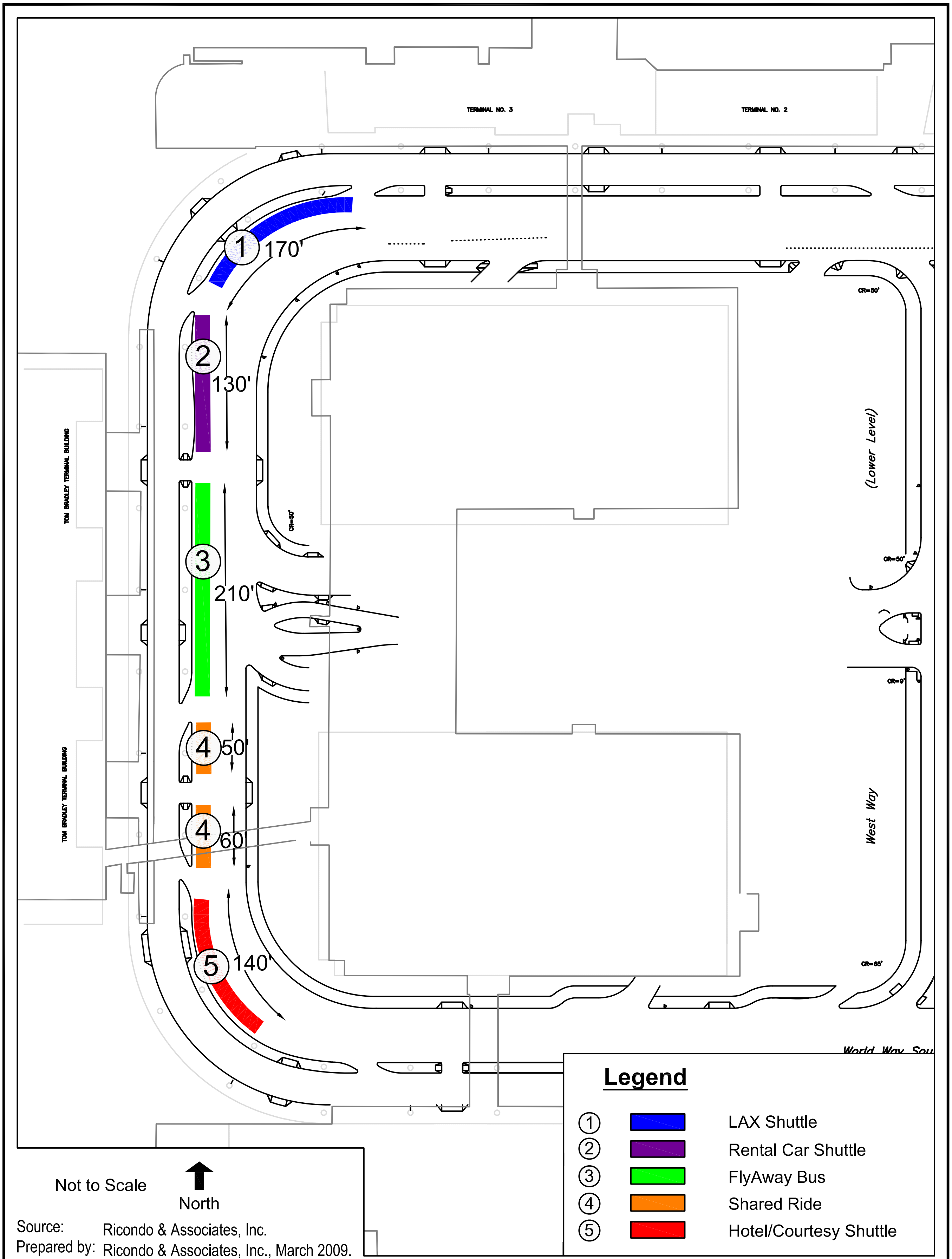
Roadway Level	Peak Period	Curbside	Zone[1]	Utilization Rate	Equivalent Volume to Capacity	Level of Service
Departures	TBIT	-	-	161%	0.804	D
	Overall Airport	-	-	161%	0.804	D
Arrivals	TBIT	Inner	-	141%	0.707	D
	TBIT	Outer	Average (all modes)	80%	0.613	B
			LAX Shuttle (Z-1)	39%	0.298	A
			Rental Car Shuttle (Z-2)	82%	0.627	B
			FlyAway Bus (Z-3)	29%	0.222	A
			Shared Ride Van (Z-4)	48%	0.367	A
			Hotel/Parking Shuttle (Z-5)	176%	1.35	F
	Overall Airport	Inner	-	130%	0.648	C
	Overall Airport	Outer	Average (all modes)	72%	0.554	B
			LAX Shuttle (Z-1)	28%	0.212	A
			Rental Car Shuttle (Z-2)	60%	0.461	A
			FlyAway Bus (Z-3)	30%	0.232	A
			Shared Ride Van (Z-4)	51%	0.395	A
			Hotel/Parking Shuttle (Z-5)	174%	1.34	F

1 Parking Zones defined in Figure 4.1-9.

Source: Ricondo & Associates, Inc., 2009.

Figure 4.1-10 provides the detailed minute-by-minute assessment of the existing TBIT departures level curbside LOS during the Existing (2008) TBIT peak departures period (11:00 to 12:00). This peak period also generally corresponded with the overall airport peak departures period. Based on the analysis shown in **Figure 4.1-10**, it is estimated that the curbside operated at an average LOS D; however, surges in curbside activity during the peak hour generated two brief periods during which congestion along the curbside reached LOS F. It should also be noted that the two traffic signals at the pedestrian crosswalks along the TBIT departures curb affect curbside operations, especially during busier periods. The first signal generally increases congestion along the section of curb prior to the first traffic signal as vehicles entering or departing this section of curbside are impeded from doing so by vehicles queued at the traffic signal. The next section of the TBIT curbside (between the traffic signals) tends to perform at a slightly better overall level of service as a result of the first signal metering traffic to this section of the curbside.

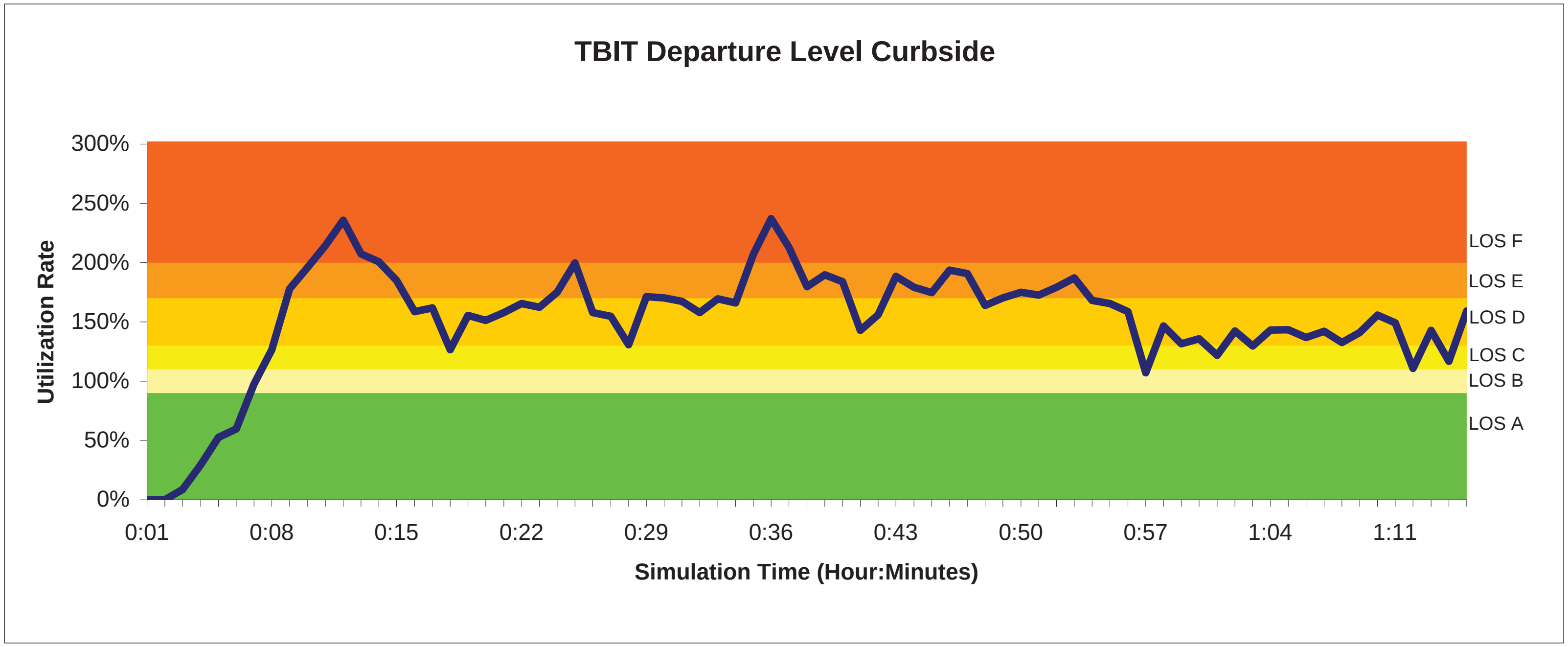
Figure 4.1-11 depicts the level of service conditions on the TBIT arrivals level inner and outer curbsides during the Existing (2008) TBIT arrivals peak hour (17:00 to 18:00). It is estimated that the arrivals level inner curbside operated at an average LOS of D during the TBIT arrivals peak hour, with two brief periods where the curbside level of service reached LOS F conditions. The arrivals level outer curbside during the TBIT peak operated mostly at an average LOS of B, with two very short periods when curbside operations reached LOS E. Refer to **Table 4.1-8** for detailed level of service estimates summarized for individual curbside zones serving specific vehicle modes.



Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc., March 2009.

TBIT Arrivals Level Outer Curbside Allocation

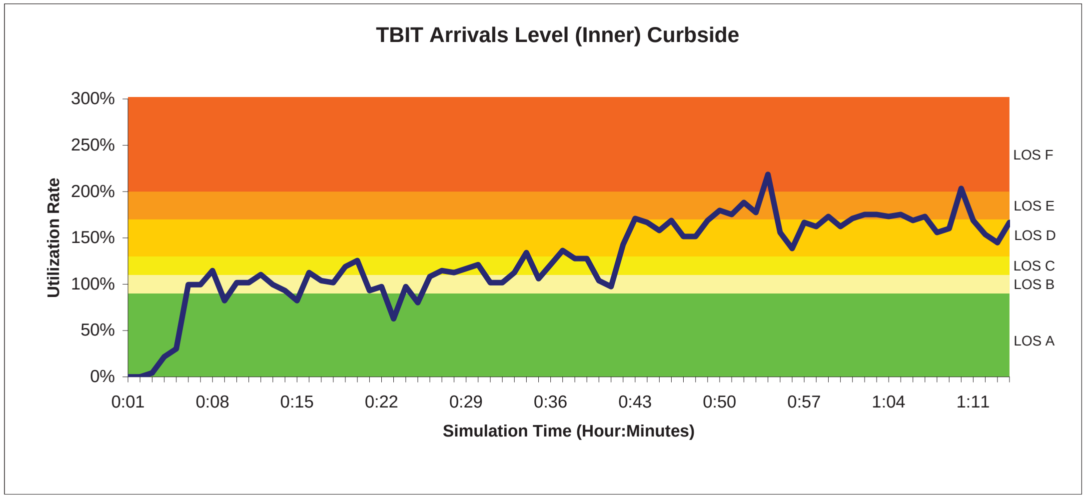
Figure 4.1-9

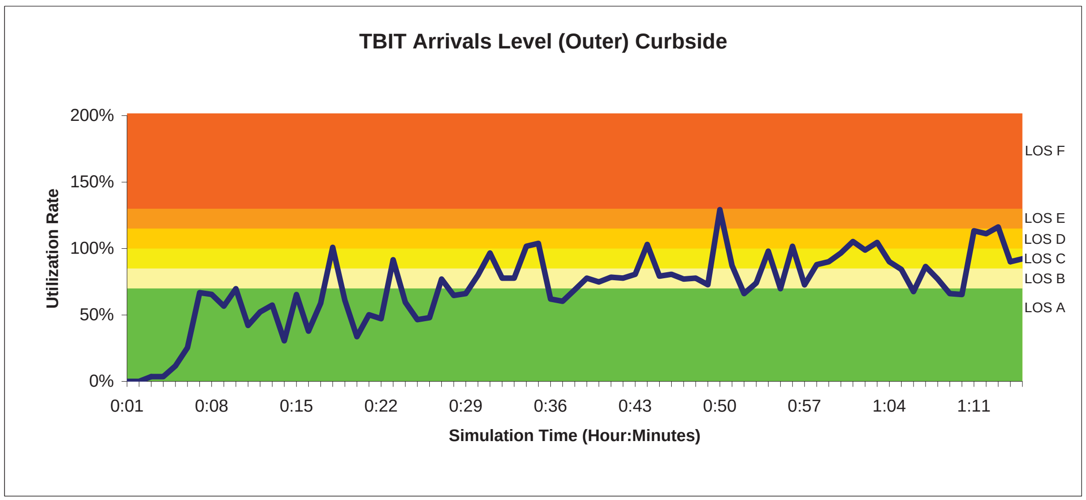


Note: Represents activity during the TBIT departures peak hour from 11:00 to 12:00

Source: Ricondo & Associates, Inc., February 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

LAX Bradley West Project Draft EIR	TBIT Departures Level Curbside Level of Service – Existing (2008), TBIT Departures Peak Hour	Figure 4.1-10





Note: Represents activity during the TBIT arrivals peak period from 17:00 to 18:00

Source: Ricondo & Associates, Inc., February 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

LAX Bradley West Project Draft EIR	TBIT Arrivals Level Curbside Level of Service – Existing (2008), TBIT Arrivals Peak Hour	Figure 4.1-11

Figure 4.1-12 depicts the level of service conditions experienced on the TBIT arrivals level inner and outer curbsides during the overall airport peak arrivals hour (21:00 to 22:00). It is estimated that the arrivals operated at an average LOS of C during that period, although there were several times during the peak hour when curbside operations reach LOS D. The outer curbside operated at an average LOS of B, although there are several brief periods during the hour when curbside operations reached LOS D or E conditions. Neither the inner or outer curbside reached an average LOS F condition throughout the peak hour. However, as shown in **Table 4.1-8**, it was estimated that the curbside zone accommodating hotel and parking shuttle buses did experience congestion characterized as LOS F.

CTA Intersection Analysis

The Bradley West Project would not have an effect on the traffic volumes that directly access and stop at the other CTA terminal curbsides; thus, a detailed assessment of the linear capacity of these other terminal curbsides was not conducted. However, because TBIT-related traffic would bypass these other terminals, the key CTA roadway intersections were assessed to measure the effect that changes in the TBIT component of these intersection volumes could have on intersection traffic operations.

This section provides an assessment of the CTA intersection operations based on the vehicle trip generation and distribution model outputs for the Existing (2008) conditions. As indicated in Section 4.1.2.1 above, the intersections were analyzed using TRAFFIX,[42] a commercially available traffic analysis program designed for developing traffic forecasts and analyzing intersection and roadway capacities. The model uses widely accepted traffic engineering methodologies and procedures, including the Transportation Research Board's Circular 212 CMA planning method,[43] which is the required intersection analysis methodology for traffic impact studies conducted for the City of Los Angeles.

For the purpose of this EIR, the balanced CTA roadway traffic volumes developed from the intersection turning movements collected in August 2008, which represent the most current comprehensive set of traffic counts collected by LAWA, were used as a basis for preparing the traffic analysis and assessing potential project-related traffic impacts, in accordance with CEQA requirements. In addition, a visual review of the simulation animation was conducted to identify significant curbside congestion and queuing within the CTA roadway network that may not have been identified as part of the detailed intersection operations analysis described previously.

Intersection level of service is a qualitative measure that describes traffic operating conditions at an intersection (e.g., delay, queue lengths, congestion). Intersection levels of service range from A (i.e., excellent conditions with little or no vehicle delay) to F (i.e., excessive vehicle delays and queue lengths). Levels of service definitions for the CMA methodology are presented in **Table 4.1-9**.

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42 Dowling Associates, TRAFFIX Version 7.7. Based on information provided by Dowling Associates on May 2, 2008, over 425 site TRAFFIX licenses are owned by public and private entities, including 44 cities, 5 countries, and Caltrans within the State of California.

43 Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

Table 4.1-9

Level of Service Thresholds and Definitions for Signalized Intersections

Level of Service (LOS)	Volume/Capacity Ratio Threshold	Definition
A	0 - 0.6	EXCELLENT: No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.7	VERY GOOD: An occasional approach phase is fully used; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.8	GOOD: Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.9	FAIR: Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.0	POOR: Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	>1.0	FAILURE: Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

The analysis evaluated the intersection's volume to capacity and level of service conditions using the CTA roadway traffic volumes for the Existing (2008) conditions, as provided in **Table 4.1-10** for the TBIT and overall airport peak departures and arrivals hours.

CTA Roadway Analysis

In addition to the intersection analysis described above, an analysis of the capacity of the airport roadway system was conducted to provide a basis for measuring the effect that changes in the TBIT component of the airport roadway traffic volumes would have on the CTA roadway system. In order to analyze the future operating conditions along the airport roadway system, the calculated volume using each roadway link is compared to the capacity of the roadway at that particular location. The capacities of the roadway links are determined based on the characteristics of the roadway link and the number of travel lanes provided. Based on the Highway Capacity Manual, Special Report 209,[44] the theoretical capacity of a roadway is the maximum hourly flow rate per lane under "ideal" conditions comprised of (a) uninterrupted flow, (b) all passenger cars comprised of drivers that are frequent users of the roadway, (c) 12-foot minimum lane width, (d) relatively flat grades with minor curvature, and (e) optimal lateral clearance between the edge of lane and from nearby obstacles and walls.

For airport roadways, however, capacities are significantly lower as many of the "ideal" conditions listed above cannot be attained. For example, drivers are often unfamiliar with the roadway system. Also, increased interaction and impedances between vehicles usually results in drivers slowing to change lanes or maneuver in response to signage describing multiple on-airport destinations occurring over relatively short distances. Because airport curbsides accommodate relatively intense activity occurring over a relatively compact area, curbside roadway throughput capacities are much lower than provided on non-airport roadway systems. The stopping lane adjacent to the curbside is assumed to have no throughput capacity. The through lane capacities are assumed to range from 300 vehicles per hour in the adjacent maneuvering lane up to 850 vehicles per hour in the outermost lanes.[45]

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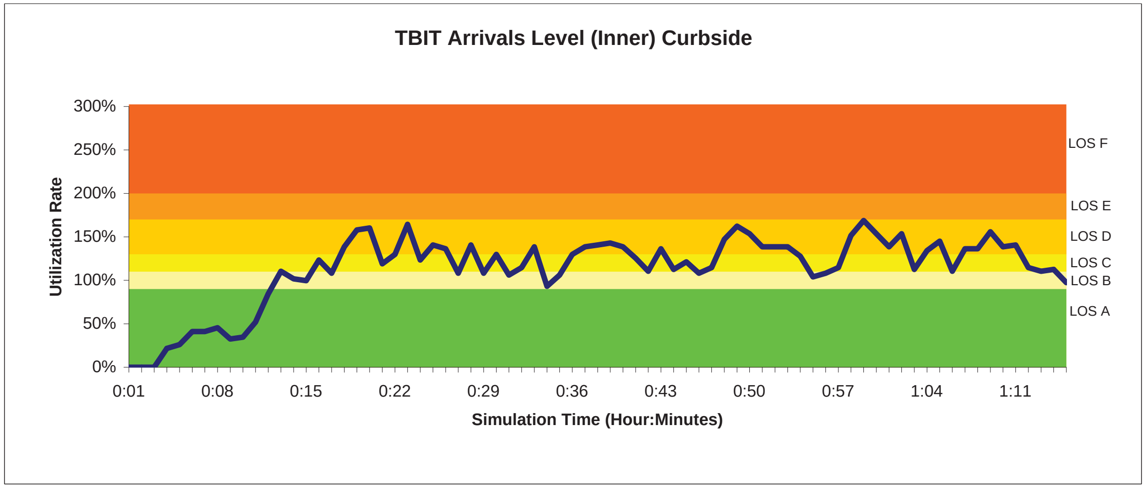
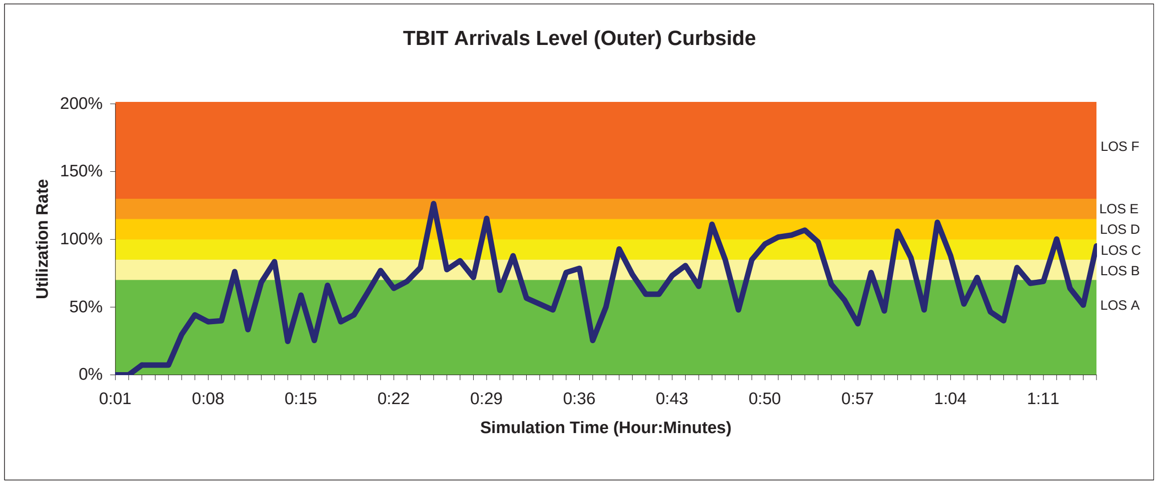
44 Transportation Research Board, Highway Capacity Manual, Special Report 209, 2000.

45 Airport curbside roadway throughput capacity assumptions were obtained from the LAX Master Plan Final EIR, Table F4.3.1-1, and Federal Aviation Administration Advisory Circular 150/5360-13, Planning and Design Guidelines, January 19, 1994.





Note: Represents activity during the overall airport peak arrivals period from 21:00 to 22:00

Source: Ricondo & Associates, Inc., February 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

TBIT Arrivals Level Curbside Level of Service – Existing (2008), Overall Airport Arrivals Peak Hour

Figure
4.1-12

Table 4.1-10

CTA Signalized Intersection Turning Movement Volumes and Level of Service Analysis - Existing (2008) Conditions

		Existing (2008)													
		Northbound			Southbound			Eastbound			Westbound				
Intersection	Peak Hour[1]	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	V/C[2]	LOS[3]
1. World Way North and Sky Way (Upper Level)	TBIT/Overall Departures						755					1841		0.518	A
2. World Way South and West Way (Upper Level)	TBIT/Overall Departures				389				1646					0.555	A
3. World Way South and East Way (Upper Level)	TBIT/Overall Departures				264			134	1901					0.203	A
4. World Way North and Sky Way (Lower Level)	TBIT Arrivals	300	197				506					1898	3	0.473	A
	Overall Arrivals	369	203				663					3000	3	0.672	B
5. East Way and World Way South (Lower Level)	TBIT Arrivals				160			150	1435					0.173	A
	Overall Arrivals				605			177	2005					0.371	A
6. Center Way and ramp from upper level roadway near Administration Building (Lower Level)	TBIT Arrivals				221				1219					0.384	A
	Overall Arrivals				337				1990					0.617	B
7. Center Way and East Way (Lower Level)	TBIT Arrivals		150			160	10	25	878					0.080	A
	Overall Arrivals		177			605		80	1358					0.278	A
8. Center Way and West Way (Lower Level)	TBIT Arrivals		55			260	70	25	591					0.207	A
	Overall Arrivals		67			549	116		953					0.573	A
9. Center Way and World Way South (Lower Level)	TBIT Arrivals	444	842	585				49	821	570				0.652	B
	Overall Arrivals	671	1157	848				75	1299	953				0.943	E

1 The overall airport peak hour and TBIT peak hour for the departures level occurred in the same time period.
2 Volume to capacity ratio.
3 Level of Service range: A (excellent) to F (failure).

Source: Ricondo & Associates, Inc., using TRAFFIX, March 2009.

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To assess the ability of the airport roadway system to accommodate future traffic volumes, the Level of Service (LOS) of each roadway section was determined. **Table 4.1-11** shows the ratio of roadway volume to capacity (V/C) thresholds used to determine a roadway link's LOS. The LOS describes the operating performance of a roadway, measured quantitatively and reported on a scale of "A" to "F." LOS A represents the optimal operating condition, characterized by uninterrupted free flow operations. At the other end of the scale, LOS F represents the worst operating condition, characterized by severe roadway congestion and delay. LOS C is generally a desirable operating condition for design of new facilities; however, some larger airports may accept LOS D conditions during peak conditions.

Table 4.1-11

Roadway Level of Service and Volume to Capacity (V/C) Ratio Ranges

LOS	V/C Ratio	Conditions	Description
A	less than 0.60	EXCELLENT	Traffic is free flow, with low volumes and high speeds
B	0.61 - 0.70	VERY GOOD	Drivers have reasonable freedom to select their speed and lane of operation
C	0.71 - 0.80	GOOD	Drivers are becoming restricted in their ability to select their speed or to change lanes
D	0.81 - 0.90	FAIR	Drivers have little freedom to maneuver and driving comfort levels are low
E	0.91 - 1.00	POOR	Roadway is operating at or near capacity
F	greater than 1.00	FAILURE	Forced flow operation where excessive roadway queuing develops

Source: Transportation Research Board, Highway Capacity Manual 2000, 2000.

The level of service estimates for key CTA roadway links during the Existing (2008) peak periods are summarized in **Table 4.1-12**. As shown in **Table 4.1-12**, the upper level roadway immediately in front of Terminal 1 during both the TBIT/overall airport peak hour was estimated to operate at LOS F at Terminal 1, LOS C at TBIT and LOS D at Terminal 7/8. The lower level, during the overall airport peak hour, was estimated to operate at LOS F at Terminal 1 and at TBIT, and LOS C at Terminal 7/8.

Table 4.1-12

CTA Roadway Link Analysis - Existing (2008) Conditions

		Existing (2008) [A]			
Level/Link Location	**Peak Period**	**Capacity**	**Volume**	**V/C**	**LOS**
Departures					
World Way North At Terminal 1 (Entry)	TBIT	2,470	2,596	1.051	F
World Way North At Terminal 1 (Entry)	Overall Airport	2,470	2,596	1.051	F
World Way South at TBIT	TBIT	2,470	1,886	0.764	C
World Way South at TBIT	Overall Airport	2,470	1,886	0.764	C
World Way South at Terminal 7/8 (Exit)	TBIT	2,470	2,165	0.877	D
World Way South at Terminal 7/8 (Exit)	Overall Airport	2,470	2,165	0.877	D
Arrivals					
World Way North At Terminal 1 (Entry)	TBIT	3,320	2,664	0.802	C
World Way North At Terminal 1 (Entry)	Overall Airport	3,320	3,962	1.193	F
World Way South at TBIT	TBIT	2,470	2,114	0.856	D
World Way South at TBIT	Overall Airport	2,470	2,634	1.066	F
World Way South at Terminal 7/8 (Exit)	TBIT	3,320	1,871	0.564	A
World Way South at Terminal 7/8 (Exit)	Overall Airport	3,320	2,621	0.789	C

Source: Ricondo & Associates, Inc., 2009.

4.1.4 Project Traffic

As described previously in Section 4.1.2, trip generation for the on-airport roadway system is inherently different than trip generation for most off-airport developments where the development of new facilities directly equates to the generation of new vehicle trips. In those cases, the traffic volumes generated by the "project" serve as inputs that are directly added to the external roadway network to estimate future traffic volumes and assess impacts.

For purposes of estimating project traffic associated with the Bradley West Project, it is necessary to calculate the Future (2013) With Project volumes accessing the CTA roadways. This Future (2013) With Project condition is generated from a future airline schedule which produces a "cumulative" estimate that includes traffic volumes generated by the other CTA terminals.

4.1.5 Future (2013) Traffic Conditions

This section describes the methodology used to define and analyze future traffic conditions.

4.1.5.1 Determination of Analysis Peak Hours

To determine the peak hours for the 2013 With and Without Project scenarios, the 2013 design day flight schedules for LAX were developed. The 2013 LAX planning forecasts were converted to peak month average day (PMAD) levels to determine activity that could be reasonably expected on an average day in the busiest month of the year at the airport, such as a Friday in August. Growth factors were developed from year 2008 data required to reach the forecast demand levels. These growth factors were applied to passenger levels to determine changes in aircraft type or number of aircraft operations that would be required to meet the 2013 demand between the airport and the markets served from the airport.

Subsequent to the development of the annual passenger forecasts, several major airlines announced significant schedule reductions for fall 2008 and winter 2009, which would not have been captured in the August 2008 *Official Airline Guide* (OAG) data. To develop a base schedule for 2013 that would account for these reductions, the initial base schedule was compared with the summer 2009 published schedules.[46] The base schedule was then adjusted to reflect the markets and number of flights added or cancelled by the airlines. Forecast growth factors were then applied to adjust the base schedule at the individual market level. The resulting growth in numbers of passengers was converted into a target number of seats required and larger aircraft or new flights were added to each market where load factors exceeded target limits. Finally, domestic originating and terminating passenger percentages were calculated based on data from the third quarter 2007. International originating and terminating passenger percentages were derived from calculations based on fiscal year (FY) 2007 passenger statistics. It is anticipated that these assumptions would be valid for 2008 given that the ratio of originating/terminating passengers to connecting passengers does not typically change substantially from year to year.

Two 2013 design day flight schedules were prepared based on different gate availability assumptions: 2013 Without Project (Existing (2008) terminal conditions), and 2013 With Project (assuming completion of the Bradley West Project). Where FAA Airplane Design Group (ADG) VI aircraft could not be accommodated at terminal contact gates under the 2013 Without Project scenario, the flight schedule was revised to accommodate as many passengers as possible on ADG V aircraft.

Figure 4.1-13 depicts the rolling hourly terminating passenger flows at the TBIT curbside for the 2013 With Project and 2013 Without Project conditions. The Existing (2008) volumes are also shown for reference. As shown, the 2013 With Project condition would produce a pronounced peak hour from 13:30 to 14:30. The peak is higher and slightly in advance of the peak that would occur under the 2013 Without Project condition. It is likely that the peak is a result of the more rapid processing capability of the TBIT facility that allows passengers to reach the curbside at a faster rate and at an earlier time than would occur had the project not been constructed.

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[46] Official Airline Guide Database for June 17, 2009, Available: www.oag.com, accessed: August 11, 2008.

Figure 4.1-14 depicts the rolling hourly terminating passenger flows for total passengers comprised of TBIT passengers and passengers arriving from the other terminal facilities. The With Project peak hour volume is also higher than the Without Project condition.

Figure 4.1-15 depicts the rolling hourly departing passenger flows at the TBIT curbside during the 2013 With and Without Project conditions. As shown, the curves are very similar, which is expected given that the implementation of the project (which is limited to the improvement of arrivals facilities and processes) would not be anticipated to affect the time that a person would arrive at the airport to board a flight. **Figure 4.1-16** depicts the 2013 departures profiles for total passenger flows, which are also very similar under the With and Without Project conditions.

Table 4.1-13 summarizes the respective peak hour passenger volumes from the information depicted in **Figures 4.1-13** through **4.1-16**. In the cases where the peak TBIT and peak overall airport passenger activities occur during different time periods, it was found that these two periods would occur within a maximum of 40-minutes of each and the difference in total passenger volumes would be less than 3.5 percent. Since the difference in passenger volumes was determined to be minimal, the peak TBIT period (when TBIT volumes were higher) was used in the analysis to represent roadway conditions during both the TBIT peak hour and the overall airport peak hour.

Table 4.1-13

Summary of Originating and Terminating Passenger Activity During Traffic Analysis Periods

	TBIT Peak Hour				Overall Airport Peak Hour[1]			
Activity	**Peak Hour**	**TBIT**	**Other**	**Total**	**Peak Hour**	**TBIT**	**Other**	**Total**
Existing (2008)								
Departures	11:00 - 12:00	1,341	4,595	5,936	*11:10 - 12:10*	*1,311*	*4,666*	*5,976*
Arrivals	17:00 - 18:00	1,487	2,606	4,093	21:00-22:00	1,213	5,248	6,461
2013 With Project								
Departures	11:50 - 12:50	2,108	4,038	6,146	*11:20-12:20*	*1,925*	*4,430*	*6,355*
Arrivals	13:30 - 14:30	2,723	4,138	6,861	13:30-14:30	2,723	4,138	6,861
2013 Without Project								
Departures	11:50 - 12:50	2,045	4,038	6,083	*11:20-12:20*	*1,871*	*4,430*	*6,301*
Arrivals	13:40 - 14:40	2,223	4,070	6,293	*13:00-14:00*	*1,846*	*4,612*	*6,458*

1 Overall airport peak hour volumes in italics were not simulated given that the TBIT volumes were greater during the TBIT peak hour and the total volumes during the overall peak hour were not materially different than during the TBIT peak hour (i.e., volumes were within 3.5% of the total volume during the TBIT peak hour).

Source: Ricondo & Associates, Inc., 2009.

Figure 4.1-17 provides a graphic representation of the peak hour passenger volumes that comprise the various Existing (2008) conditions as well as the 2013 With and Without Project conditions described above. The bar chart is intended to illustrate the relative differences in magnitude between the passenger volumes that are used to generate future roadway traffic volumes.

4.1.5.2 Determination of Future (2013) Traffic Volumes

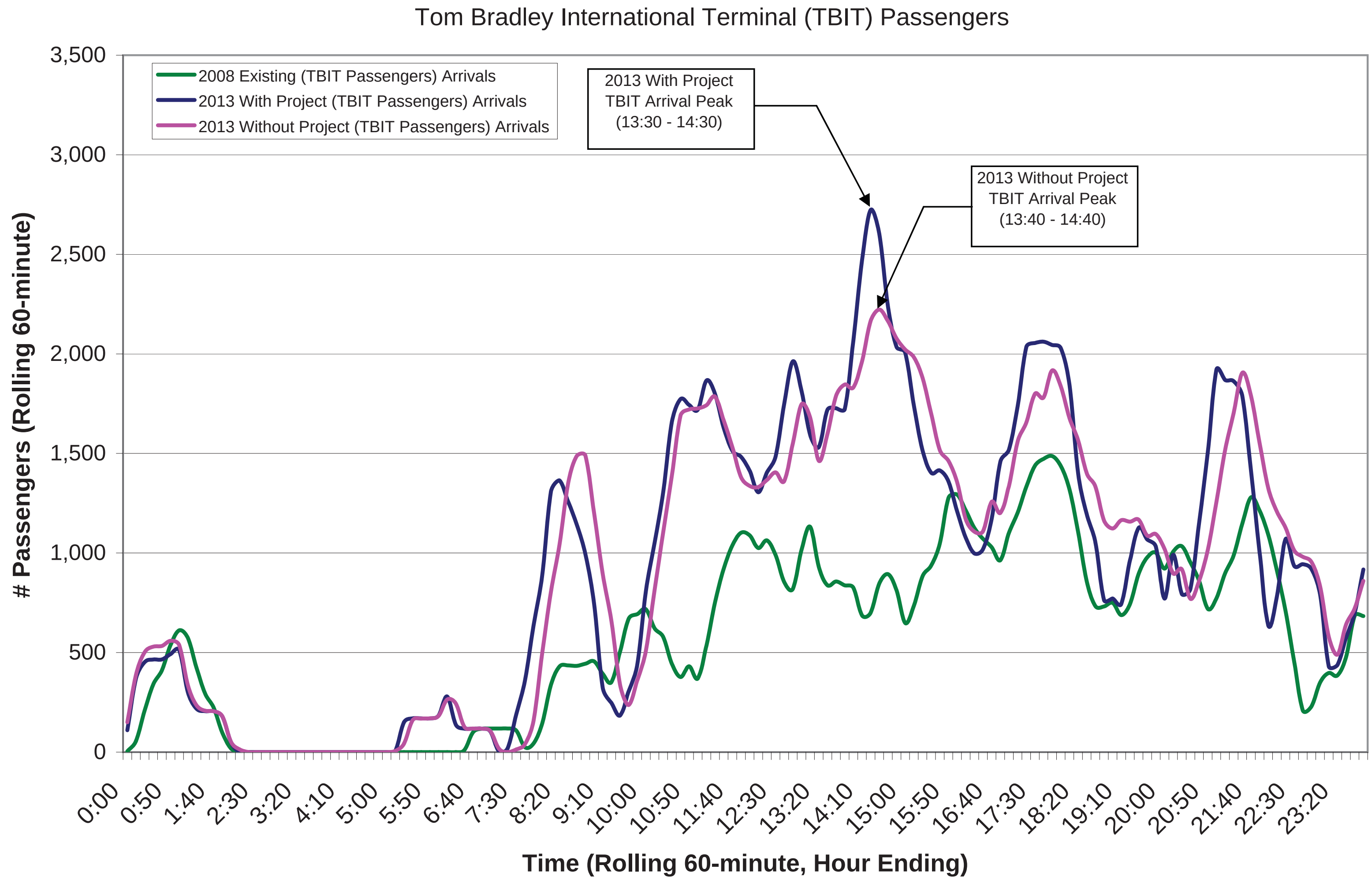
Using the calibrated roadway traffic models for the departures and arrivals peak hours developed for the Existing (2008) condition, estimated traffic volumes were generated for the two future conditions: 2013 With Project and 2013 Without Project using the peak hour passenger volumes identified in Section 4.1.5.1 above.

The projected originating and terminating passenger volumes derived from the airline passenger schedules were input into the model for the 2013 With and Without Project conditions to generate future roadway volumes during the TBIT and overall airport departures and arrivals peak hours. Generating future vehicle volumes using passenger schedules accounts only for passenger-related vehicle trips. Although passenger-related trips account for the overwhelming majority of vehicle trips on the CTA roadway network, other trips also occur during peak periods. These "other" trips include employee vehicles, public safety vehicles, and other not specified vehicle categories that are not directly attributed to airline passenger activity. These non-airline passenger trips, which are estimated to comprise a minor component of the overall CTA traffic activity (approximately 1.4 percent on the arrivals level and 2.5 percent on the departures level of the peak hour CTA traffic volumes), were accounted for and included as part of the calibrated roadway traffic model for both the TBIT and overall airport departures and arrivals peak hours. As traffic associated with these non-airline passenger components would not be expected to increase at the same rate as passenger trips, it was assumed that these "other" vehicle trips would remain constant through 2013. The "other" vehicle trips generated in the models were assigned unique travel routes through the terminal area access and circulation roadways, similar to the process used for passenger-related vehicle trips.

Estimated traffic volumes for each CTA roadway link for both the TBIT and overall airport departures and arrivals peak hours were generated for the 2013 With and Without Project conditions and are included in Appendix B of this EIR. It should be noted that, in addition to using the future conditions passenger volumes in the roadway models, the terminal and parking distributions were also updated in the model to reflect the new passenger distributions based on the future 2013 With and Without Project passenger schedules.

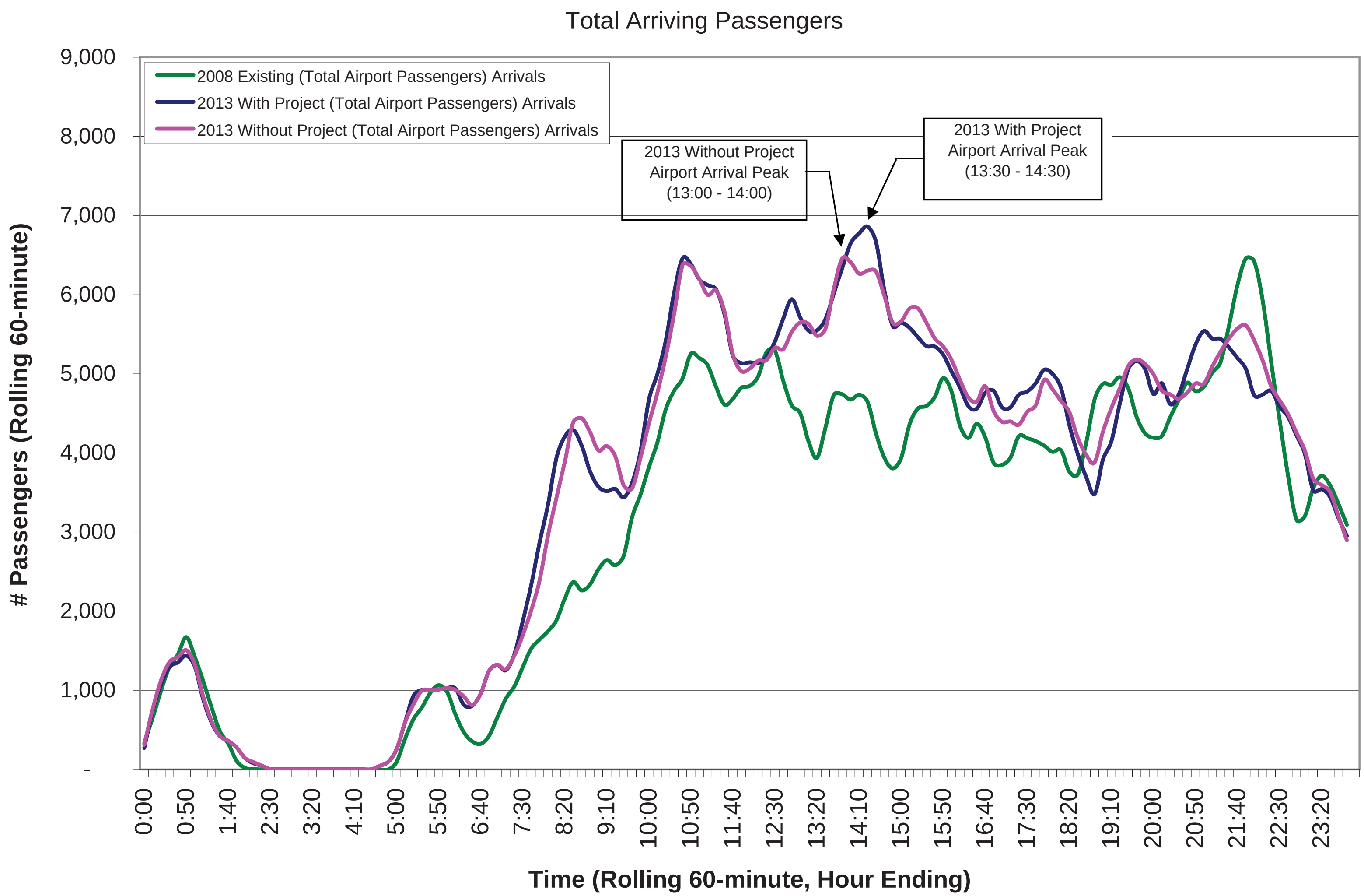
4.1.5.3 Determination of Future (2013) Traffic Impacts

Similar to the Existing (2008) condition, the projected CTA roadway traffic volumes were used as inputs to the 2013 With and Without Project VISSIM model. This section describes how the results from the vehicle trip generation and VISSIM models were used to assess traffic conditions at the TBIT curbsides and at key CTA intersections and roadways for the 2013 With Project and Without Project conditions.



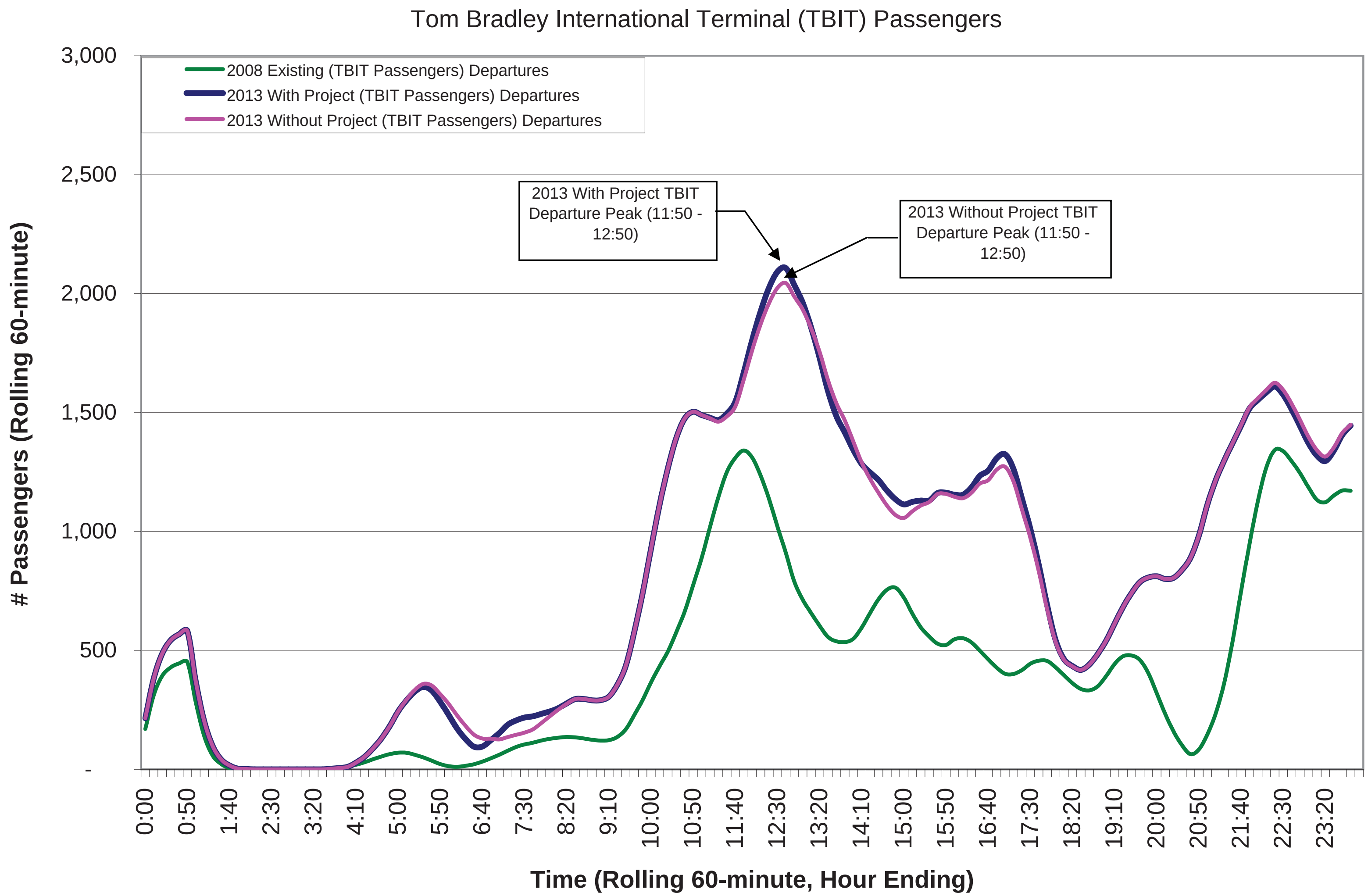
Sources: Jacobs Consultancy (Terminal Simulation); Ricondo & Associates, Inc., February 2009 (Passenger Schedules).
Prepared by: Ricondo & Associates, Inc., March 2009.

LAX Bradley West Project Draft EIR	TBIT Terminating Passenger Flow at Curbside	Figure 4.1-13

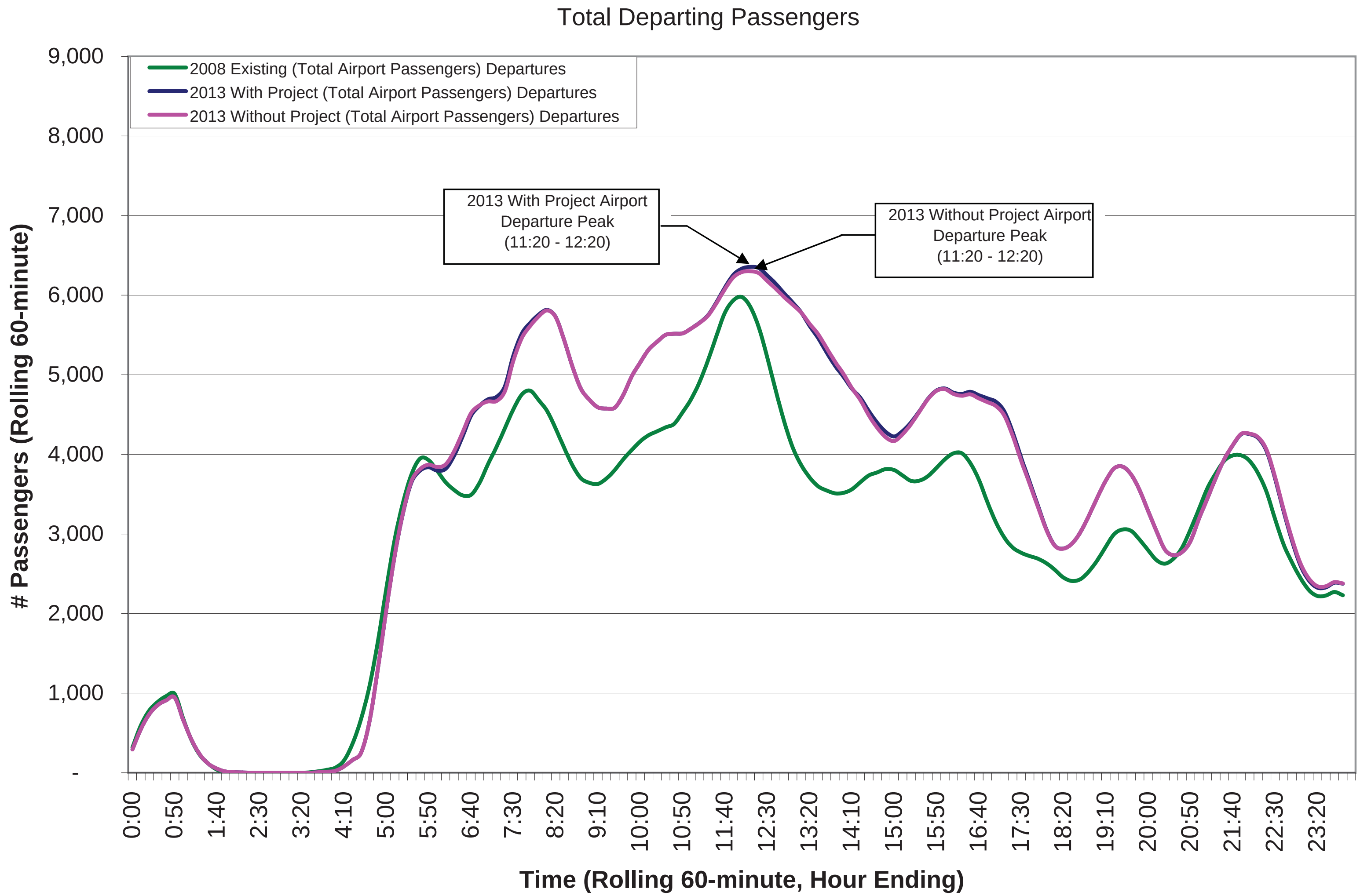


Sources: Jacobs Consultancy (TBIT Simulation); Ricondo & Associates, Inc., February 2009 (Passenger Schedules).
Prepared by: Ricondo & Associates, Inc., March 2009.

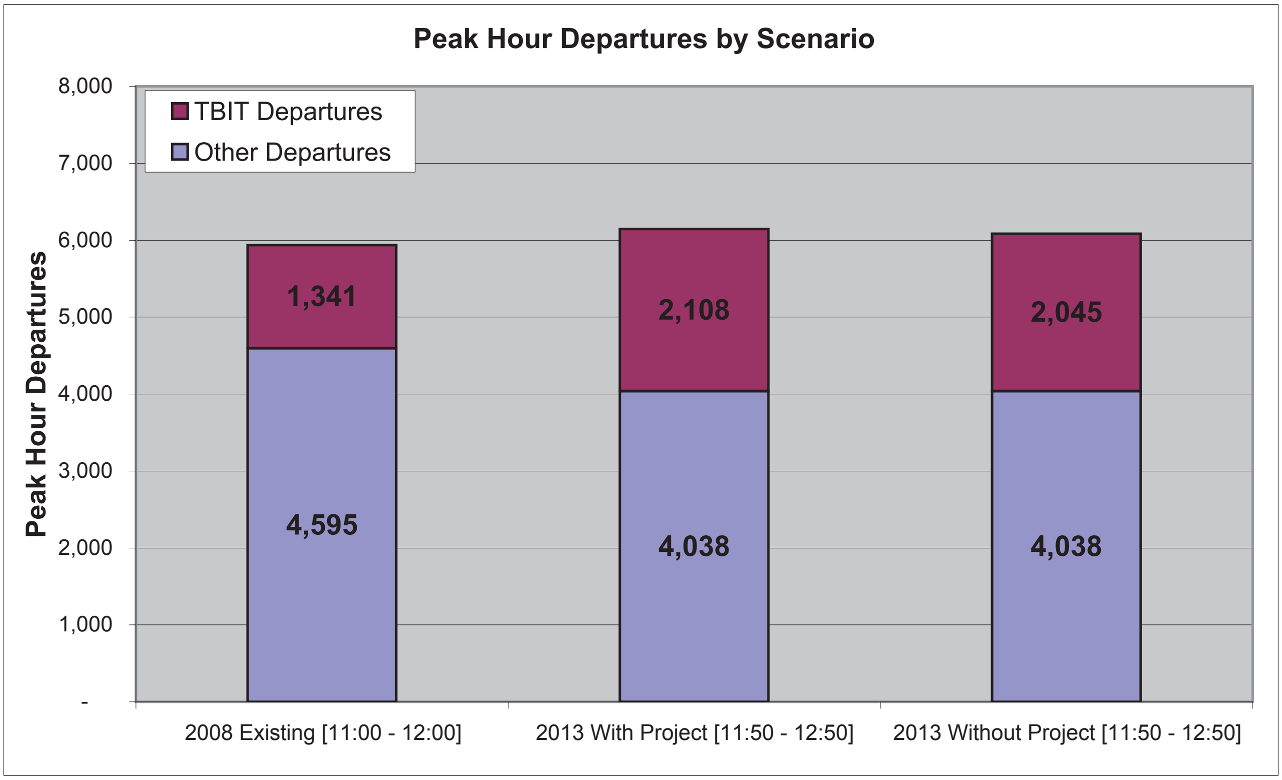
LAX Bradley West Project Draft EIR	**Total Airport Terminating Passenger Flow at Curbside**	Figure **4.1-14**

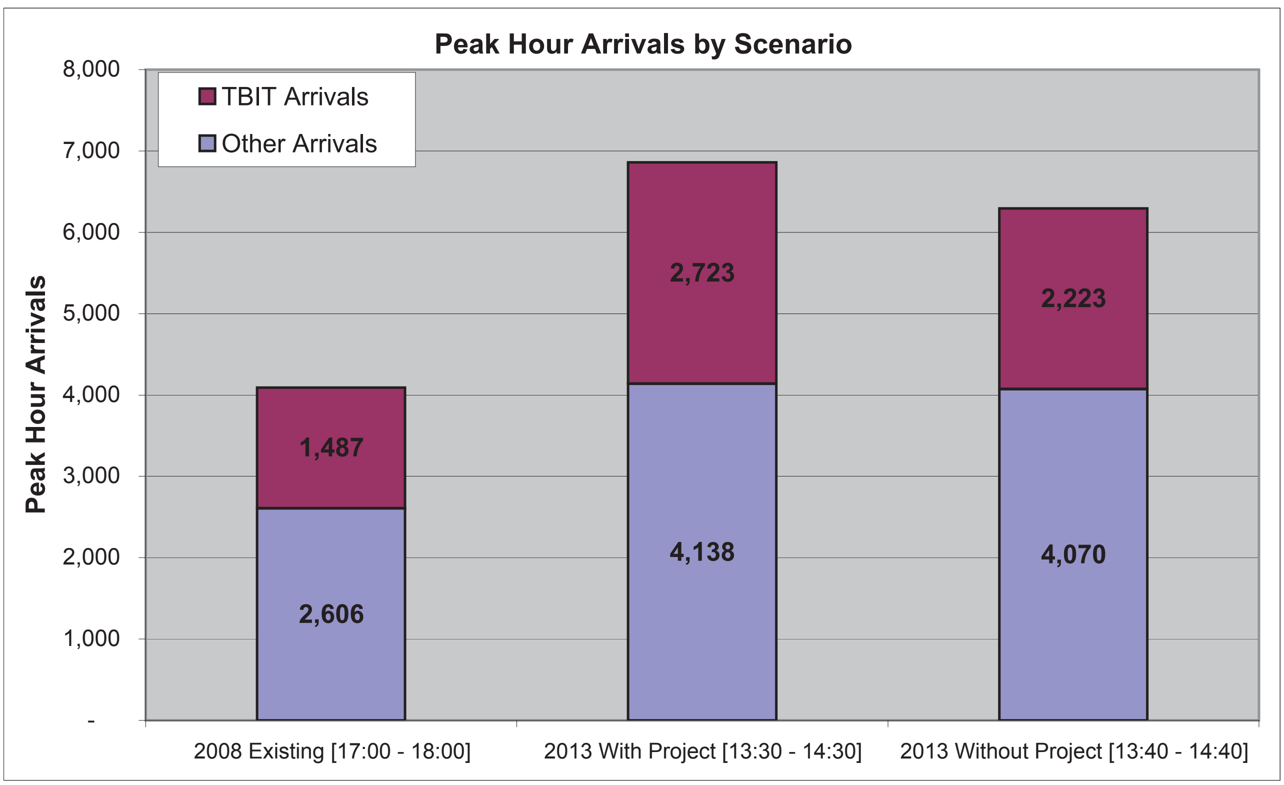


Sources: Jacobs Consultancy (Terminal Simulation); Ricondo & Associates, Inc., February 2009 (Passenger Schedules).
Prepared by: Ricondo & Associates, Inc., March 2009.



Source: Ricondo & Associates, Inc., February 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.





Source: Ricondo & Associates, Inc., March 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

Departure and Arrival Peak Hour Volumes by Scenario

Figure
4.1-17

VISSIM Curbside Analysis

As discussed in Section 4.1.3.7, the VISSIM model provides a simulation of the anticipated traffic volumes accessing the curbside and the effects of the interaction of vehicles stopping and maneuvering within the terminal area curbside pick up and drop off zones during the peak hour conditions analyzed. The model simulates the anticipated congestion and traffic operations that would be expected considering the effects of peaking around terminal building doorways, curbside check-in counters, and other physical features of the curbside that affect driver decisions and resulting traffic operations.

Figure 4.1-18 provides a summary of the simulation results for the TBIT departures level curbside for the 2013 With Project condition during the TBIT departures peak hour (11:50 to 12:50). As shown, the curbside would operate within the LOS F range throughout the hour.

Figure 4.1-19 depicts the simulation results for the TBIT arrivals level curbsides for the 2013 With Project condition during the TBIT arrivals level peak hour (13:30 to 14:30). As shown, the inner curbside would operate within the LOS E to F range throughout the hour. The outer curbside, on average, would operate generally in the LOS A to B range.

Figure 4.1-20 depicts the simulation results for the TBIT departures level curbside for the 2013 Without Project condition during the TBIT departures peak hour (11:50 to 12:50). As shown, the curbside would operate within the LOS F range throughout the hour.

Figure 4.1-21 depicts the simulation results for the TBIT arrivals level curbsides for the 2013 Without Project condition during the TBIT arrivals level peak hour (13:40 to 14:40). As shown, the inner curbside would generally operate within the LOS E to F range throughout the hour. The outer curbside, on average, would operate generally in the LOS B to D range throughout the hour.

The average curbside utilization rates and corresponding level of service calculations for the scenarios listed above are summarized in **Table 4.1-14**.

Table 4.1-14

Curbside Analysis Results - 2013 With and Without Project

Roadway Level	Peak Period	Curbside Zone[1]	Utilization Rate	Volume/ Capacity	Level of Service
Future 2013 With Project					
Departures	TBIT	-	258%	1.289	F
	Overall Airport[2]	-	258%	1.289	F
Arrivals	TBIT	Inner	192%	0.962	E
		Outer (Average of all Modes)	56%	0.433	A
		LAX Shuttles (Z-1)	53%	0.408	A
		Rental car shuttles (Z-2)	70%	0.538	A
		FlyAway buses (Z-3)	17%	0.131	A
		Shared Ride vans (Z-4)	16%	0.123	A
		Hotel & parking courtesy shuttles (Z-5)	96%	0.738	C
	Overall Airport[2]	Inner	192%	0.962	E
		Outer (Average of all Modes)	56%	0.433	A
		LAX Shuttles (Z-1)	53%	0.408	A
		Rental car shuttles (Z-2)	70%	0.538	A
		FlyAway buses (Z-3)	17%	0.131	A
		Shared Ride vans (Z-4)	16%	0.123	A
		Hotel & parking courtesy shuttles (Z-5)	96%	0.738	C

Table 4.1-14

Curbside Analysis Results - 2013 With and Without Project

Roadway Level	Peak Period	Curbside Zone[1]	Utilization Rate	Volume/ Capacity	Level of Service
Future 2013 Without Project					
Departures	TBIT	-	258%	1.289	F
	Overall Airport[2]	-	258%	1.289	F
Arrivals	TBIT	Inner	198%	0.988	E
		Outer (Average of all Modes)	93%	0.712	C
		LAX Shuttles (Z-1)	69%	0.531	A
		Rental car shuttles (Z-2)	77%	0.592	B
		FlyAway buses (Z-3)	24%	0.185	A
		Shared Ride vans (Z-4)	58%	0.446	A
		Hotel & parking courtesy shuttles (Z-5)	219%	1.685	F
	Overall Airport[2]	Inner	198%	0.988	E
		Outer (Average of all Modes)	93%	0.712	C
		LAX Shuttles (Z-1)	69%	0.531	A
		Rental car shuttles (Z-2)	77%	0.592	B
		FlyAway buses (Z-3)	24%	0.185	A
		Shared Ride vans (Z-4)	58%	0.446	A
		Hotel & parking courtesy shuttles (Z-5)	219%	1.685	F

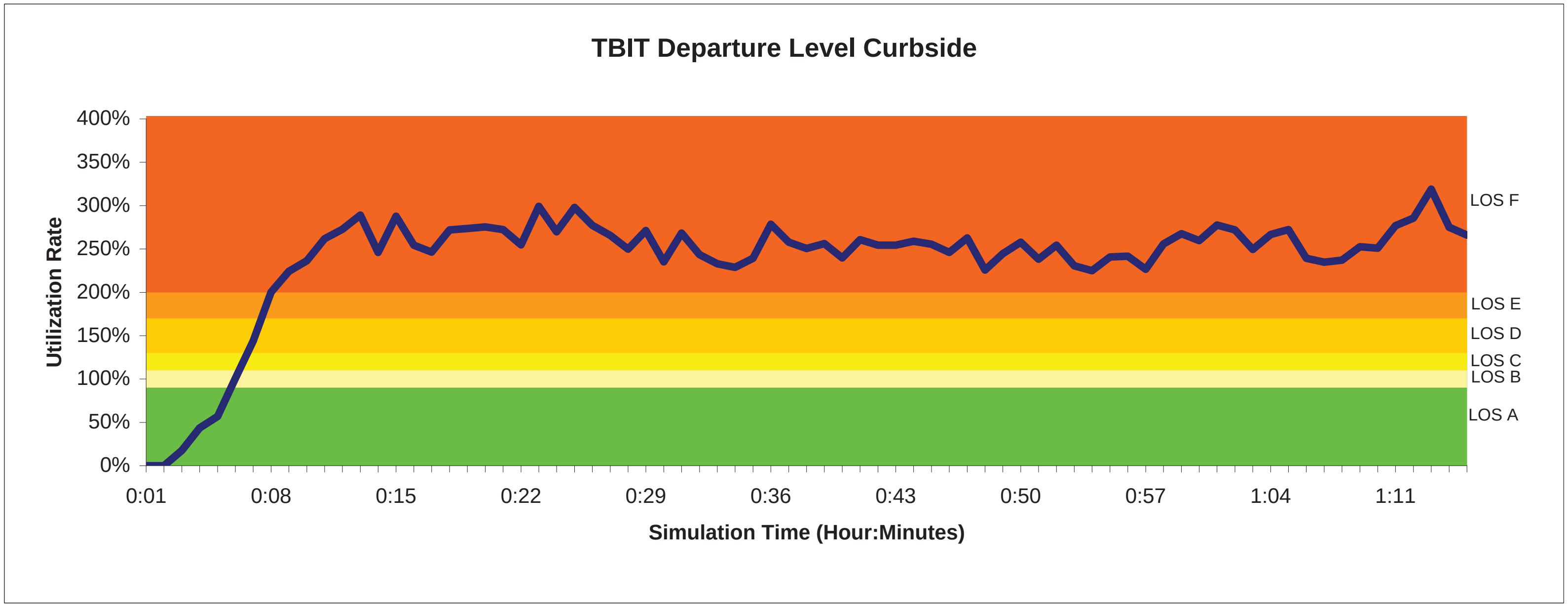
1 Parking Zones defined in Figure 4.1-9.
2 Total combined airport peak hour for all terminals.

Source: Ricondo & Associates, Inc., 2009.

For both the 2013 With and Without Project conditions for the TBIT departures peak hour, **Figures 4.1-18** and **4.1-20** show that the departures curbside would generally operate at an average LOS F. As discussed in Section 4.1.3.7, the two traffic signals at the pedestrian crosswalks along the TBIT departures curb affect curbside operations by restricting the ability for vehicles to depart the curbside zone, especially during busier periods.

For both the With and Without Project conditions for the TBIT arrivals peak hour, **Figures 4.1-19** and **4.1-21** show that the inner curbsides generally operate at a LOS E with peak periods in the LOS F range. In both the With and Without Project scenarios, the simulation indicated increased congestion along the arrivals level roadways. The simulation also indicated the congestion along the arrivals level roadways would be greater for the With Project condition than for the Without Project condition. A review of the simulation concluded the higher number or vehicles attempting to access the TBIT curbside in the With Project condition generated the increased congestion both immediately prior to TBIT and in front of Terminals 2 and 3 along the outer roadway.

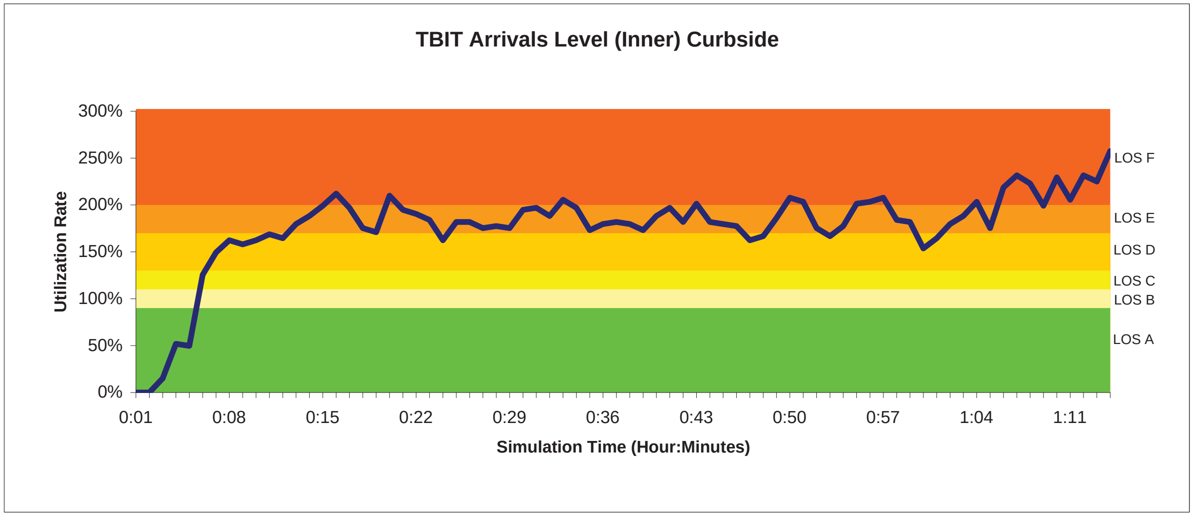
The simulation revealed the congestion in front of TBIT was a function of vehicles attempting to access the inner TBIT curbside being delayed due to congestion from the inner curbside roadway which generated "spill back" onto the outer curbside roadway. Access to the inner curbside at TBIT is limited to a single lane connector roadway between the inner and outer curbsides. This simulation indicated the connector roadway was unable to process a number of vehicles trying to access the inner curbside, even with the assumption that a proportion of the TBIT vehicles would use an "upstream" connector roadway to access the inner curbside at Terminal 3. Congestion along the outer curbside roadway prior to the median opening was compounded by the interaction of weaving vehicles attempting to access the inner TBIT curbside and commercial vehicles operating along the outer curbside between Terminal 3 and TBIT. The increased congestion on the outer curbside roadway which extends from the TBIT back to Terminal 2 resulted in fewer vehicles being able to access TBIT during the peak hour. As a result, the volume to capacity ratio for the With Project condition was calculated to be slightly better (.962 versus .988) compared to the Without Project condition as shown in **Table 4.1-14**.

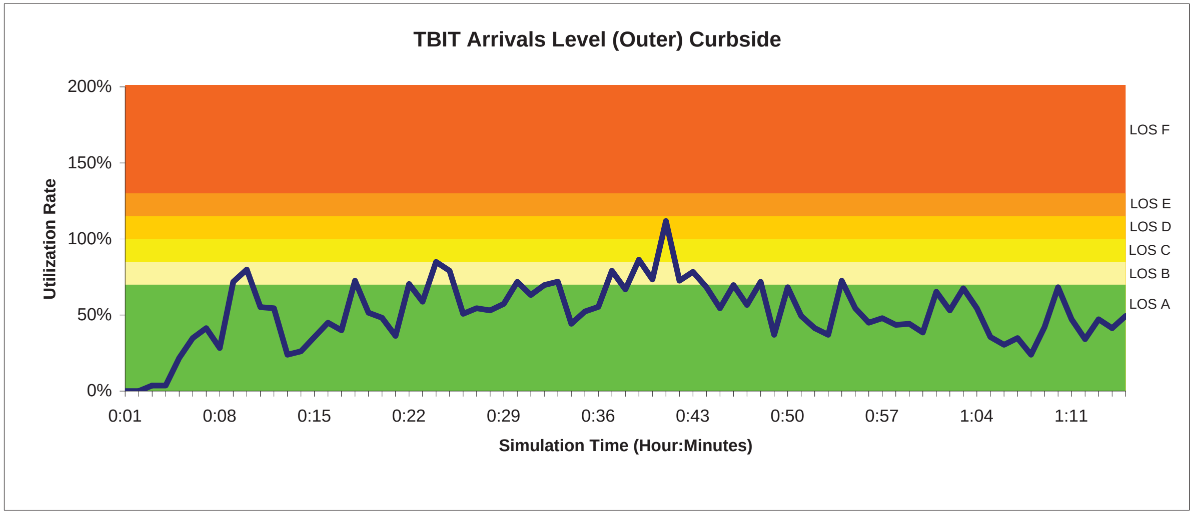


Note: Represents activity during the TBIT departures peak hour from 11:50 to 12:50

Source: Ricondo & Associates, Inc., February 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

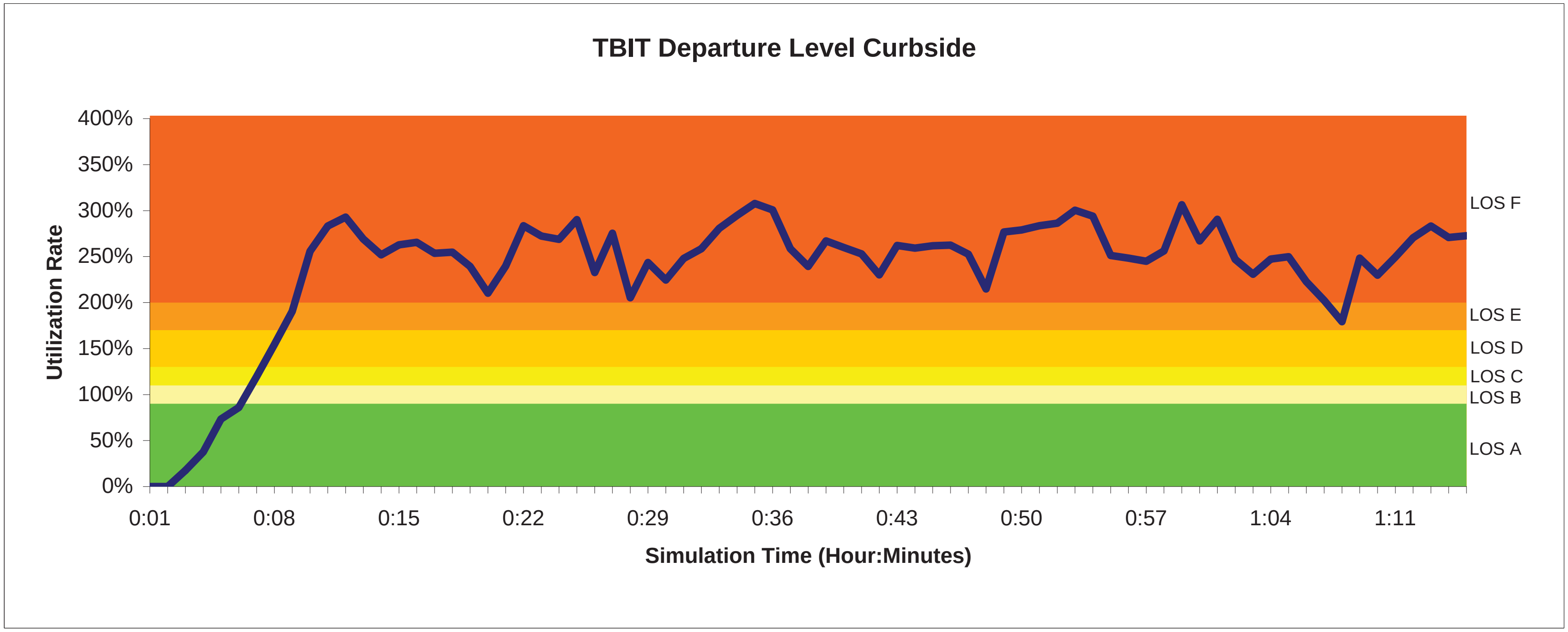
LAX Bradley West Project Draft EIR	TBIT Departures Level Curbside Level of Service – 2013 With Project	Figure 4.1-18





Note: Represents activity during the TBIT arrivals peak hour from 13:30 to 14:30

Source: Ricondo & Associates, Inc., February 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

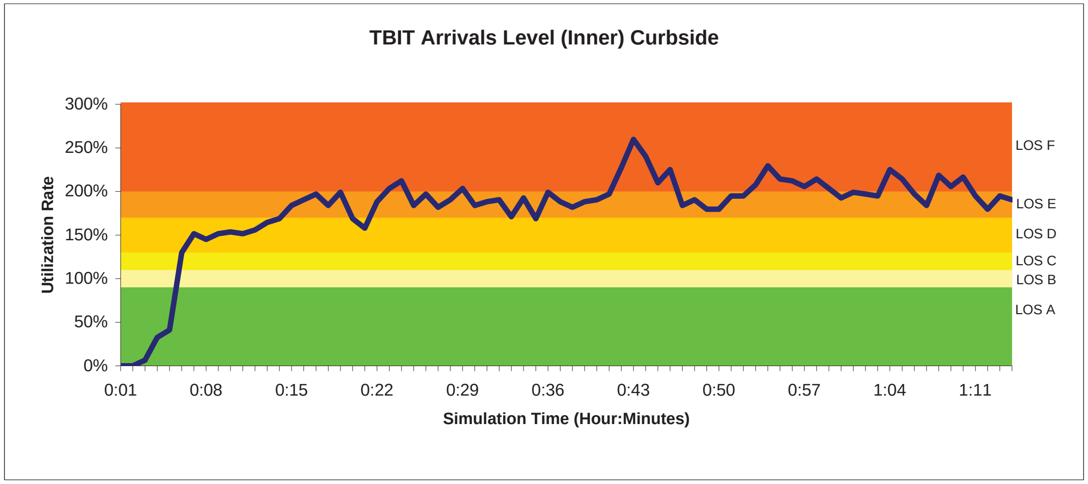


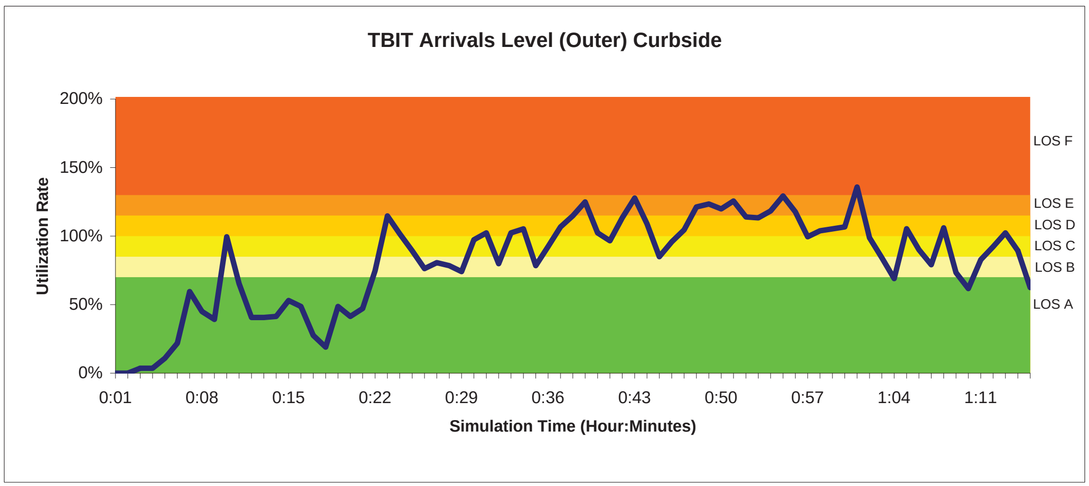
Note: Represents activity during the TBIT departures peak hour from 11:50 to 12:50

Source: Ricondo & Associates, Inc., February 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

TBIT Departures Level Curbside Level of Service – 2013 Without Project

Figure 4.1-20





Note: Represents activity during the TBIT arrivals peak hour from 13:40 to 14:40

Source: Ricondo & Associates, Inc., February 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

Table 4.1-15

CTA Signalized Intersection Turning Movement Volumes and Level of Service Analysis - 2013 With and Without Project

		Northbound			Southbound			Eastbound			Westbound				
Intersection	**Peak Hour[3]**	**Left**	**Thru**	**Right**	**Left**	**Thru**	**Right**	**Left**	**Thru**	**Right**	**Left**	**Thru**	**Right**	**V/C[1]**	**LOS[2]**
2013 With Project															
1. World Way North and Sky Way (Upper Level)	TBIT/Overall Departures						780					1903		0.535	A
2. World Way South and West Way (Upper Level)	TBIT/Overall Departures				325				1923					0.596	A
3. World Way South and East Way (Upper Level)	TBIT/Overall Departures				130			133	2102					0.149	A
4. World Way North and Sky Way (Lower Level)	TBIT/Overall Arrivals	372	214				696					3054		0.688	B
5. East Way and World Way South (Lower Level)	TBIT/Overall Arrivals				266			294	2428					0.320	A
6. Center Way and ramp from upper level roadway near Administration Building (Lower Level)	TBIT/Overall Arrivals				378				2037					0.645	B
7. Center Way and East Way (Lower Level)	TBIT/Overall Arrivals		294			266		91	1635					0.173	A
8. Center Way and West Way (Lower Level)	TBIT/Overall Arrivals		92			404	112		1191					0.510	A
9. Center Way and World Way South (Lower Level)	TBIT/Overall Arrivals	589	1270	927				65	1370	1000				1.058	F
2013 Without Project															
1. World Way North and Sky Way (Upper Level)	TBIT/Overall Departures						773					1884		0.530	A
2. World Way South and West Way (Upper Level)	TBIT/Overall Departures				325				1900					0.591	A
3. World Way South and East Way (Upper Level)	TBIT/Overall Departures				130			132	2081					0.148	A
4. World Way North and Sky Way (Lower Level)	TBIT/Overall Arrivals	366	211				649					2801		0.643	B
5. East Way and World Way South (Lower Level)	TBIT/Overall Arrivals				249			267	2201					0.294	A
6. Center Way and ramp from upper level roadway near Administration Building (Lower Level)	TBIT/Overall Arrivals				380				1872					0.606	B
7. Center Way and East Way (Lower Level)	TBIT/Overall Arrivals		267			249		75	1473					0.152	A
8. Center Way and West Way (Lower Level)	TBIT/Overall Arrivals		81			404	95		1049					0.484	A
9. Center Way and World Way South (Lower Level)	TBIT/Overall Arrivals	559	1186	851				62	1274	915				0.978	E

1 Volume to capacity ratio.
2 Level of Service range: A (excellent) to F (failure).
3 The overall airport peak hour was not analyzed given that the TBIT component of the volume was greater and the overall volumes were of similar magnitude (within 3.5% of the TBIT peak hour volume).

Source: Ricondo & Associates, Inc., using TRAFFIX, January 2009.

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CTA Intersection Analysis

As discussed in the Section 4.1.3.7, key CTA roadway intersections were analyzed using the Circular 212 Critical Movement Analysis methodology. The analysis evaluated the projected operating conditions using the CTA roadway traffic volumes for 2013 With and Without Project conditions, as provided in **Table 4.1-15** for the TBIT and overall airport peak departures and arrivals hours. The vehicle turning movement volumes were projected using the vehicle trip generation and distribution models for each scenario.

As was the case with the Existing (2008) intersection analysis, the levels of service definitions for the CMA methodology presented in **Table 4.1-9** were used and the results are provided in **Table 4.1-15**. With the exception of the intersection of Center Way and World Way South, which is projected to operate at LOS F and E, all other intersections for both the With Project and the Without Project conditions are anticipated to operate at LOS B or better.

CTA Roadway Link Analysis

Key CTA roadway links were analyzed to identify potential points of congestion along the CTA roadway network. The results of the analysis are summarized in **Table 4.1-16**. As shown in **4.1-16**, World Way North at Terminal 1 is anticipated to operate at LOS F conditions on both the upper and lower level roadways during either the With or Without Project conditions. In addition, World Way South at TBIT is anticipated to operate at LOS F conditions on the lower level roadway during either the With or Without Project conditions.

Table 4.1-16

Level of Service Results (CTA Roadway Links) - 2013 With and Without Project

			2013 Without Project			2013 With Project		
Level/Link Location	**Peak Period**	**Capacity**	**Volume**	**V/C**	**LOS**	**Volume**	**V/C**	**LOS**
Departures								
World Way North At Terminal 1 (Entry)	TBIT	2,470	2,657	1.076	F	2,683	1.086	F
World Way North At Terminal 1 (Entry)	Overall Airport	2,470	2,657	1.076	F	2,683	1.086	F
World Way South at TBIT	TBIT	2,470	2,171	0.879	D	2,199	0.890	D
World Way South at TBIT	Overall Airport	2,470	2,171	0.879	D	2,199	0.890	D
World Way South at Terminal 7/8 (Exit)	TBIT	2,470	2,219	0.898	D	2,240	0.907	E
World Way South at Terminal 7/8 (Exit)	Overall Airport	2,470	2,219	0.898	D	2,240	0.907	E
Arrivals								
World Way North At Terminal 1 (Entry)	TBIT	3,320	3,757	1.132	F	4,063	1.224	F
World Way North At Terminal 1 (Entry)	Overall Airport	3,320	3,757	1.132	F	4,063	1.224	F
World Way South at TBIT	TBIT	2,470	3,017	1.221	F	3,263	1.321	F
World Way South at TBIT	Overall Airport	2,470	3,017	1.221	F	3,263	1.321	F
World Way South at Terminal 7/8 (Exit)	TBIT	3,320	2,597	0.782	C	2,786	0.839	D
World Way South at Terminal 7/8 (Exit)	Overall Airport	3,320	2,597	0.782	C	2,786	0.839	D

Source Ricondo & Associates, Inc., 2009.

4.1.6 CEQA Thresholds of Significance

To assess impacts at the TBIT curbsides and CTA intersections and roadway links, LOS thresholds defined within the LADOT Traffic Study Policy and Procedures[47] were used to determine if an impact was generated by the project.

47 Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002.

However, because thresholds of significance are not defined for airport curbsides, for the purpose of this analysis, these thresholds were adapted for use in assessing on-airport curbside impacts. Based on the LADOT definition, an impact is considered to be significant if one of the following thresholds is met or exceeded:

- The LOS is C, its final V/C ratio is 0.701 to 0.800, and the project-related increase in V/C is 0.040 or greater, or
- The LOS is D, its final V/C ratio is 0.801 to 0.900, and the project-related increase in V/C is 0.020 or greater, or
- The LOS is E or F, its final V/C ratio is 0.901 or greater, and the project-related increase in V/C is 0.010 or greater.

The "final V/C ratio" as defined by LADOT consists of the future V/C ratio at an intersection that includes volume from the project, existing (2008) traffic, ambient background growth,[48] and other related projects, but without proposed traffic mitigation as potentially required for the project. The project-related increase is defined as the change in V/C between the future V/C ratio with project, ambient and related project growth but without proposed traffic mitigation and the future V/C ratio with ambient and related project growth but without project and proposed traffic mitigation. (i.e., the change in the unmitigated LOS condition between [a] the V/C for Future (2013) With Project conditions, and [b] the V/C for Future (2013) Without Project conditions).

The LADOT thresholds listed above are designed for assessing impacts associated with intersections and roadways where the V/C ranges are based on an established scale between 0.000 and 1.000 (i.e., capacity), with the interim LOS ranges (e.g., LOS B to C, LOS C to D) increasing in increments of 0.1. LADOT does not have a defined methodology for analyzing airport curbsides. In addition, curbside level of service ranges are based on utilization factors (not V/C ranges) that do not increase at the same incremental rates as V/C rates for roadways and intersections. However, to maintain consistency with the LADOT impact criteria, an equivalent V/C scale was developed to present the results of the curbside analysis. **Table 4.1-17** provides the level of service impact thresholds for curbsides and their comparison to the V/C ranges for intersections and roadway links. As shown in **Table 4.1-17**, the V/C for curbside operations within a specific LOS range is lower than the V/C for intersections and roadway links. This is a conservative measure in that potential curbside impacts would be realized at a lower V/C level as compared with intersections and roadway links.

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48 As discussed above, all growth in TBIT-related traffic activity anticipated to occur from 2008 to 2013 is assumed to be related to the Bradley West Project for the purposes of determining the project specific impacts and the proposed project's contribution to cumulative impacts. The non-project component of the cumulative traffic condition only includes traffic generated from the other passenger terminals as no other “projects” would contribute traffic to the CTA roadway system.

Table 4.1-17

Level of Service Impact Thresholds for On-Airport Curbside Operations

LOS	Intersection and roadway link V/C		Multi-lane passenger loading/unloading allowed		Single lane passenger loading/unloading	
Curbside Utilization (Linear curbside demand/available length)						
A			0.00	0.90	0.00	0.70
B			0.91	1.10	0.71	0.85
C			1.11	1.30	0.86	1.00
D			1.31	1.70	1.01	1.15
E			1.71	2.00	1.16	1.30
F			2.10	or greater	1.31	or greater
Curbside equivalent V/C ratios						
A	0.000	0.600	0.00	0.45	0.00	0.54
B	0.601	0.700	0.46	0.55	0.55	0.65
C	0.701	0.800	0.56	0.65	0.66	0.77
D	0.801	0.900	0.66	0.85	0.78	0.88
E	0.901	1.000	0.86	1.00	0.89	1.00
F	1.001	or greater	1.01	or greater	1.01	or greater

Source: Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980; Ricondo & Associates, Inc. developed based on information published by the Transportation Research Board and Federal Aviation Administration Advisory Circular 150/5360-13, Planning and Design Guidelines, January 19, 1994.

For the purpose of this study, project impacts were determined for both the TBIT curbside and the CTA intersections and roadway links by comparing the level of service results for Future (2013) With Project conditions and Future (2013) Without Project conditions.

4.1.7 LAX Master Plan Commitments and Mitigation Measures

The following transportation-related Master Plan mitigation measure identified in the LAX Master Plan Mitigation Monitoring and Report Program is applicable to the Bradley West Project and thus is included as part of the project for the purposes of environmental review:

- **MM-AQ-3. Transportation-Related Mitigation Measure**: The primary feature of the transportation-related air quality mitigation measure is the development and construction of at least eight (8) additional sites with FlyAway service similar to the service provided by the Van Nuys FlyAway currently operated by LAWA. The intent of these FlyAway sites is to reduce the quantity of traffic going to and from LAX by providing regional locations where LAX employees and passengers can pick up an LAX-dedicated, clean-fueled bus that will transport them from a FlyAway closer to their home or office into LAX and back.

  Since publication of the LAX Master Plan Final EIR (2004), LAWA has developed two additional FlyAway sites: one at Union Station in downtown Los Angeles which opened in March 2006; and, one at Westwood Village/UCLA which opened in June 2007.

4.1.8 Impact Analysis

In accordance with CEQA Guidelines and as described previously in Section 4.1.2, potential traffic-related impacts pertaining to the development and operation of the Bradley West Project were assessed by conducting the impact comparison described in the following section.

4.1.8.1 Future (2013) With Project Conditions Measured Against Future (2013) Without Project Conditions

This comparison focuses on the change in traffic conditions in 2013 when the proposed TBIT improvements are completed, as measured against the conditions that would occur in 2013 without the proposed project. A significant impact is realized when the thresholds of significance defined in Section 4.1.6 above are met or exceeded.

TBIT Curbside Impacts

The impact comparison for the TBIT curbside under this condition is depicted in **Table 4.1-18**. The associated level of service worksheets for the intersection analysis are provided in Appendix B of this EIR.

Table 4.1-18

Level of Service Results (TBIT Curbside) - Future (2013) Conditions

Level/ Peak Period	Curbside	Shuttle	2013 Without Project V/C	2013 Without Project LOS[1]	2013 With Project V/C	2013 With Project LOS[1]	Change in V/C	Significant Impact?
Departures								
TBIT			1.289	F	1.289	F	0.000	No
Overall Airport			1.289	F	1.289	F	0.000	No
Arrivals								
TBIT	Inner		0.988	E	0.962	E	(0.026)	No
	Outer	LAX Shuttles	0.531	A	0.408	A	(0.123)	No[2]
		Rental Car Shuttles	0.592	B	0.538	A	(0.054)	No[2]
		FlyAway Buses	0.185	A	0.131	A	(0.054)	No[2]
		Shared Ride Vans	0.446	A	0.123	A	(0.323)	No[2]
		Hotel/Parking Shuttles	1.685	F	0.738	C	(0.947)	No[2]
Overall Airport	Inner		0.988	E	0.962	E	(0.026)	No[2]
	Outer	LAX Shuttles	0.531	A	0.408	A	(0.123)	No[2]
		Rental Car Shuttles	0.592	B	0.538	A	(0.054)	No[2]
		FlyAway Buses	0.185	A	0.131	A	(0.054)	No[2]
		Shared Ride Vans	0.446	A	0.123	A	(0.323)	No[2]
		Hotel/Parking Shuttles	1.685	F	0.738	C	(0.947)	No[2]

1 Level of Service range: A (excellent) to F (failure).
2 Congestion upstream of TBIT produces a metering effect that results in a better With Project level of service as compared to Without Project conditions.

Source: Ricondo & Associates, Inc., 2009.

As shown in **Table 4.1-18**, the Future (2013) With Project traffic conditions compared to the Future (2013) Without Project traffic conditions would not result in a significant impact to TBIT curbside operations.

On the departures level, both the With and Without Project conditions would result in the same LOS; therefore, the anticipated effect of the project under this analysis would not be significant. On the arrivals level, curbside LOS With Project would be generally better than the Without Project condition. This is because the increased traffic volume associated with the project in combination with traffic from the other terminals results in increased congestion "upstream" of TBIT. This congestion creates a metering effect that reduces traffic congestion at the TBIT curbside.

CTA Intersection Impacts

As shown in **Table 4.1-19**, it is anticipated that the Future (2013) With Project traffic conditions compared to Future (2013) Without Project traffic conditions would produce significant impacts at the following intersection:

- Center Way and World Way South during the TBIT arrivals peak period and the overall airport arrivals peak period.

Table 4.1-19

Level of Service Results (CTA Intersections) - Future (2013) Conditions

Level/Intersection	Peak Period	2013 Without Project V/C[1]	2013 Without Project LOS[2]	2013 With Project V/C[1]	2013 With Project LOS[2]	Change in V/C	Significant Impact?
Departures							
World Way North and Sky Way	TBIT	0.53	A	0.535	A	0.005	No
	Overall Airport	0.53	A	0.535	A	0.005	No
World Way South and West Way	TBIT	0.591	A	0.596	A	0.005	No
	Overall Airport	0.591	A	0.596	A	0.005	No
World Way South and East Way	TBIT	0.148	A	0.149	A	0.001	No
	Overall Airport	0.148	A	0.149	A	0.001	No
Arrivals							
World Way North and Sky Way	TBIT	0.643	B	0.688	B	0.045	No
	Overall Airport	0.643	B	0.688	B	0.045	No
East Way and World Way South	TBIT	0.294	A	0.32	A	0.026	No
	Overall Airport	0.294	A	0.32	A	0.026	No
Center Way & ramp from upper	TBIT	0.606	B	0.645	B	0.039	No
level rdwy. near Admin. Bldg	Overall Airport	0.606	B	0.645	B	0.039	No
Center Way and East Way	TBIT	0.152	A	0.173	A	0.021	No
	Overall Airport	0.152	A	0.173	A	0.021	No
Center Way and West Way	TBIT	0.484	A	0.51	A	0.026	No
	Overall Airport	0.484	A	0.51	A	0.026	No
Center Way and World Way South	TBIT	0.978	E	1.058	F	0.080	Yes
	Overall Airport	0.978	E	1.058	F	0.080	Yes

[1] V/C (Volume/Capacity) calculations performed using TRAFFIX.
[2] Level of Service range: A (excellent) to F (failure).

Source: Ricondo & Associates, Inc., 2009.

CTA Roadway Link Impacts

As shown in **Table 4.1-20** it is anticipated that the Future (2013) With Project traffic conditions, compared to Future (2013) Without Project traffic conditions, would produce significant traffic impacts on the following roadway links:

- World Way North at Terminal 1 on the departures level during both the TBIT and overall airport peak hours
- World Way North at Terminal 1 on the arrivals level during both the TBIT and overall airport peak hours
- World Way South at TBIT on the arrivals level roadway during both the TBIT and overall airport peak periods.
- World Way South at Terminal 7/8 on the arrivals level roadway during both the TBIT and overall airport peak periods.

Table 4.1-20

Level of Service Results (CTA Roadway Links) - Future (2013) Conditions

Level/Link Location	Peak Period	Capacity	LOS	2013 Without Project Volume	2013 Without Project V/C	2013 Without Project LOS	2013 With Project Volume	2013 With Project V/C	2013 With Project LOS	Change in V/C	Significant Impact?
Departures											
World Way North At Terminal 1 (Entry)	TBIT	2,470	F	2,657	1.076	F	2,683	1.086	F	0.011	Yes
World Way North At Terminal 1 (Entry)	Overall Airport	2,470	F	2,657	1.076	F	2,683	1.086	F	0.011	Yes
World Way South at TBIT	TBIT	2,470	C	2,171	0.879	D	2,199	0.890	D	0.011	No
World Way South at TBIT	Overall Airport	2,470	C	2,171	0.879	D	2,199	0.890	D	0.011	No
World Way South at Terminal 7/8 (Exit)	TBIT	2,470	D	2,219	0.898	D	2,240	0.907	E	0.009	No
World Way South at Terminal 7/8 (Exit)	Overall Airport	2,470	D	2,219	0.898	D	2,240	0.907	E	0.009	No
Arrivals											
World Way North At Terminal 1 (Entry)	TBIT	3,320	D	3,757	1.132	F	4,063	1.224	F	0.092	Yes
World Way North At Terminal 1 (Entry)	Overall Airport	3,320	F	3,757	1.132	F	4,063	1.224	F	0.092	Yes
World Way South at TBIT	TBIT	2,470	D	3,017	1.221	F	3,263	1.321	F	0.100	Yes
World Way South at TBIT	Overall Airport	2,470	F	3,017	1.221	F	3,263	1.321	F	0.100	Yes
World Way South at Terminal 7/8 (Exit)	TBIT	3,320	A	2,597	0.782	C	2,786	0.839	D	0.057	Yes
World Way South at Terminal 7/8 (Exit)	Overall Airport	3,320	C	2,597	0.782	C	2,786	0.839	D	0.057	Yes

Source: Ricondo & Associates, Inc., 2009.

4.1.9 Mitigation Measures

As described above, the Bradley West Project would produce significant project-related impacts at one of the key CTA intersections (Center Way and World Way South) and along each of the roadway links analyzed. The following mitigation measures comprised of physical and operational enhancements are proposed to address estimated significant project-related intersection and roadway link impacts.

- **MM-ST (BWP)-1. Trip Reduction Measures.**

  LAWA will implement the following trip reduction measures:

  (a) Continue to promote and expand the FlyAway services in accordance with LAX Master Plan Mitigation Measure MM-AQ-3. It is anticipated that the continued expansion of the FlyAway service will promote a shift in mode-share away from the private vehicle mode which would reduce traffic volume using the CTA roadway system.

  (b) Continue to promote the consolidation of shuttle services (e.g., hotel/motel, off-airport parking, rental cars) or programs to reduce trips associated with these modes.

- **MM-ST (BWP)-2. Improve the Intersection of Center Way and World Way South.**

  Widen World Way South approach on the east side of the roadway to provide an additional right turn lane. The resulting configuration would be a single left turn lane, one through-left turn lane, two through lanes, and two right turn lanes.

  As noted in **Table 4.1-19**, during the Future (2013) Without Project overall airport peak hour the intersection of Center Way and World Way South operates at a V/C of 0.978 which is LOS E. As described in Section 4.1.6, with an intersection operating at a LOS E condition, the volume to capacity ratio can be increased by 0.01 without generating an impact. This equates to an increase in the intersection's V/C ratio from 0.978 to 0.988, or approximately 1.1 percent (i.e., 0.988/0.978) in the critical movement traffic volume without triggering an impact. LAWA will monitor traffic conditions at this intersection to determine when an estimated impact has been "triggered" in accordance with the LOS thresholds described above. Specifically, LAWA will monitor future CTA average daily traffic volumes (refer to **Table 4.1-2**) in August to determine when CTA average daily traffic volumes have increased by more than 1.1 percent relative to the Future (2013) Without Project average daily traffic volumes. In addition, LAWA will record turning movement volumes at this intersection annually during the airport's peak month (August). When the August average daily CTA volumes have increased by 1.1 percent as compared to the Future (2013) Without Project estimated volume, LAWA will complete a V/C analysis using the same intersection methodology described in Section 4.1.3.7 of this section to determine if an impact has occurred. The mitigation measure would be constructed once both (a) the CTA average daily traffic volumes are 1.1 percent greater than the Future (2013) Without Project and (b) the V/C for the intersection meets or exceeds 0.988. The intersection analysis would be subject to approval by LADOT regarding timing of the mitigation measure.

- **MM-ST (BWP)-3. Widen World Way Across from TBIT.**

  Widen the arrivals-level outer roadway across from TBIT by changing the left-most lane that currently terminates at Center Way to a through/left lane and extending this lane to World Way South. This improvement will result in increased capacity on the outer roadway and reduced delay for vehicles that experience upstream CTA roadway congestion as defined previously in Section 4.1.5.3.

4.1.10 Level of Significance After Mitigation

The potential mitigation measures and resulting level of service based on the improved conditions are presented in **Table 4.1-21**. As shown in **Table 4.1-21**, it is anticipated that the proposed mitigation measures described above would result in the following operational benefits:

Table 4.1-21

Summary of Proposed Measures to Mitigate Potentially Significant Impacts

Estimated Impacts	Mitigation Measures	Peak Period	Project (Un-mitigated) Significant?	Project (Un-mitigated) LOS[2]	Project (Un-mitigated) V/C[1]	Project (Un-mitigated) LOS[2]	Project (Mitigated) V/C[1]	Project (Mitigated) LOS[2]	Reduced to Less than Significant
Intersection									
Center Way & World Way South	MM-ST (BWP)-2	TBIT	0.978	E	1.058	F	0.869	D	Yes
		Overall Airport	0.978	E	1.058		0.869	D	Yes
Roadways Links									
Departures Level									
World Way North At Terminal 1 (Entry)	MM-ST (BWP)-1	TBIT	1.051	F	1.086	F	[3]	[3]	[3]
World Way North At Terminal 1 (Entry)	MM-ST (BWP)-1	Overall Airport	1.051	F	1.086	F	[3]	[3]	[3]
World Way South at TBIT	MM-ST (BWP)-1	TBIT	0.764	C	0.890	D	[3]	[3]	[3]
World Way South at TBIT	MM-ST (BWP)-1	Overall Airport	0.764	C	0.890	D	[3]	[3]	[3]
World Way South at Terminal 7/8 (Exit)	MM-ST (BWP)-1	TBIT	0.877	D	0.907	E	[3]	[3]	[3]
World Way South at Terminal 7/8 (Exit)	MM-ST (BWP)-1	Overall Airport	0.877	D	0.907	E	[3]	[3]	[3]
Arrivals Level									
World Way North At Terminal 1 (Entry)	MM-ST (BWP)-1,3	TBIT	0.802	D	1.224	F	[3]	[3]	[3]
World Way North At Terminal 1 (Entry)	MM-ST (BWP)-1,3	Overall Airport	1.193	F	1.224	F	[3]	[3]	[3]
World Way South at TBIT	MM-ST (BWP)-1,3	TBIT	0.856	D	1.321	F	[3]	[3]	[3]
World Way South at TBIT	MM-ST (BWP)-1,3	Overall Airport	1.066	F	1.321	F	[3]	[3]	[3]
World Way South at Terminal 7/8 (Exit)	MM-ST (BWP)-1	TBIT	0.564	A	0.839	D	[3]	[3]	[3]
World Way South at Terminal 7/8 (Exit)	MM-ST (BWP)-1	Overall Airport	0.789	C	0.839	D	[3]	[3]	[3]

1 V/C (Volume/Capacity) calculations performed using TRAFFIX.
2 Level of Service range: A (excellent) to F (failure).
3 It is anticipated that the proposed measures listed in the report would benefit the operations; however the effects have not been quantified. It is anticipated that the impact would remain significant and unavoidable.

Source: Ricondo & Associates, Inc., March 2009.

Intersections

- Intersection of Center Way and World Way South - It is anticipated that the improvement as described in Mitigation Measure MM-ST (BWP)-2 would reduce both project specific and cumulative impacts to less than significant during both the TBIT and overall airport peak analysis periods.

Roadway Links

- All Roadway Links Analyzed - It is anticipated that the expansion of the FlyAway Bus services and further consolidation of shuttle bus services or trip reduction programs as described in Mitigation Measure MM-ST (BWP)-1 would result a reduction in traffic volumes on the on-airport roadway links; however, it is not anticipated that the potential benefit derived from these measures would reduce the impacts on roadway links to a less than significant level.
- It is anticipated that the widening of the arrivals level outer roadway across from TBIT and south of Center Way as described in Mitigation Measure MM-ST (BWP)-3, would reduce overall CTA travel times and delay for vehicles that experience upstream CTA roadway congestion as defined previously in Section 4.1.5.3. Although travel delay would be reduced for certain users, the benefits from this improvement would not improve traffic conditions at the direct location of the impact. As a result, this improvement is not expected to reduce the impacts on roadway links to a less than significant level.

Based on the above, implementation of the recommended mitigation measures would reduce intersection impacts to a level that is less than significant. All of the roadway link impacts summarized in Section 4.1.8 above would remain significant and unavoidable after mitigation.

4.2 Off-Airport Surface Transportation

4.2.1 Introduction

This section analyzes the off-airport traffic impacts on intersections and County of Los Angeles Congestion Management Plan arterial and freeway monitoring stations in the study area associated with the operation of the Bradley West Project. Impacts to off-airport surface transportation associated with construction of the Bradley West Project are addressed in Section 4.3, *Construction Surface Transportation*, of this EIR. Impacts to on-airport surface transportation associated with operation of the Bradley West Project are addressed in Section 4.1, *On-Airport Surface Transportation*, of this EIR.

The off-airport surface transportation analysis was developed in conjunction with the City of Los Angeles Department of Transportation (LADOT) and is consistent with their methodologies and guidelines. The base assumptions, technical methodologies, and geographic coverage of the study were all identified during the LADOT Memorandum of Understanding (MOU) process, which is required when conducting traffic studies in order to agree/confirm on the key assumptions of the traffic study for their approval. The following scenarios were analyzed as part of the Bradley West Project off-airport surface transportation study:

- Existing (2008) Conditions
- Future (2013) Conditions
  - Future-Adjusted (2013) Without Project Conditions
  - Future (2013) With Project Conditions

4.2.2 Methodology

4.2.2.1 Description of Traffic Model

The traffic forecasting process that provides the basis for addressing operational traffic impacts at completion of the project in 2013 was performed using a travel demand model developed from the Southern California Association of Governments (SCAG) regional travel demand model. The SCAG model focuses on estimating regional travel for the entire southern California region. Since the proposed Bradley West Project is located in a localized area of the region, it was necessary to supplement the SCAG model with a more detailed sub-area model.

Sub-Area Model Validation

The model sub-area encompasses the Bradley West Project traffic analysis study area which, as further described in Section 4.2.3.1 below, is bounded by Rose Avenue to the north, Manhattan Beach Boulevard to the south, Western Avenue to the east, and Pershing Drive to the west. A detailed review of the model roadway network and land use assumptions was performed in the model sub-area, revealing the need to increase the detail of the coarse traffic analysis zone (TAZ)[49] structure to more accurately model traffic flows on arterials and freeway facilities. Therefore, model TAZs were split proportionally, especially those representing the airport. The numbers of vehicle trips originating and terminating at the airport TAZs were then adjusted to match data published in the Los Angeles International Airport 2006 Air Passenger Survey,[50] followed by a comparison of the model-wide distribution of airport trips to annual data published in the aforementioned document.

A preliminary sub-area model validation was performed on the resulting base year SCAG model. Forecasting models are typically calibrated by adjusting model parameters such as speed and capacity until they are validated by applying a set of criteria that compare model link volumes to actual counts. In

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[49] Traffic analysis zones are non-overlapping, statistical areas used to tabulate traffic-related data for use in regional transportation models.

[50] Applied Management & Planning Group, 2006 Air Passenger Survey Los Angeles International Airport, December 2007.

this case, land use and roadway network modifications were made to the SCAG model and the resulting modeled link volumes were compared to roughly 1,015 intersection approach and departure volumes derived from turning movement counts collected in 2008. Additionally, the sub-area model was validated to roughly 39 counts on freeway facilities. Caltrans has established guidelines for determining whether a model is valid and acceptable for forecasting future year traffic volumes as described in Travel Forecasting Guidelines.[51] The SCAG base year model was validated within Caltrans' thresholds for acceptable performance. The SCAG model link validation results are presented in Appendix C-1.

In addition to the Caltrans validation tests, dynamic validation tests were conducted to test the sensitivity of the model to changes in land uses or the transportation system. The dynamic validation results presented in Appendix C-2 indicate that the model performed acceptably.

Modeling of Future (2013) Conditions

The off-airport surface transportation analysis focused on impacts projected to occur at completion of improvements at TBIT as proposed by the Bradley West Project. Such improvements, which include the addition of new contact gates and improvement of passenger processing facilities, are expected to occur by 2013. Section 15125 of the CEQA Guidelines indicates that the environmental setting present at the time the Notice of Preparation (NOP) was published normally constitutes the baseline physical conditions by which a lead agency determines whether an impact is significant. That approach would not, however, provide an accurate or meaningful delineation of the proposed project's operational impacts because any material changes in the operational characteristics of TBIT, as may affect off-airport traffic, would not occur until the proposed improvements are completed. The local traffic conditions present at the time the Bradley West Project EIR NOP was published, in December 2008, would not be the same as the traffic conditions in 2013, the latter of which would include increases in background traffic volumes due to ambient area wide growth between 2008 and 2013, as well as changes in the transportation network (i.e., roads and intersections) during that period. As such, 2013 is used as the baseline year for evaluating project-related operational impacts. In order to provide a conservative (i.e., worst-case) impacts analysis, an "adjusted" 2013 baseline condition is utilized, as described in greater detail below. While 2013 is the focus for evaluating project impacts, information related to existing 2008 conditions was used in the analysis to help validate and calibrate the traffic model, as well as provide a description of the existing environmental setting.

Traffic volume forecasts for two future (2013) scenarios evaluated for the project were based on linear interpolation of vehicle trips from the 2020 SCAG model. This method accounts for growth in the study area as well as growth outside the study area that may utilize study area roadways. Additionally, the SCAG model accounts for a portion of induced travel such as changes in route, but will not be sensitive to changes in trip generation or time-of-day travel.

TAZ splits performed for existing (2008) conditions were applied to the 2020 model prior to the subtraction of vehicle trips from the validated base year model. Growth at airport TAZs was eliminated to preserve existing airport trip generation and distribution patterns. Linear interpolation was then used to develop non-airport background growth from 2008 to 2013. Vehicle trips were then developed to match trip generation data from entitled development projects. The annual growth rate for the area was then calculated and used to determine whether the amount of land use development assumed to occur from 2008 to 2013 was reasonable.

The roadway network was modified to include funded roadway improvement projects to be constructed by 2013, along with roadway improvements that occurred since the counts were collected. Mitigation measures associated with entitled development projects were not assumed unless they were already under construction at the time of the counts. Since the future year SCAG model was developed from the base year SCAG model, the same roadway network modifications made to calibrate the base year model were incorporated into the model.

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[51] California Department of Transportation, Travel Forecasting Guidelines, November 1992.

As further described below in Section 4.2.2.5, traffic generation in terms of new vehicle trips associated with the proposed project would be limited to those resulting from additional employment within TBIT due to expanded building floor area (i.e., additional concessions, security/inspection areas, janitorial/maintenance requirements, etc.). Over the course of the five years between 2008 conditions and 2013 completion of the TBIT improvements, the volume of passengers traveling through TBIT is expected to increase substantially, irrespective of whether the proposed improvements are implemented. Completion of the proposed improvements at TBIT would not cause an increase in the overall daily passenger activity levels at TBIT, but would affect the nature and timing of how passengers are processed through TBIT during the course of the day. The proposed improvements would enable TBIT to better accommodate and process international flights, including those that utilize new large aircraft capable of carrying more passengers than most other aircraft. While the overall daily passenger activity level in 2013 would be about the same with or without the project, completion of the proposed improvements would result in larger surges of passengers being processed through TBIT during certain times of the day. This, in turn, would affect the number of vehicle trips occurring during the three peak hours (i.e., a.m. commuter peak, mid-day airport peak, and p.m. commuter peak) evaluated in the on-airport surface transportation analysis in Section 4.1 of this EIR. Such changes would only be evident upon completion of the proposed improvements in 2013, by which time there would be a natural increase in passenger activity levels at TBIT independent of the improvements. In other words, the ongoing growth in passenger activity at TBIT that would occur over time while the proposed project is under construction is included in the "project traffic" used in the 2013 impacts analysis. This approach is considered to be very conservative in delineating the off-airport traffic impacts of the Bradley West Project, because the vehicle trips associated with natural growth at TBIT that would occur regardless of whether the project is implemented are included in the project's traffic generation estimate.

Future-Adjusted (2013) Without Project Conditions

The future (2013) without project scenario assumed growth in vehicle trips at the adjacent terminals (i.e., Central Terminal Area (CTA) Terminals 1 through 8) anticipated to occur by 2013, but held trip generation levels at TBIT to those of 2008. Therefore, vehicle trips originating or terminating at airport TAZs were developed to match trip generation estimates for the adjacent terminals. The resulting 2013 vehicle trips were then assigned to the 2013 roadway network to forecast "Future-Adjusted (2013) Without Project" traffic volumes. This analysis scenario is consistent with the traffic analysis guidelines of LADOT in assuming a future baseline condition that includes existing traffic plus traffic from ambient growth and related projects, but no traffic from the proposed project.[52] This type of scenario is sometimes referred to as an "adjusted baseline." By using this scenario as the basis of comparison for evaluating Future (2013) With Project conditions, the project's contribution to traffic impacts at the time of project completion resulting from the number and timing of passengers at TBIT curbside during the three analysis peak hours along with ambient growth[53] at TBIT from 2008 to 2013 can be identified.

Future (2013) With Project Conditions

This scenario was compared to the Future-Adjusted (2013) Without Project scenario described above to determine project impacts. Therefore, this scenario assumed the natural growth expected to occur between 2008 and 2013 at all airport terminals due to the reconfigured TBIT, while also accounting for traffic from ambient growth and related projects throughout the off-airport roadway network study area. Vehicle trips originating or terminating at airport TAZs were developed to match trip generation estimates with the implementation of the proposed project. The resulting 2013 vehicle trips were then assigned to the 2013 roadway network to forecast Future (2013) With Project traffic volumes.

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52 Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002.

53 As discussed above, ongoing growth in passenger activity at TBIT that would occur over time while the proposed project is under construction is included in the "project traffic."

Development of Forecasts

Traffic forecasts for the Future (2013) With Project scenario and the Future-Adjusted (2013) Without Project scenario were developed by adding the difference between the forecasted traffic volume and the validated base year traffic volume to the 2008 count. The resulting forecasts were then balanced[54] where appropriate. The balanced forecasts for each scenario were compared to existing counts as well as one another to ensure the reasonableness of the forecasts.

4.2.2.2 Determination of Existing (2008) Traffic Conditions

Intersection turning movement volumes collected in July and August 2008, which represent the most current comprehensive traffic counts completed by LAWA, were used for characterizing the existing environmental setting (i.e., existing traffic conditions) within the study area. The following steps were taken to develop the Existing (2008) traffic conditions information.

The intersection analysis was performed using the CalcaDB intersection analysis software for intersections within the City of Los Angeles. This software, developed by LADOT, is based on the analysis methods described in Circular 212.[55] Intersections outside the City of Los Angeles were analyzed using the Intersection Capacity Utilization (ICU) methodology, as required by all neighboring cities and Los Angeles County. Both analysis methodologies use intersection geometries, phasing, and traffic counts to determine the volume-to-capacity (V/C) ratio of critical turning movements at the intersection.

4.2.2.3 Determination of Future-Adjusted (2013) Traffic Conditions

For purposes of delineating project-related impacts when the proposed TBIT improvements are completed in 2013, a traffic scenario was developed consisting of the 2013 traffic conditions including all traffic that would be generated by the rest of the airport and other projects in the study area. The following steps were taken to develop the Future-Adjusted (2013) traffic conditions:

- Related projects were added to the traffic model in order to produce conservative estimates of background traffic in the study area.
- The trips generated by TBIT activity in 2013 were adjusted back to existing (2008) levels to provide a conservative impacts analysis (i.e., TBIT-related vehicle trips that would increase naturally between 2008 and 2013 were removed from the background traffic and ascribed to the project-related traffic generation used for the impacts analysis).

4.2.2.4 Determination of Congestion Management Program Conditions

Analyses were conducted to comply with Congestion Management Program (CMP) requirements. This analysis was conducted in accordance with the procedures outlined in the 2004 Congestion Management Program for Los Angeles County.[56] The CMP requires that when a traffic impact analysis is prepared for a project, traffic impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use those facilities.

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54 Traffic volumes, counted or forecasted, are balanced to ensure a reasonable amount of vehicles are either gained or lost between adjacent intersections.

55 Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

56 Los Angeles County Metropolitan Transportation Authority, 2004 Congestion Management Program for Los Angeles County, July 2004.

4.2.2.5 Determination of Project Trip Generation

Trip generation for the off-airport surface transportation analysis was determined based on passenger activity levels within TBIT estimated for 2008 existing conditions and projected for 2013 when the proposed TBIT improvements are anticipated to be complete. Trip generation for most development projects, such as a new residential community or a new commercial center, can be determined based on trip generation factors published by the Institute of Transportation Engineers (ITE). The application of such factors to the Bradley West Project is, however, not appropriate because of the unique nature of the subject facility and the role served in accommodating its users. While most facilities, such as homes, offices, shopping centers, restaurants, etc., are trip "generators" in terms of serving a specific purpose that drivers travel to and from, such is not the case for TBIT. Passengers traveling to and from TBIT do so in transit between their points of flight origin and destination. In other words, a business traveler may drive to LAX from his/her house in order to take a flight out of TBIT to conduct business in a foreign country, and a leisure traveler may arrive on an international flight at TBIT, rent a car at/near LAX, and drive to a Los Angeles vacation destination. In neither case is TBIT the reason or "generator" of the vehicle trips. Implementation of the proposed Bradley West Project would provide for development of new concourses to replace the existing TBIT concourses and improvement of the TBIT existing central core, which would include additional areas for new and improved passenger lounge areas, business centers, restaurants, retail stores, airline lounges, and various concessions. Although there are ITE trip generation rates for these, or similar type uses, the application of those rates to the Bradley West Project would not be appropriate. The improvements proposed at TBIT are intended and designed to improve the quality of service available to existing and future passengers that are traveling through TBIT for other reasons.

As described in Section 2.4.5 of this EIR, the passenger activity level at TBIT in 2013, when the proposed TBIT improvements are anticipated to be complete, is projected to reach a certain level with or without the proposed improvements. The increase in passenger activity levels between 2008 and 2013 would be driven primarily by projected increases in aircraft activity at LAX based on a flight schedule forecast that reflects the anticipated travel market demands. Based on an activity level forecast prepared in mid-2008, international passenger activity levels at LAX were projected to experience substantial growth from 16.7 million annual passengers (MAP) in 2008 to 21.8 in 2013, an approximately 30 percent increase. By comparison, domestic passenger activity at LAX is projected to grow from 44.3 in 2008 to 45.8 in 2013, an increase of approximately three percent. As indicated in Section 2.4.5, of this EIR, the activity level forecast is based on 2008 data, and is considered conservative in light of the current economic recession and the expected decrease in aviation activity worldwide that would likely occur as a result.

In conjunction with the aforementioned activity level forecasts, design day flight schedules (DDFSs) were developed for 2008 and 2013 conditions. A DDFS delineates every arriving and departing flight scheduled expected throughout a 24-hour day on an average day (Wednesday) during the busiest month (August) of the year. The DDFS accounts for the anticipated size and type of aircraft, as well as the projected number of seats occupied, for each flight in order to estimate the number of arriving and departing passengers occurring in each hour of the day. It also distinguishes "origin and destination" (O&D) activity from connecting flight activity, with the former accounting for passengers whose flight origin or destination is LAX (i.e., would have vehicle trips to/from LAX) and the latter accounting for passengers that simply change planes at LAX (i.e., would not have vehicle trips to/from LAX).

Based on the information above, it is possible to estimate the number of passengers arriving and departing during each hour of the day at TBIT, distinguishing between those passengers that would be associated with external vehicle trips (O&D passengers) and those passengers that remain at LAX (connecting flights). As indicated above, the increase in daily passenger activity levels at TBIT between 2008 and 2013 is projected to be approximately the same for with-project conditions and without-project conditions. There would, however, be a notable difference between with-project conditions and without-project conditions relative to the number and processing time of arriving passengers during the course of a day. With the combination of new contact gates, suitable to accommodate new large aircraft, being added on the west side of TBIT and the proposed improvements to the federal inspection systems (i.e., Customs and Border Protection), baggage claim systems, and other facilities related to the processing of arriving international flights, it is anticipated that a larger volume of arriving passengers could be processed more quickly through TBIT under with-project conditions in comparison to the without-project conditions due to improvements to the passenger processing system. Although the total number of passengers processed through the course of a day would not be notably different between the two scenarios, the number of arriving passengers reaching the TBIT curbside during the three analysis peak hours (i.e., a.m. commuter peak, mid-day airport peak, and p.m. commuter peak) would differ between the two scenarios (see Section 4.1.2 of this EIR for additional discussion of how the proposed project would affect passenger processing and associated vehicle trips). The project-related change in the volume and timing of passengers moving through TBIT is more relevant to arriving flights than departing flights, inasmuch as each arriving flight would introduce a particular number of passengers into TBIT at a specific time and the majority of the passengers with LAX as their destination would be moving through the processing steps at TBIT as a group to reach curbside at approximately the same time. For passengers taking a departing international flight from LAX, the time that each passenger arrives at curbside before their flight and the amount of time they take in moving through TBIT to get to their gate is much more individualized.

An analysis was completed to estimate the number of vehicle trips generated during the three peak hours, based on the DDFS, which provided information on the number of international passengers arriving or departing at each gate during each hour of the day, and the estimated passenger processing time between the gate and the TBIT curbside. This analysis is provided in Appendix C-7. The trip generation estimates for the peak hours also took into account the anticipated number of passengers per vehicle.

In addition to estimating trip generation associated with arriving and departing passengers during each of the three analysis peak hours, estimates were developed for project-related increases in the number of employees at TBIT. Whereas the projected increase in passenger activity levels at TBIT between 2008 and 2013 would occur with or without the proposed project, the projected increase in employees would be directly related to the project. Such increased employment is based on the additional building floor area proposed for expanded concession areas, airline functions, security personnel, and maintenance/janitorial needs. The employment-related trip generation was based on existing employee trips increased proportionally to the additional building floor area proposed for the Bradley West Project.

In integrating the information described above into the off-airport traffic analysis model, the trip generation data for the airport facilities were added to the travel demand models. The resulting vehicle trips were then assigned to the model roadway networks to forecast traffic volumes with and without the proposed Bradley West Project.

4.2.2.6 Delineation of Traffic Impacts

The direct project impacts were determined by calculating the difference in level of service (LOS) for (a) the Future (2013) With Project LOS and (b) the Future-Adjusted (2013) Without Project LOS. This is a comparison required to isolate the direct impacts of the project. With this comparison, the difference in LOS is compared to the thresholds defined by the jurisdiction in which the intersection is located to determine if the project results in a significant impact. As noted above, the Future (2013) With Project scenario includes growth in passenger activity levels at TBIT between 2008 and 2013 that is anticipated to occur irrespective of the proposed improvements; hence, it is considered to be a very conservative analysis accounting for traffic increase impacts that are not directly attributable to the Bradley West Project. Moreover, those impacts associated with ambient growth in activity levels at TBIT over the next five years are based on conservative growth projections in light of the current economic downturn.

With regard to cumulative impacts, the methodology used in the off-airport surface transportation analysis is cumulative by its nature. That is, it accounted for future regional, non-airport projects and their corresponding traffic growth as background traffic. The background traffic conditions used in the 2013 analysis also account for all funded roadway improvement projects that have been approved by local and regional transportation agencies.

4.2.2.7 Delineation of Mitigation Measures

The traffic analysis approach included provisions to identify mitigation measures for intersections determined to be significantly impacted by the addition of project-related traffic. Several types of improvements to the off-airport surface transportation system are recommended to mitigate the impacts of the Bradley West Project. Such improvements include the addition of, or improvements to, travel- and turn-lanes, traffic signal enhancements, and intersection restriping. Locations where additional right-of-way may be required are noted. In several cases, such additional right-of-way needs cannot be met due to existing improvements nearby, such as rail lines or major structures, which renders the potential intersection improvements infeasible. Those instances are discussed in the Section 4.2.9, *Mitigation Measures*, below.

4.2.3 Existing (2008) Conditions

This section contains details of the comprehensive data collected to develop a detailed description of the existing conditions in the study area. The assessment of conditions relevant to this study includes land use, the transit service in the study area, a description of street and highway systems, traffic volumes on these facilities, geometry and lane configurations at key intersections, and operating conditions at key intersections.

4.2.3.1 Traffic Analysis Study Area

The proposed project is located in the CTA. **Figure 4.2-1** illustrates the location of the Bradley West Project and the surrounding roadways. The project study area was determined through the use of the travel demand forecasting model and input from LADOT during the MOU process. Project trips were added to the model and assigned to the roadway network. The study intersections were then selected for analysis. These study intersections were then presented to LADOT for their approval. As shown in **Figure 4.2-2**, the Bradley West Project study area is bounded by Rose Avenue to the north, Manhattan Beach Boulevard to the south, Western Avenue to the east, and Pershing Drive to the west.

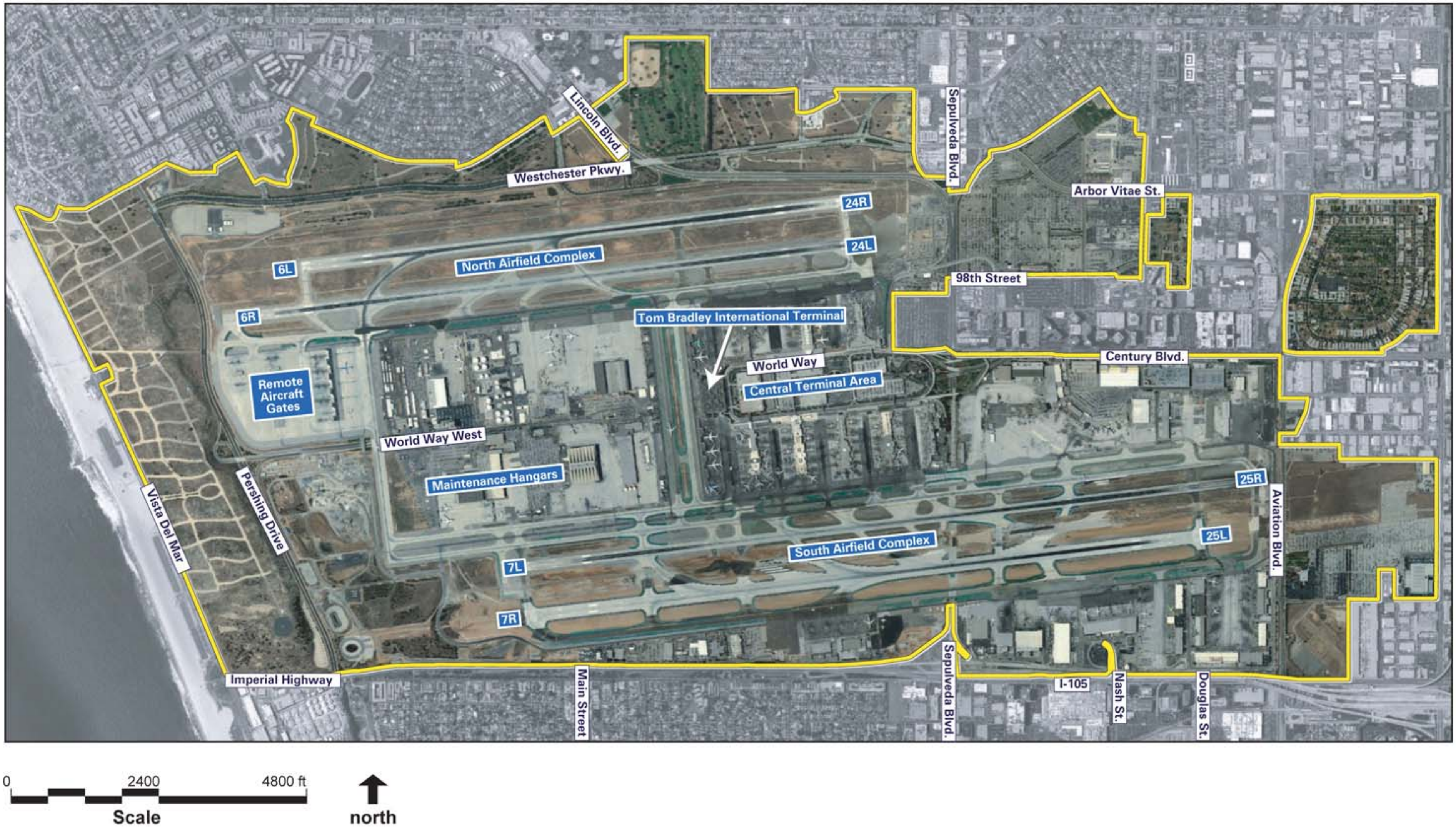
Primary regional access to the project is provided by the San Diego Freeway (I-405), which runs north-south, and the Glenn Anderson Freeway (I-105), which runs east-west. The main arterial streets serving the project are Century Boulevard and Sepulveda Boulevard, providing main entrances to the airport. Other key roadways providing access to the area are Airport Boulevard, Aviation Boulevard, La Cienega Boulevard, El Segundo Boulevard, Arbor Vitae Street/Westchester Parkway, Lincoln Boulevard, and Manchester Avenue.

Study Area Roadways

The key roadways providing access to the Bradley West Project include the following freeways and arterials:

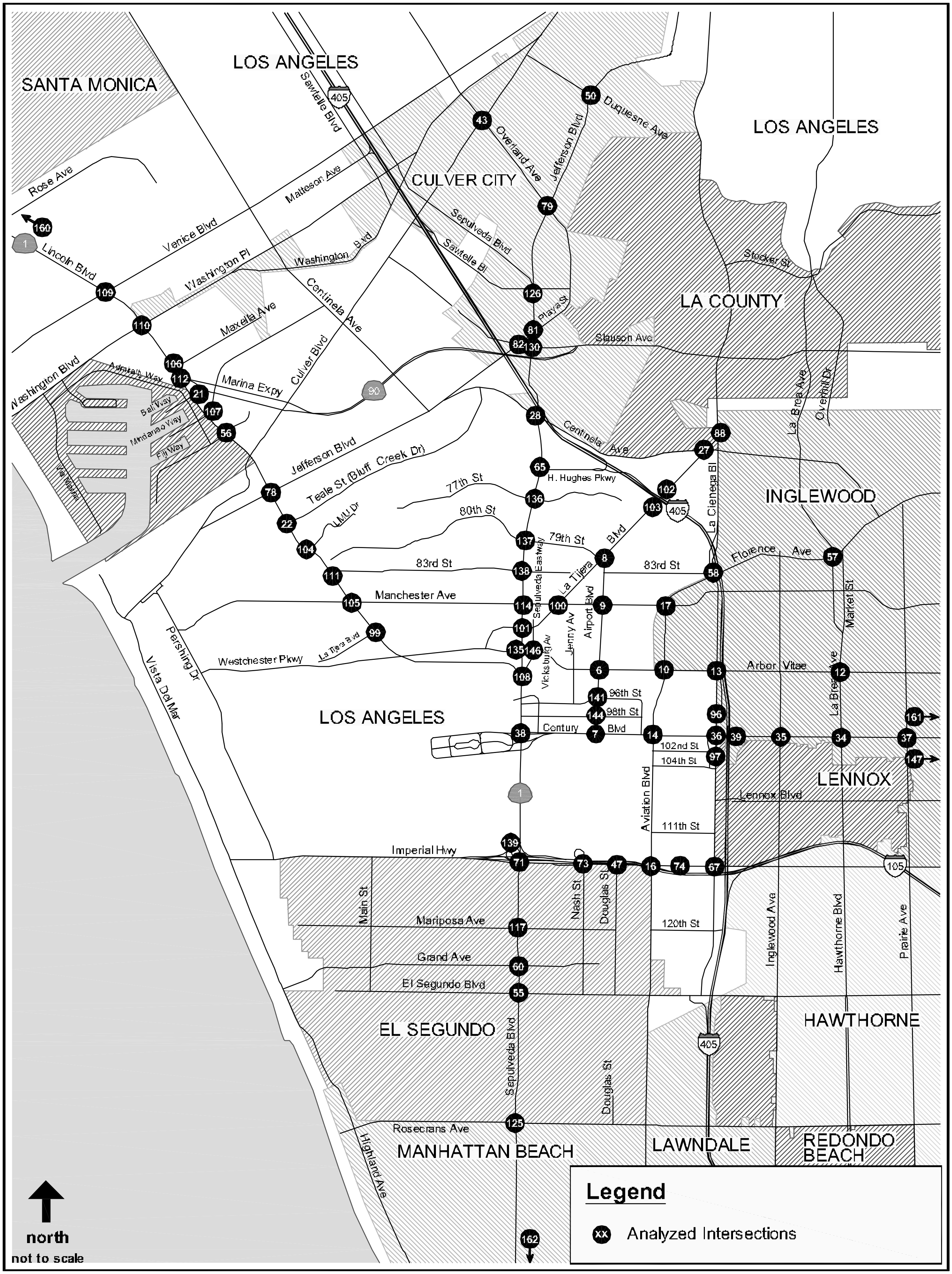
- **San Diego Freeway (I-405)** runs in a north-south direction east of LAX and extends from the San Fernando Valley to Orange County. The San Diego Freeway generally provides four lanes in each direction plus a carpool lane in certain segments. Ramps located in the study area provide access to/from Rosecrans Avenue, El Segundo Boulevard, Imperial Highway, Century Boulevard, Manchester Avenue/La Cienega Boulevard, La Tijera Boulevard, Howard Hughes Parkway, Sepulveda Boulevard, Jefferson Boulevard, Culver Boulevard, and Venice Boulevard/Washington Boulevard.
- **Glenn Anderson Freeway (I-105)** runs from its westerly terminus on Imperial Highway west of Sepulveda Boulevard to its easterly terminus at the San Gabriel Freeway (I-605) in the City of Norwalk. The Glenn Anderson Freeway generally provides four lanes in each direction, a carpool lane in each direction and a light rail line (the Green Line) down its center median. Ramps located in the study area include access to/from Imperial Highway, Sepulveda Boulevard/Imperial Highway, Nash Street, La Cienega Boulevard/Aviation Boulevard, Hawthorne Boulevard, Prairie Avenue, and Crenshaw Boulevard.

- **Marina Freeway (SR-90)** runs in an east-west direction and extends from Lincoln Boulevard in Marina Del Rey eastward to Slauson Avenue in southern Culver City. The Marina Freeway generally provides two lanes in each direction plus auxiliary lanes in certain segments. Ramps include Lincoln Boulevard, Mindanao Way, Culver Boulevard and Centinela Boulevard.
- **Airport Boulevard** is a Class II Major Highway that runs north-south with two to three lanes in each direction plus left-turn channelization at major intersections in the study area. Parking is generally prohibited on both sides of Airport Boulevard, and the posted speed limit is 35 miles per hour (MPH) in the study area.
- **Arbor Vitae Street** is a Class II Major Highway north of LAX that runs east-west with generally two lanes in each direction plus left-turn channelization at most major intersections through the study area. Restricted parking is allowed along certain segments of Arbor Vitae Street, and the posted speed limit is 35 MPH.
- **Aviation Boulevard** is a Class II Major Highway that runs north-south with two lanes in each direction plus left-turn channelization at major intersections in the study area. Parking is generally prohibited on both sides of Aviation Boulevard, and the posted speed limit is 40 MPH through the study area.
- **Century Boulevard** is a Class II Major Highway that runs east-west and directly feeds into the LAX CTA. It has three to four lanes in each direction plus left-turn channelization at major intersections through the study area. Parking is not allowed along Century Boulevard, and the posted speed limit is 35 MPH.
- **Crenshaw Boulevard** is a Major Arterial that runs north-south with two to three lanes in each direction plus left-turn channelization at major intersections through the study area. Parking is allowed on certain segments of Crenshaw Boulevard, and the posted speed limit ranges from 35 to 40 MPH.
- **Culver Boulevard** is a Class II Major Highway with two lanes in each direction plus left-turn channelization at major intersections in the study area. Parking is generally not allowed along Culver Boulevard but there are some segments with restricted parking. The posted speed limit is 40 MPH.
- **El Segundo Boulevard** is a Major Arterial south of LAX that runs east-west with one to three lanes in each direction plus left-turn channelization at major intersections through the study area. Parking is allowed on certain segments along El Segundo Boulevard, and the posted speed limit ranges from 35 to 40 MPH.
- **Hawthorne Boulevard/La Brea Avenue** is a Major Arterial that runs north-south with three to four lanes in each direction plus left-turn channelization at major intersections through the study area. Parking is generally allowed along most of Hawthorne Boulevard/La Brea Avenue, with some center median parking provided. The posted speed limit is 35 MPH.
- **Imperial Highway** is a Class II Major Highway directly south of LAX that runs east-west with two to three lanes in each direction plus left-turn channelization at major intersections through the study area. Parking is not allowed on Imperial Highway and the posted speed limit ranges from 40 to 50 MPH.
- **Inglewood Avenue** is a Minor Arterial that runs north-south with one to two lanes in each direction plus left-turn channelization at most major intersections through the study area. Parking is generally allowed on both sides of Inglewood Avenue, and the posted speed limit is 35 MPH.
- **Jefferson Boulevard** is a Class II Major Highway that runs east-west with two to three lanes in each direction plus left-turn channelization at most major intersections in the study area. With a few exceptions, parking is generally not allowed on either side of Jefferson Boulevard and the speed limit ranges from 35 to 45 MPH in the study area.
- **La Tijera Boulevard** is a Class II Major Highway north of LAX with two to three lanes in each direction plus left-turn channelization at major intersections. Parking is allowed on certain segments of La Tijera Boulevard, and it has a posted speed limit of 35 MPH.



Prepared by: CDM, 2009.

LAX Bradley West Project Draft EIR	Existing Airport	Figure 4.2-1



LAX Bradley West Project Draft EIR	Study Area With 71 Intersections	Figure 4.2-2

- **Lincoln Boulevard** is a Class I Major Highway northwest of LAX with two to four lanes in each direction plus left-turn channelization at major intersections through the study area. It begins at Sepulveda Boulevard just north of LAX and extends to the northwest. Parking is allowed on certain segments of Lincoln Boulevard, and the posted speed limit ranges from 40 to 55 MPH. Lincoln Boulevard is State Route 1 within the study area.
- **Manchester Avenue** is a Major Arterial north of LAX that runs east-west with generally two lanes in each direction plus left-turn channelization at major intersections through the study area. Parking is allowed along most of Manchester Avenue with some restricted segments. The posted speed limit along Manchester Avenue ranges from 25 to 35 MPH. This arterial is known as Manchester Boulevard in the City of Inglewood.
- **Overland Avenue** is a Class II Major Highway north of LAX that runs north-south with two lanes in each direction plus left-turn channelization at most major intersections through the study area. Restricted parking is allowed along most of Overland Avenue, and the posted speed limit is 35 MPH.
- **Pershing Drive** is a Major Arterial west of LAX that runs north-south with primarily two lanes in each direction plus left-turn channelization at major intersections through the study area. Parking is allowed on both sides of Pershing Drive between Westchester Parkway and its northerly terminus at Culver Boulevard. Although parking is prohibited between Imperial Highway and Westchester Parkway, there are bike lanes within these limits.
- **Prairie Avenue** is a Major Arterial east of LAX that runs north-south with three lanes in each direction plus left-turn channelization at most major intersections through the study area. Parking is generally allowed along both sides of Prairie Avenue and the posted speed limit is 35 MPH.
- **Rosecrans Avenue** is a Major Arterial south of LAX that runs east-west with two to three lanes in each direction plus left-turn channelization at most major intersections through the study area. Parking is not allowed along Rosecrans Avenue through the study area, except for limited restricted parking segments. The posted speed limit ranges from 40 to 45 MPH.
- **Sawtelle Boulevard** is a Secondary Highway north of LAX with one to two lanes in each direction. Parking is allowed along most of Sawtelle Boulevard on both sides and the posted speed limit ranges from 25 to 35 MPH.
- **Sepulveda Boulevard** is a Class I Major Highway with three to four lanes in each direction plus left-turn channelization at major intersections through the study area. It runs north-south and intersects with the main entrance and exit of the airport's CTA at Century Boulevard, providing direct access to LAX. Parking is generally prohibited on both sides of Sepulveda Boulevard in the study area with the exception of the stretch between Manchester Avenue and 92nd Street. The speed limit ranges from 30 and 45 MPH. Sepulveda Boulevard is State Route 1 south of its intersection with Lincoln Boulevard.
- **Slauson Boulevard** ranges from a Local Street to a Class II Major Highway in the study area. It ranges from one to three lanes in each direction plus left-turn channelization at major intersections in the study area. Parking is only allowed on Slauson Boulevard where it is a local street. The posted speed limit ranges from 25 to 40 MPH.
- **Venice Boulevard** is a Class II Major Highway that runs east-west with two to three lanes in each direction plus left-turn channelization at major intersections in the study area. Parking is generally allowed on both sides of Venice Boulevard, and the posted speed limit is 35 MPH.
- **Washington Boulevard** is a Class II Major Highway that runs east-west with two lanes in each direction plus left-turn channelization at major intersections in the study area. Restricted parking along Washington Boulevard is generally allowed, and the posted speed limit ranges from 30 to 35 MPH.
- **Westchester Parkway** is a Class II Major Highway just north of LAX that runs east-west with two lanes plus bike lanes in each direction. Its limits are Pershing Drive on the west and Airport Boulevard on the east. Except for a short stretch in Westchester Village, parking is not allowed along Westchester Parkway. The posted speed limit ranges from 30 to 50 MPH. The portion of

Westchester Parkway between Pershing Drive and Sepulveda Westway was built by Los Angeles World Airports.

4.2.3.2 Data Collection and Data Sources

This section discusses the data collected and data sources for key locations analyzed as part of this EIR.

Study Intersections

The analyzed intersections[57] were selected in conjunction with LADOT. A total of 71 intersections were selected for analysis. These locations are shown in **Figure 4.2-2** and are as follows:

- 6. Airport Boulevard and Arbor Vitae Street/Westchester Parkway
- 7. Airport Boulevard and Century Boulevard
- 8. Airport Boulevard and La Tijera Boulevard
- 9. Airport Boulevard and Manchester Avenue
- 10. Arbor Vitae Street and Aviation Boulevard
- 12. Arbor Vitae Street and La Brea Avenue
- 13. Arbor Vitae Street and La Cienega Boulevard
- 14. Aviation Boulevard and Century Boulevard
- 16. Aviation Boulevard and Imperial Highway
- 17. Aviation Boulevard/Florence Avenue and Manchester Boulevard
- 21. Bali Way and Lincoln Boulevard
- 22. Bluff Creek Drive and Lincoln Boulevard
- 27. Centinela Avenue and La Tijera Boulevard
- 28. Centinela Avenue and Sepulveda Boulevard
- 34. Century Boulevard and Hawthorne Boulevard/La Brea Avenue
- 35. Century Boulevard and Inglewood Avenue
- 36. Century Boulevard and La Cienega Boulevard
- 37. Century Boulevard and Prairie Avenue
- 38. Century Boulevard and Sepulveda Boulevard
- 39. Century Boulevard and I-405 NB On/Off Ramps
- 43. Culver Boulevard and Overland Avenue
- 47. Douglas Street and Imperial Highway
- 50. Duquesne Avenue and Jefferson Boulevard
- 55. El Segundo Boulevard and Sepulveda Boulevard
- 56. Fiji Way and Lincoln Boulevard
- 57. Florence Avenue and La Brea Avenue
- 58. Florence Avenue and La Cienega Boulevard
- 60. Grand Avenue and Sepulveda Boulevard
- 65. Howard Hughes Parkway and Sepulveda Boulevard
- 67. Imperial Highway and La Cienega Boulevard
- 71. Imperial Highway and Sepulveda Boulevard
- 73. Imperial Highway and Nash Street/I-105 WB Off-Ramp
- 74. Imperial Highway and I-105 Ramps E/O Aviation Boulevard
- 78. Jefferson Boulevard and Lincoln Boulevard
- 79. Jefferson Boulevard and Overland Avenue
- 81. Jefferson Boulevard/Playa Street and Sepulveda Boulevard
- 82. Jefferson Boulevard and Slauson Avenue
- 88. La Cienega Boulevard and La Tijera Boulevard

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57 The intersection numbers correspond with the intersection number designations associated with the intersection traffic count database that has been collected to support analyses associated with the LAX Specific Plan Amendment Study.

- 96. La Cienega Boulevard and I-405 Ramps N/O Century Boulevard
- 97. La Cienega Boulevard and I-405 Ramps S/O Century Boulevard
- 99. La Tijera Boulevard and Lincoln Boulevard
- 100. La Tijera Boulevard and Manchester Avenue
- 101. La Tijera Boulevard and Sepulveda Boulevard
- 102. La Tijera Boulevard and I-405 NB Ramps
- 103. La Tijera Boulevard and I-405 SB Ramps
- 104. Lincoln Boulevard and LMU Drive
- 105. Lincoln Boulevard and Manchester Avenue
- 106. Lincoln Boulevard and Marina Pointe Drive/Maxella Avenue
- 107. Lincoln Boulevard and Mindanao Way
- 108. Lincoln Boulevard and Sepulveda Boulevard
- 109. Lincoln Boulevard and Venice Boulevard
- 110. Lincoln Boulevard and Washington Boulevard
- 111. Lincoln Boulevard and 83rd Street
- 112. Lincoln Boulevard and SR-90
- 114. Manchester Avenue and Sepulveda Boulevard
- 117. Mariposa Avenue and Sepulveda Boulevard
- 125. Rosecrans Avenue and Sepulveda Boulevard
- 126. Sawtelle Boulevard and Sepulveda Boulevard
- 130. Sepulveda Boulevard and Slauson Avenue
- 135. Sepulveda Boulevard and Westchester Parkway
- 136. Sepulveda Boulevard and 76th/77th Street
- 137. Sepulveda Boulevard and 79th/80th Street
- 138. Sepulveda Boulevard and 83rd Street
- 139. Sepulveda Boulevard and I-105 WB Ramp north of Imperial Highway
- 141. 96th Street and Airport Boulevard
- 144. 98th Street and Airport Boulevard
- 146. Sepulveda Eastway and Westchester Parkway
- 147. Century Boulevard and Crenshaw Boulevard
- 160. Lincoln Boulevard and Rose Avenue
- 161. Century Boulevard and Western Avenue
- 162. Sepulveda Boulevard and Rosecrans Avenue

The 71 intersections listed above are located in nine different jurisdictions/agencies, namely:

- Los Angeles
- State of California (Caltrans)
- Unincorporated Los Angeles County
- Culver City
- Inglewood
- El Segundo
- Manhattan Beach
- Lennox
- Hawthorne

Intersection Control and Geometry

All of the 71 study area intersections listed above and illustrated in **Figure 4.2-2** are signalized. Many of the intersections are included in LADOT's Automated Traffic Surveillance and Control (ATSAC) system, the exceptions being:

- 12. Arbor Vitae Street and La Brea Avenue
- 34. Century Boulevard and Hawthorne Boulevard/La Brea Avenue

- 35. Century Boulevard and Inglewood Avenue
- 37. Century Boulevard and Prairie Avenue
- 55. El Segundo Boulevard and Sepulveda Boulevard
- 57. Florence Avenue and La Brea Avenue
- 58. Florence Avenue and La Cienega Boulevard
- 60. Grand Avenue and Sepulveda Boulevard
- 117. Mariposa Avenue and Sepulveda Boulevard
- 125. Rosecrans Avenue and Sepulveda Boulevard
- 147. Century Boulevard and Crenshaw Boulevard
- 162. Sepulveda Boulevard and Manhattan Beach Boulevard

In addition, many of the intersections are included in LADOT's Adaptive Traffic Control System (ATCS) system, the exceptions being:

- 12. Arbor Vitae Street and La Brea Avenue
- 34. Century Boulevard and Hawthorne Boulevard/La Brea Avenue
- 35. Century Boulevard and Inglewood Avenue
- 37. Century Boulevard and Prairie Avenue
- 43. Culver Boulevard and Overland Avenue
- 50. Duquesne Avenue and Jefferson Boulevard
- 55. El Segundo Boulevard and Sepulveda Boulevard
- 57. Florence Avenue and La Brea Avenue
- 58. Florence Avenue and La Cienega Boulevard
- 60. Grand Avenue and Sepulveda Boulevard
- 79. Jefferson Boulevard and Overland Avenue
- 81. Jefferson Boulevard/Playa Street and Sepulveda Boulevard
- 82. Jefferson Boulevard and Slauson Avenue
- 117. Mariposa Avenue and Sepulveda Boulevard
- 125. Rosecrans Avenue and Sepulveda Boulevard
- 126. Sawtelle Boulevard and Sepulveda Boulevard
- 130. Sepulveda Boulevard and Slauson Avenue
- 147. Century Boulevard and Crenshaw Boulevard

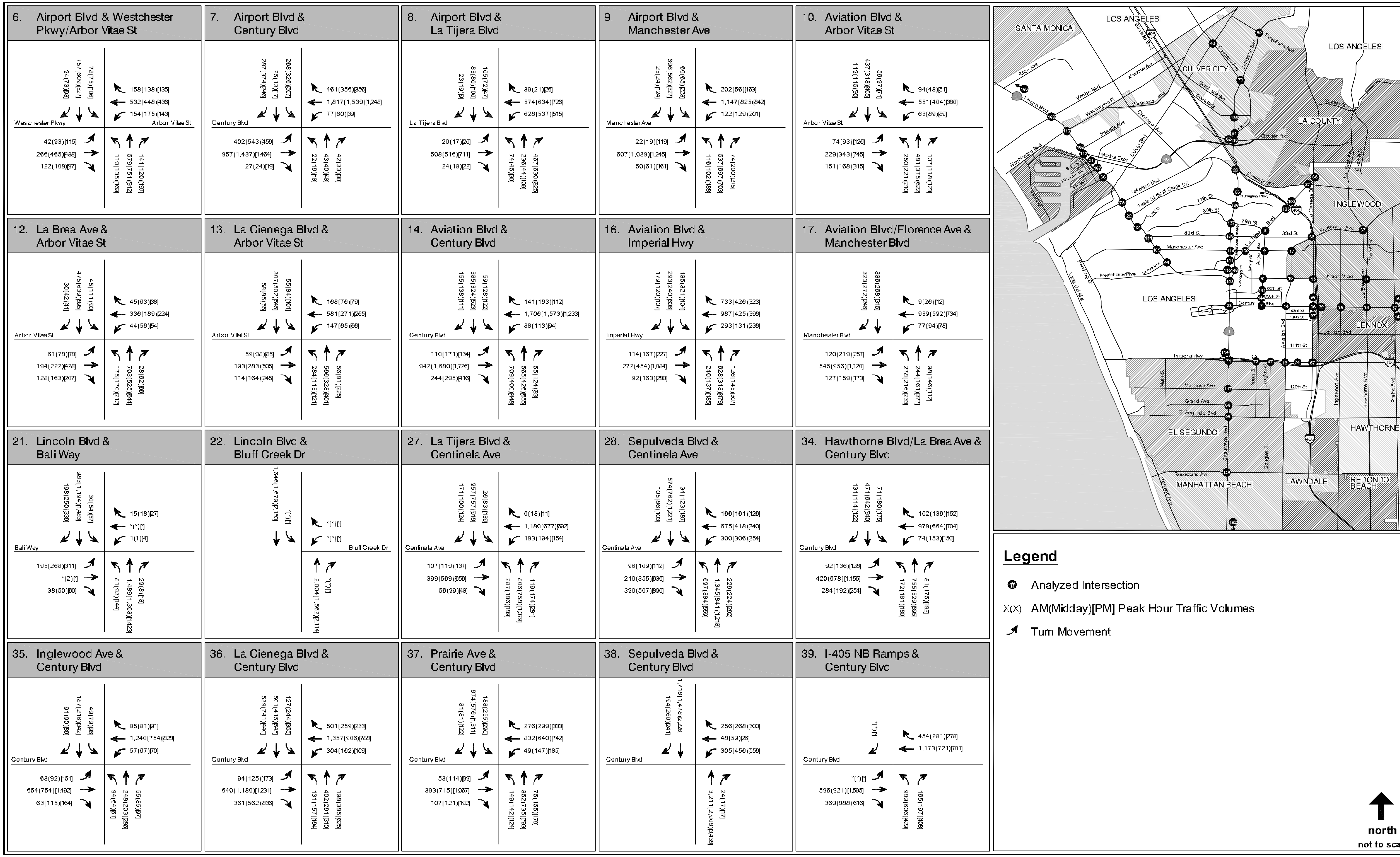
Information concerning signal controls was provided by LADOT, specifically whether the intersection was under the control of ATSAC/ATCS. The ATSAC system provides for monitoring of intersection traffic conditions and the flexibility to adjust traffic signal timing in response to current conditions. The ATCS system continuously detects vehicular traffic volumes and computes "optimal" signal timings based on the detected volumes that can then be implemented in the field.

In addition to the information regarding the signal control systems, detailed information was collected concerning the lane geometry/configurations and the signal phasing. This information is provided in Appendix C-3 of this EIR.

Traffic Count Data

Intersection turning movement counts were collected during the weekday morning, midday (MD) and afternoon time periods at the 71 aforementioned locations in July and August 2008. July and August are considered to be the peak months for airport-related traffic around LAX; therefore, additional seasonal adjustments were not required to convert the counts to peak month conditions. Collecting counts during the peak months for airport-related traffic provides for a more conservative analysis because as LOS gets progressively higher, the trigger for the significance threshold gets lower, as discussed in Section 4.2.5 below.

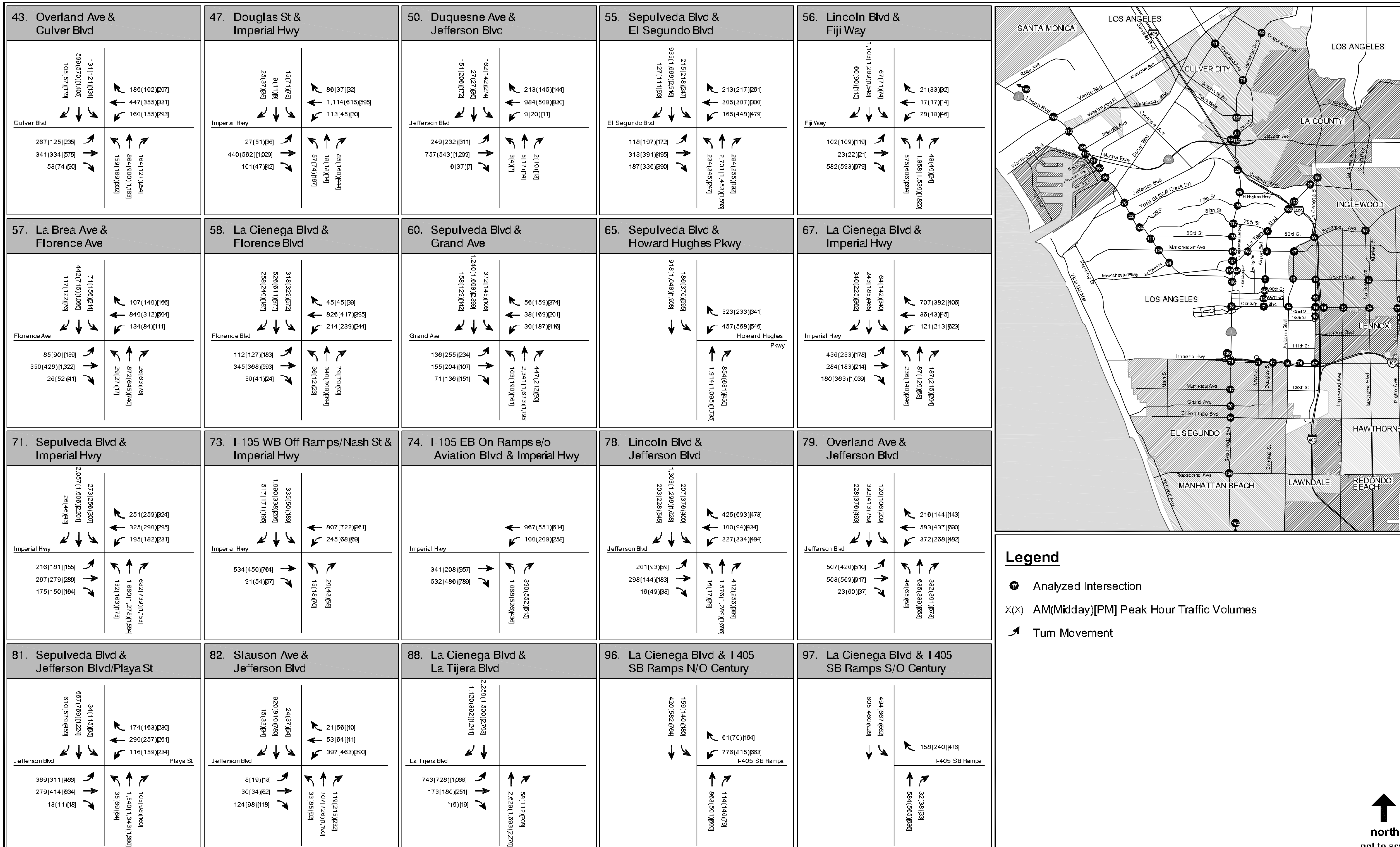
Traffic count data sheets are provided in Appendix C-4 and the existing traffic volumes are illustrated in **Figures 4.2-3a-d**. The AM peak hour represents the peak 60-minute period between 7:00 and 9:00 AM,



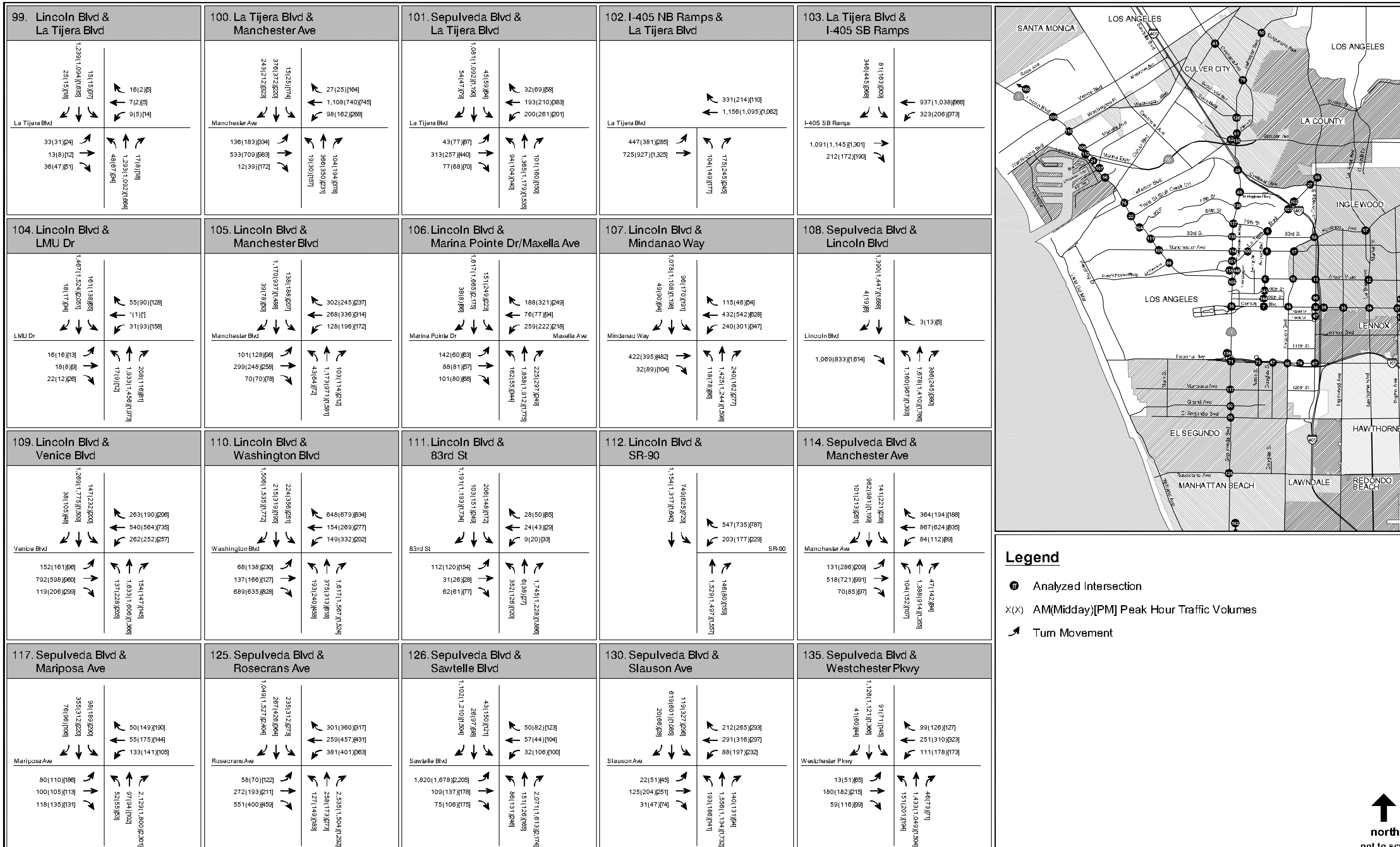
LAX Bradley West Project Draft EIR

Existing (2008) Traffic Volumes

Figure 4.2-3a



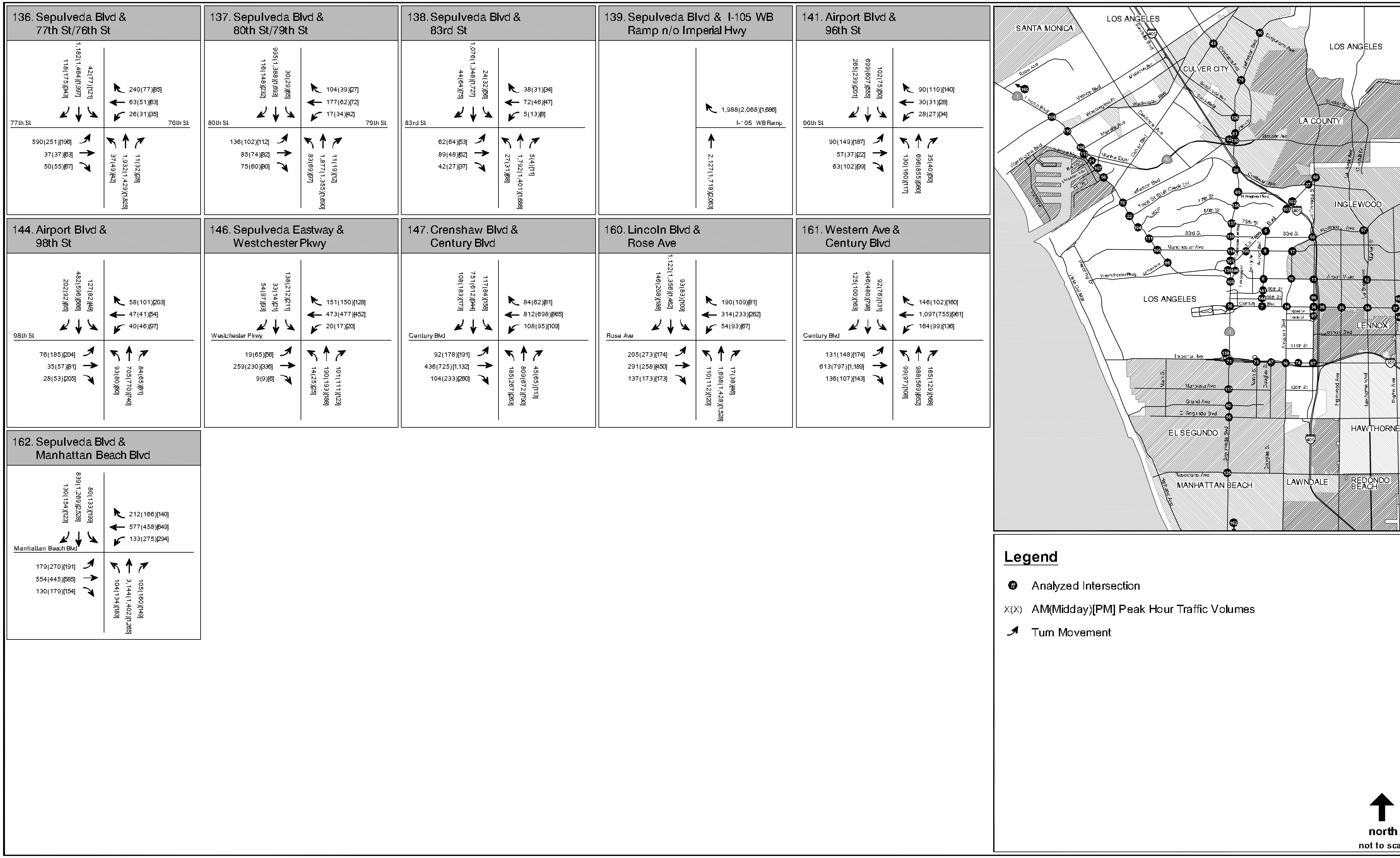
LAX Bradley West Project Draft EIR	Existing (2008) Traffic Volumes	Figure 4.2-3b



LAX Bradley West Project Draft EIR

Existing (2008) Traffic Volumes

Figure
4.2-3c



LAX Bradley West Project Draft EIR	Existing (2008) Traffic Volumes	Figure 4.2-3d

the MD peak hour represents the peak 60-minute period between 11:00 AM and 1:00 PM, and the PM peak hour represents the peak 60-minute period between 4:00 and 6:00 PM.

Existing Public Transit Service

The proposed project area is currently being served by a total of 59 different transit lines. These transit lines are listed below and consist of Los Angeles County Metropolitan Transportation Authority (Metro) lines, LADOT Commuter Express lines, Culver City Bus lines, Santa Monica Big Blue Bus lines, a Beach Cities Transit line, a Torrance Transit line, and Municipal Area Express (MAX) lines.

Los Angeles County Metropolitan Transportation Authority

- Metro Rapid Lines: 705, 710, 711, 715, 740, and R3
- Metro Local & Limited Lines: 33, 37, 38, 40, 42, 42A, 105, 108, 110, 111, 115, 117, 120, 124, 125, 126, 210, 211, 212, 215, 220, 232, 312, 333, and 358
- Metro Express Lines: 439, 442, and 534
- Metro Shuttle & Circulator Lines: 607, 625, and 626
- Metro Rail Line: Green Line

Los Angeles Department of Transportation

- LADOT Commuter Express Lines: 437, 574, and 438

Culver City Bus

- Culver City Bus Lines: 1, 2, 3, 4, 5, 6, and 7

Santa Monica Big Blue Bus

- Big Blue Bus Lines: 1, 2, 6, 12, and 14

Beach Cities Transit

- Beach Cities Transit Line: 109

Torrance Transit

- Torrance Transit Line: 8

Municipal Area Express

- MAX Lines: 2, 3, and 3X

4.2.3.3 Existing (2008) Traffic Conditions

Intersection LOS was analyzed using either the Critical Movement Analysis (CMA) methodology[58] or the Intersection Capacity Utilization (ICU) methodology[59] to assess the estimated operating conditions during Existing (2008) conditions for the AM, MD and PM peak hours. Level of service is a qualitative measure used to describe the condition of traffic flow. Intersection level of service ranges from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically considered to be the minimum acceptable level of service in urban areas.

LADOT requires that the CMA methodology of intersection capacity analysis be used to determine the intersection V/C ratio and corresponding level of service for the given turning movements and intersection characteristics at signalized intersections within the City of Los Angeles. However, 24 of the 71 study intersections are located in neighboring cities or unincorporated County of Los Angeles boundaries

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58 Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

59 Trafficware, Intersection Capacity Utilization, 2003.

adjacent to the City of Los Angeles. The traffic analysis for those intersections located outside the City of Los Angeles was conducted using the methodologies of the respective jurisdictions where the intersections are located. Specifically, the ICU methodology is required by all neighboring cities and Los Angeles County. Therefore, the 71 study intersections discussed in Section 4.2.3.2 were analyzed using either the CMA or ICU methodology. The CalcaDB software package developed by LADOT was used to implement the CMA methodology in this EIR. **Table 4.2-1** defines the ranges of V/C ratios and their corresponding levels of service using the CMA method.

Table 4.2-1

Level of Service Thresholds and Definitions for Signalized Intersections

Level of Service (LOS)	Volume/Capacity Ratio Threshold	Definition
A	0 - 0.6	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.7	VERY GOOD. An occasional approach phase is fully used; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.8	GOOD. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.9	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.0	POOR. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.0	FAILURE. Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

In accordance with LADOT analysis procedures, the V/C ratio calculated using the CMA or ICU methodology is further reduced by 0.07 for those intersections included in the ATSAC system and an additional 0.03 for ATCS, to account for the improved operation and increased efficiency from the ATSAC/ATCS system that is not captured as part of the CMA or ICU methodology. Application of the ATSAC reduction is described in Attachment D of LADOT's Traffic Study Policies and Procedures.[60]

Table 4.2-2 summarizes the AM, MD and PM peak hour V/C ratios and corresponding LOS at each of the study intersections. The results of this analysis indicate that 60 of the 71 study intersections are currently operating at acceptable levels of service (LOS D or better) during both the morning, midday and afternoon peak hours, and the remaining 11 intersections currently operate at LOS E or F during one or more of the peak hours. These locations are as follows:

- 9. Airport Boulevard & Manchester Avenue
- 43. Culver Boulevard and Overland Avenue
- 55. El Segundo Boulevard & Sepulveda Boulevard
- 57. Florence Avenue and La Brea Avenue
- 58. Florence Avenue and La Cienega Boulevard
- 60. Grand Avenue & Sepulveda Boulevard
- 71. Imperial Highway & Sepulveda Boulevard
- 78. Jefferson Boulevard and Lincoln Boulevard

60 Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002.

- 110. Lincoln Boulevard & Washington Boulevard
- 125. Rosecrans Avenue & Sepulveda Boulevard
- 162. Sepulveda Boulevard and Manhattan Beach Boulevard

Appendix C-5 contains the CalcaDB LOS worksheets (including signal phasing and lane geometry).

Table 4.2-2

Existing (2008) Conditions Intersection Analysis Results

	Intersection	Peak Hour[1]	V/C[2]	LOS[3]
6.	Airport Boulevard and Arbor Vitae Street/Westchester Parkway	AM	0.451	A
		MD	0.525	A
		PM	0.600	B
7.	Airport Boulevard and Century Boulevard	AM	0.535	A
		MD	0.576	A
		PM	0.488	A
8.	Airport Boulevard and La Tijera Boulevard	AM	0.582	A
		MD	0.381	A
		PM	0.487	A
9.	Airport Boulevard and Manchester Avenue	AM	0.680	B
		MD	0.673	B
		PM	0.921	E
10.	Arbor Vitae Street and Aviation Boulevard	AM	0.517	A
		MD	0.422	A
		PM	0.618	B
12.	Arbor Vitae Street and La Brea Avenue	AM	0.457	A
		MD	0.513	A
		PM	0.721	C
13.	Arbor Vitae Street and La Cienega Boulevard	AM	0.511	A
		MD	0.435	A
		PM	0.539	A
14.	Aviation Boulevard and Century Boulevard	AM	0.740	C
		MD	0.619	B
		PM	0.728	C
16.	Aviation Boulevard and Imperial Highway	AM	0.707	C
		MD	0.391	A
		PM	0.661	B
17.	Aviation Boulevard/Florence Avenue and Manchester Boulevard	AM	0.744	C
		MD	0.663	B
		PM	0.699	B
21.	Bali Way and Lincoln Boulevard	AM	0.373	A
		MD	0.429	A
		PM	0.581	A
22.	Bluff Creek Drive and Lincoln Boulevard	AM	N/A	N/A
		MD	N/A	N/A
		PM	N/A	N/A
27.	Centinela Avenue and La Tijera Boulevard	AM	0.653	B
		MD	0.490	A
		PM	0.613	B
28.	Centinela Avenue and Sepulveda Boulevard	AM	0.715	C
		MD	0.558	A
		PM	0.743	C
34.	Century Boulevard and Hawthorne Boulevard/La Brea Avenue	AM	0.589	A
		MD	0.624	B
		PM	0.797	C
35.	Century Boulevard and Inglewood Avenue	AM	0.601	B
		MD	0.508	A
		PM	0.741	C
36.	Century Boulevard and La Cienega Boulevard	AM	0.611	B
		MD	0.632	B
		PM	0.897	D

Table 4.2-2

Existing (2008) Conditions Intersection Analysis Results

	Intersection	Peak Hour[1]	V/C[2]	LOS[3]
37.	Century Boulevard and Prairie Avenue	AM	0.675	B
		MD	0.711	C
		PM	0.860	D
38.	Century Boulevard and Sepulveda Boulevard	AM	0.553	A
		MD	0.557	A
		PM	0.667	B
39.	Century Boulevard and I-405 NB On/Off Ramps	AM	0.725	C
		MD	0.520	A
		PM	0.600	A
43.	Culver Boulevard and Overland Avenue	AM	0.767	C
		MD	0.619	B
		PM	0.950	E
47.	Douglas Street and Imperial Highway	AM	0.264	A
		MD	0.179	A
		PM	0.368	A
50.	Duquesne Avenue and Jefferson Boulevard	AM	0.598	A
		MD	0.434	A
		PM	0.663	B
55.	El Segundo Boulevard and Sepulveda Boulevard	AM	0.819	D
		MD	0.813	D
		PM	0.972	E
56.	Fiji Way and Lincoln Boulevard	AM	0.492	A
		MD	0.568	A
		PM	0.668	B
57.	Florence Avenue and La Brea Avenue	AM	0.766	C
		MD	0.602	B
		PM	0.960	E
58.	Florence Avenue and La Cienega Boulevard	AM	0.793	C
		MD	0.743	C
		PM	1.000	E
60.	Grand Avenue and Sepulveda Boulevard	AM	0.805	D
		MD	0.718	C
		PM	0.927	E
65.	Howard Hughes Parkway and Sepulveda Boulevard	AM	0.569	A
		MD	0.569	A
		PM	0.569	A
67.	Imperial Highway and La Cienega Boulevard	AM	0.361	A
		MD	0.227	A
		PM	0.547	A
71.	Imperial Highway and Sepulveda Boulevard	AM	0.680	B
		MD	0.714	C
		PM	1.051	F
73.	Imperial Highway and Nash Street/I-105 WB Off-Ramp	AM	0.557	A
		MD	0.212	A
		PM	0.285	A
74.	Imperial Highway and I-105 Ramps E/O Aviation Boulevard	AM	0.652	B
		MD	0.296	A
		PM	0.475	A
78.	Jefferson Boulevard and Lincoln Boulevard	AM	0.801	D
		MD	0.724	C
		PM	0.947	E
79.	Jefferson Boulevard and Overland Avenue	AM	0.683	B
		MD	0.520	A
		PM	0.851	D
81.	Jefferson Boulevard/Playa Street and Sepulveda Boulevard	AM	0.655	B
		MD	0.625	B
		PM	0.798	C
82.	Jefferson Boulevard and Slauson Avenue	AM	0.468	A
		MD	0.474	A

Table 4.2-2

Existing (2008) Conditions Intersection Analysis Results

	Intersection	Peak Hour[1]	V/C[2]	LOS[3]
		PM	0.509	A
88.	La Cienega Boulevard and La Tijera Boulevard	AM	0.681	B
		MD	0.481	A
		PM	0.820	D
96.	La Cienega Boulevard and I-405 Ramps N/O Century Boulevard	AM	0.635	B
		MD	0.507	A
		PM	0.550	A
97.	La Cienega Boulevard and I-405 Ramps S/O Century Boulevard	AM	0.322	A
		MD	0.387	A
		PM	0.408	A
99.	La Tijera Boulevard and Lincoln Boulevard	AM	0.268	A
		MD	0.227	A
		PM	0.349	A
100.	La Tijera Boulevard and Manchester Avenue	AM	0.529	A
		MD	0.440	A
		PM	0.727	C
101.	La Tijera Boulevard and Sepulveda Boulevard	AM	0.471	A
		MD	0.472	A
		PM	0.565	A
102.	La Tijera Boulevard and I-405 NB Ramps	AM	0.598	A
		MD	0.569	A
		PM	0.478	A
103.	La Tijera Boulevard and I-405 SB Ramps	AM	0.506	A
		MD	0.489	A
		PM	0.661	B
104.	Lincoln Boulevard and LMU Drive	AM	0.689	B
		MD	0.521	A
		PM	0.720	C
105.	Lincoln Boulevard and Manchester Avenue	AM	0.512	A
		MD	0.533	A
		PM	0.704	C
106.	Lincoln Boulevard and Marina Pointe Drive/Maxella Avenue	AM	0.610	B
		MD	0.614	B
		PM	0.579	A
107.	Lincoln Boulevard and Mindanao Way	AM	0.576	A
		MD	0.622	B
		PM	0.779	C
108.	Lincoln Boulevard and Sepulveda Boulevard	AM	0.325	A
		MD	0.303	A
		PM	0.451	A
109.	Lincoln Boulevard and Venice Boulevard	AM	0.850	D
		MD	0.890	D
		PM	0.867	D
110	Lincoln Boulevard and Washington Boulevard	AM	0.765	C
		MD	0.827	D
		PM	1.012	F
111.	Lincoln Boulevard and 83rd Street	AM	0.719	C
		MD	0.631	B
		PM	0.711	C
112	Lincoln Boulevard and SR-90	AM	0.691	B
		MD	0.625	B
		PM	0.698	B
114.	Manchester Avenue and Sepulveda Boulevard	AM	0.707	C
		MD	0.627	B
		PM	0.827	D
117.	Mariposa Avenue and Sepulveda Boulevard	AM	0.712	C
		MD	0.731	C
		PM	0.755	C
125.	Rosecrans Avenue and Sepulveda Boulevard	AM	0.948	E
		MD	0.841	D

Table 4.2-2

Existing (2008) Conditions Intersection Analysis Results

Intersection		Peak Hour[1]	V/C[2]	LOS[3]
		PM	0.972	E
126.	Sawtelle Boulevard and Sepulveda Boulevard	AM	0.472	A
		MD	0.556	A
		PM	0.659	B
130.	Sepulveda Boulevard and Slauson Avenue	AM	0.552	A
		MD	0.563	A
		PM	0.695	B
135.	Sepulveda Boulevard and Westchester Parkway	AM	0.471	A
		MD	0.528	A
		PM	0.598	A
136.	Sepulveda Boulevard and 76th/77th Street	AM	0.734	C
		MD	0.440	A
		PM	0.577	A
137.	Sepulveda Boulevard and 79th/80th Street	AM	0.617	B
		MD	0.390	A
		PM	0.481	A
138.	Sepulveda Boulevard and 83rd Street	AM	0.447	A
		MD	0.336	A
		PM	0.453	A
139.	Sepulveda Boulevard and I-105 WB Ramp north of Imperial Highway	AM	0.863	D
		MD	0.792	C
		PM	0.775	C
141.	96th Street and Airport Boulevard	AM	0.329	A
		MD	0.405	A
		PM	0.469	A
144.	98th Street and Airport Boulevard	AM	0.341	A
		MD	0.429	A
		PM	0.486	A
146.	Sepulveda Eastway and Westchester Parkway	AM	0.349	A
		MD	0.439	A
		PM	0.413	A
147.	Century Boulevard and Crenshaw Boulevard	AM	0.640	B
		MD	0.702	C
		PM	0.855	D
160.	Lincoln Boulevard and Rose Avenue	AM	0.874	D
		MD	0.769	C
		PM	0.827	D
161.	Century Boulevard and Western Avenue	AM	0.758	C
		MD	0.497	A
		PM	0.750	C
162.	Sepulveda Boulevard and Manhattan Beach Boulevard	AM	1.100	F
		MD	0.792	C
		PM	1.133	F

[1] The AM peak hour represents the peak 60-minute period between 7:00 and 9:00 A.M., the MD peak hour represents the peak 60-minute period between 11:00 A.M. and 1:00 P.M., and the PM peak hour represents the peak 60-minute period between 4:00 and 6:00 p.m.

[2] Volume to capacity ratio.

[3] Level of Service range: A (excellent) to F (failure).

Source: Fehr & Peers, February 2009.

4.2.4 Project Traffic

4.2.4.1 Peak-Hour Project Trip Generation in 2013

Peak hour trip generation estimates were developed for 2013 conditions with the reconfigured terminal described in Section 4.2.2.1 above. Since the reconfiguration of the TBIT terminal would likely affect vehicle trip generation of other airport facilities, trip generation was estimated at the CTA, airport parking facilities, employee parking facilities, rental car facilities, and off-airport parking facilities.

The Future (2013) With Project trip generation estimates were compared to existing (2008) observed trip generation numbers to determine the number of TBIT-related trips during each of the three analysis peak hours, which accounts for the increase in passenger activity from 2008 to 2013 at the TBIT terminal as well as the reconfigured terminal described in Section 4.2.2.1. This approach reflects the fact that, as described in Section 4.2.2.1, the trip-generation for the off-airport surface transportation analysis was based on passenger activity levels, which, in this case, is very conservative by assuming all of the growth in TBIT-related vehicle trips between 2008 and 2013 is attributable to the project. Trip generation estimates were also developed for adjacent terminals. This information is provided in Appendix C-7. The peak hour project trip generation is shown in **Table 4.2-3**. As noted above in Section 4.2.2.5, the trip generation estimates developed for this analysis are based on an aviation activity level forecast that assumed substantial growth in passenger activity levels at LAX between 2008 and 2013, which is considered to be conservative (high) given current economic conditions and associated decreases in aviation activity worldwide.

Table 4.2-3

TBIT Trip Generation

	Future (2013) With Project Minus Existing (2008) Conditions		
Peak Hour/Location	**In**	**Out**	**Total**
AM Peak Hour			
CTA	522	685	1,207
Airport Parking	6	13	19
Employee Parking	158	47	205
Rental Car Facility	30	195	225
Off-Airport Parking	8	26	34
Total	**724**	**966**	**1,690**
MD Peak Hour			
CTA	713	804	1,517
Airport Parking	12	13	25
Employee Parking	61	33	94
Rental Car Facility	102	159	261
Off-Airport Parking	21	18	39
Total	**909**	**1,027**	**1,936**
PM Peak Hour			
CTA	593	470	1,063
Airport Parking	31	2	33
Employee Parking	87	122	209
Rental Car Facility	202	11	213
Off-Airport Parking	35	3	38
Total	**948**	**608**	**1,556**

Source: Fehr & Peers, 2009.

4.2.4.2 Trip Distribution

Vehicle trips generated by the proposed Bradley West Project were distributed to the regional roadway network by the LAX travel demand model. The model focuses on estimating regional travel for the entire southern California region supplemented by a more detailed sub-area model to better distribute trips in the study area. Additionally, the model-wide distribution pattern of airport-related trips in the validated base year model was compared to annual distribution percentages published in the Los Angeles

International Airport 2006 Air Passenger Survey.[61] The existing distribution patterns of airport-related trips were maintained throughout both analysis scenarios.

4.2.5 CEQA Thresholds of Significance

Each study intersection was evaluated for potential traffic impacts using the significant traffic impact criteria utilized in the jurisdiction of the intersection. Intersections lying on the boundary of multiple jurisdictions were evaluated using the more conservative criteria. Specifically, 47 intersections were evaluated using the City of Los Angeles significant traffic impact criteria, 10 intersections were evaluated using the City of Inglewood significant traffic impact criteria, 8 intersections were evaluated using the City of Culver City significant traffic impact criteria, 3 intersections were evaluated using the City of El Segundo significant traffic impact criteria, 2 intersections were evaluated using the City of Manhattan Beach significant traffic impact criteria, and 1 intersection was evaluated using the Los Angeles County significant impact criteria. A description of the significant impact criteria for each jurisdiction is presented below.

4.2.5.1 City of Culver City Impact Criteria

For the City of Culver City, an impact is considered to be significant if one of the following thresholds is exceeded:[62]

- The LOS is D, its final V/C ratio 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 V/C ratio is 0.901 or greater, and the project-related increase in V/C is 0.020 or greater.

4.2.5.2 City of El Segundo Impact Criteria

For the City of El Segundo, an impact is considered to be significant if one of the following thresholds is exceeded:[63]

- The LOS is E or F, its final V/C ratio is 0.901 or greater, and the project-related increase in V/C is 0.020 or greater.

4.2.5.3 City of Inglewood Impact Criteria

For the City of Inglewood, an impact is considered to be significant if one of the following thresholds is exceeded:[64]

- The LOS is F, its final V/C ratio is 1.001 or greater, and the project-related increase in V/C is 0.020 or greater.

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61 Applied Management & Planning Group, 2006 Air Passenger Survey Los Angeles International Airport, December 2007.

62 Paetzold, Max, City Traffic Engineering Manager, City of Culver City, Personal Communication, April 17, 2009

63 Samaras, Paul, Principal Planner, City of El Segundo, Personal Communication, April 21, 2009.

64 Mai, Alan, Associate Traffic Engineer, City of Inglewood, Personal Communication, January 6, 2009.

4.2.5.4 City of Los Angeles Impact Criteria

In accordance with LADOT criteria defined in their Traffic Study Policy and Procedures,[65] an impact is considered to be significant if one of the following thresholds is exceeded:

- The LOS is C, its final V/C ratio 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 V/C ratio 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 V/C ratio is 0.901 or greater, and the project-related increase in V/C is 0.010 or greater.

4.2.5.5 City of Manhattan Beach Impact Criteria

For the City of Manhattan Beach, an impact is considered to be significant if one of the following thresholds is exceeded:[66]

- The LOS is D, its final V/C ratio 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 V/C ratio is 0.901 or greater, and the project-related increase in V/C is 0.010 or greater.

4.2.5.6 Los Angeles County Impact Criteria

In accordance with Los Angeles County criteria defined in their Traffic Impact Analysis Report Guidelines,[67] an impact is considered to be significant if one of the following thresholds is exceeded:

- The LOS is C, its final V/C ratio 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 V/C ratio 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 V/C ratio is 0.901 or greater, and the project-related increase in V/C is 0.010 or greater.

The "final V/C ratio" as defined by all jurisdictions is comprised of the future V/C ratio at an intersection that includes volume from the project, existing traffic, ambient background growth, and other related projects, but without proposed traffic mitigation as potentially required by the project. The "project-related increase" is defined as the change in the unmitigated LOS condition between the (a) future V/C "with" project, existing traffic, ambient background growth, and other related project growth, and (b) the future V/C "without" the project but with existing traffic, ambient background growth, and other related project growth.

For purposes of this study, project impacts were determined by calculating the difference in LOS for (a) the Future (2013) With Project LOS and (b) the Future-Adjusted (2013) Without Project LOS.

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[65] Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002, Available: www.lacity.org/LADOT/TrafficStudyGuidelines.pdf

[66] Zandvliet, Erik, Traffic Engineer, City of Manhattan Beach, Personal Communication, April 21, 2009.

[67] Los Angeles County Department of Public Works, Traffic Impact Analysis Report Guidelines, January 1, 1997, Available: http://www.ladpw.org/Traffic/Traffic%20Impact%20Analysis%20Guidelines.pdf

CMP Thresholds of Significance

The guidelines set forth in the 2004 CMP for Los Angeles County,[68] indicate that if a proposed development project adds 150 or more trips in either direction during either the morning or evening peak hour to the mainline freeway monitoring location, then a CMP freeway analysis must be conducted. If a proposed project adds 50 or more peak hour trips in either the AM or PM peak hour (of adjacent street traffic) to a CMP arterial intersection, then a CMP arterial intersection analysis must be conducted.

For the purpose of a CMP Traffic Impact Analysis, a project impact is considered to be significant if the proposed project increases traffic demand, as determined by comparing Future (2013) With Project to Future-Adjusted (2013) Without Project, on a CMP facility by 2 percent of capacity (V/C ≥ 0.02), causing or worsening LOS F (V/C ≥ 1.00). Under these criteria, a project would not be considered to have a regionally significant impact if the analyzed facility is operating at LOS E or better after the addition of project traffic regardless of the increase in V/C ratio caused by the project. If the facility is operating at LOS F with project traffic, and the incremental change in the V/C ratio caused by the project is 0.02 or greater, the project would be considered to have a significant impact.

4.2.6 LAX Master Plan Commitments and Mitigation Measures

The transportation-related LAX Master Plan commitments and mitigation measures identified in the LAX Master Plan Mitigation Monitoring and Reporting Program address significant impacts associated with an airport access plan that is substantially different from existing conditions. The LAX Master Plan, as approved, would substantially alter existing circulation in and around the airport by limiting access by private vehicles to the main airport infrastructure. Under the LAX Master Plan, a new Ground Transportation Center (GTC) and an Intermodal Transportation Center (ITC) would be constructed east of Aviation Boulevard and would be the primary access points for all passenger drop off and pick up and vehicle parking. Additionally, an automated people mover (APM) system and a new roadway system linking the GTC, ITC, and CTA are key elements of the surface transportation system proposed under the LAX Master Plan. As described in Section 3.3.2, as part of the Stipulated Settlement, LAWA is proceeding with the Specific Plan Amendment Study (SPAS) process to identify potential alternative designs, technologies, and configurations for the LAX Master Plan Program that would provide solutions to the problems that the Yellow Light Projects were designed to address, The GTC and associated APM and roadway system are Yellow Light Projects, and as such, are being revisited and may be potentially replaced as part of the SPAS process. The LAX Master Plan traffic-related commitments and mitigation measures are not included as part of the Bradley West Project for the purposes of environmental review, nor are any associated additional roadway improvements. As such, the impacts analysis presented herein for the Bradley West Project is considered to be conservative, inasmuch as it does not take into account the traffic flow benefits provided by the types of traffic system improvements referenced above.

4.2.7 Transportation Network Improvements and Development Projects

The proposed transportation system changes that are projected to occur between the existing conditions in 2008 and Future (2013) scenarios are included in the future roadway networks used in the analysis. These improvements were collected through information provided by local jurisdictions and verified by LADOT. Improvements were only included if they were funded and would be constructed by 2013. The improvements are listed in detail in **Table 4.2-4**.

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[68] Los Angeles County Metropolitan Transportation Authority, 2004 Congestion Management Program for Los Angeles County, July 2004.

Table 4.2-4

Major Transportation Network Improvements in Study Area

Street/Freeway	Limits	Improvement
Arbor Vitae St	Airport Blvd to La Cienega Blvd	Widen to provide continuous left-turn channelization
Bluff Creek Dr	Centinela Ave to Lincoln Blvd	New roadway to be built to Secondary Highway standards; easterly segment will be 3 lanes in each direction
Culver Blvd[1]	At Sawtelle Blvd and at Sepulveda Blvd	Intersectional improvements
Douglas St[1]	Imperial Highway to El Segundo Blvd	Convert from one-way to two-way; 3 lanes in each direction
La Cienega Blvd[1]	At Centinela Avenue	Add second northbound left-turn lane
La Tijera Boulevard	At I-405 Freeway	Widen the bridge structure over the freeway and add double left-turn lanes on La Tijera Blvd at the on-ramps
Lincoln Blvd[1]	La Tijera Blvd to LMU Dr	Widen to 7 total lanes (4 NB, 3 SB)
Lincoln Blvd[1]	LMU Dr to Jefferson Blvd	Widen to 4 lanes in each direction
Lincoln Blvd[1]	Ballona Creek Bridge to Fiji Way	Widen to 3 lanes in each direction
Nash St[1]	Imperial Highway to El Segundo Blvd	Convert to two-way traffic; 2 lanes in each direction
Sepulveda Blvd[2]	Manchester Avenue to Lincoln Blvd	Widen to provide 3 full-time lanes NB and SB
Sepulveda Blvd	Jefferson/Playa to Green Valley Circle	Widen to provide third southbound lane
I-105[2]	Westbound off-ramp at NB Sepulveda Blvd	Widen to provide three lanes on off-ramp
I-405[2]	SR-90 to I-10	HOV
I-405[2]	I-10 to SR-101; NB; portion of remaining SB	HOV

1 Completed since project Notice of Preparation in 2008.
2 Under construction as of March 2009.

Source: Fehr & Peers, 2009.

Planned development projects in the City of Los Angeles and neighboring communities within the vicinity of the study area are shown in **Table 4.2-5**. The list was prepared to document and describe all known local area development projects that may contribute traffic to the Bradley West Project study area. The list is based on consultation with representatives of LADOT, Culver City, El Segundo, Hawthorne, Inglewood, Los Angeles County, and Manhattan Beach. **Table 4.2-5** includes the estimated a.m. and p.m. peak hour trip generation associated with each project (if known) and includes information relating to project status. The peak hour trips presented in **Table 4.2-5** represent the development-related traffic generated during the peak commute periods analyzed for the Bradley West Project.

4.2.8 Impact Analysis

As described in Section 4.2.2, off-airport traffic-related impacts pertaining to operation of the Bradley West Project were assessed by comparing Future (2013) With Project Conditions against Future-Adjusted (2013) Without Project Conditions. The following presents the conclusions of that comparison.

4.2.8.1 Future (2013) With Project Conditions Measured Against Future-Adjusted (2013) Without Project Conditions

As discussed in Section 4.2.2.1, "Future-Adjusted (2013) Without Project" assumed growth in vehicle trips at the adjacent terminals (i.e., CTA Terminals 1 through 8) anticipated to occur by 2013, but held trip generation levels at TBIT to those of 2008. By comparing Future (2013) With Project Conditions to Future-Adjusted (2013) Without Project Conditions, the proposed project's impact is calculated. As indicated in Section 2.4.5 of this EIR, the activity level forecast is based on 2008 data, and is considered conservative in light of the current economic recession and the expected decrease in aviation activity worldwide that would likely occur as a result.

The impact comparison for this condition is depicted in **Table 4.2-6**. The associated level of service sheets are provided in Appendix C-5. The Future (2013) With Project traffic volumes are shown in **Figures 4.2-4a-d** and the Future-Adjusted (2013) Without Project traffic volumes are shown in **Figures 4.2-5a-d**.

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
1	Baldwin Hills Scenic Overlook Park	Hetzler Road	10,300 sq. ft. visitor center, passive recreation area	CC	3	12	Completed and opened to the public in April 2009
2	Baldwin Site	12803 W. Washington Boulevard	New 3-story mixed use development totaling 37,308 sq. ft.	CC			Empty lot per field visit of 1/14/2009
3	Brentwood Site Mixed Use	8810/8840/8850 Washington Boulevard	New mixed use development w/preliminary concept of up to (approx.) 133 residential units and 17,084 sq. ft. retail	CC			Existing closed auto dealership per field check of 1/15/2009
4	Brooke Kaufman	4227 Ince Boulevard	6 condo units on 3 lots	CC			Existing homes
5	Child Care Center	4024/4026 Wade St.	Conversion of a 1,371 sq. ft. duplex into a day care; no new square footage	CC			Completed per City of Culver City
6	Condominiums	3846 Bentley Avenue	4 units	CC	2	2	Existing single family home per field visit of 1/14/2009
7	Condominiums	3873 Bentley Avenue	2 units	CC	1	1	Construction complete per field visit of 1/14/2009
8	Condominiums	3862 Huron Avenue	5 units	CC	3	3	Building permit; existing home per field visit of 1/14/2009
9	Condominiums	4048 Lincoln Avenue	3 townhome condominiums	CC			In construction per field visit of 1/14/2009
10	Condominiums	9650 Lucerne Avenue	5 townhome condominiums	CC	3	3	Existing apartments per field visit of 1/14/2009
11	Condominiums	4058 Madison Ave.	4 units	CC	2	2	Existing home. Notice of pending development per field check of 1/14/2009
12	Condominiums	4228 Madison Avenue	2 units	CC	1	1	Building permit; no such address per field visit 1/14/2009
13	Condominiums	3972 Tilden Avenue	4 units	CC	2	2	Under construction per field visit of 1/14/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
14	Condominiums	4014 Van Buren Place	4 units	CC	2	2	In construction per City of Culver City
15	Condominiums	4025 Wade Street	4 units	CC	2	2	Under construction per field visit of 1/14/2009
16	Condominiums (Former Burger King site)	13340 Washington Boulevard	41 unit condominium development with 6 live/work condominium units in Culver City and 35 Units in LA	CC/LA	18	21	Fenced empty lot per field of 1/14/2009
17	Czuker Site Mixed Use	8770 Washington Boulevard	New mixed use development w/preliminary concept of up to (approx.) 115 residential units, 41,600 sq. ft. retail; 1,400 sq. ft. cafe; 53,500 sq. ft. office	CC			Pre-application stage
18	Distribution & Warehouse	3434 Wesley Street	10,500 sq. ft. office, warehouse and distribution	CC	16	86	Empty fenced lot per field check of 1/14/2009
19	Dr. Brenord Dutt	5800 Uplander Way	Add 3 stories; 57,050 sq. ft. to a 2-story office	CC			Notice of pending development posted per field check of 1/14/2009
20	Radisson Office Tower	6161 Centinela Avenue	342,409 sq. ft. office tower and 9-level parking structure	CC	502	462	Entitlements pending
21	FAYNSOD Family Trust	11501-11509 Washington Blvd.	Mixed Use: 3 Retail (2,359 sq. ft.), 1 Office (937 sq. ft.), & 2 Apts. (1,867 sq. ft.)	CC	9	87	Parking lot with fenced storage area per field check of 1/14/2009
22	Fire Station No. 3	6030 Bristol Pkwy	Two-story, 12,156 sq. ft. fire station	CC	9	9	Under construction per field check of 1/14/2009
23	Glencoe/Washington Mixed Use	13365 Washington Blvd.	4,183 sq. ft. retail and 19 condominium units	CC	14	24	Building permit; existing closed restaurant per field visit 1/14/2009
24	Greg Reitz	8665 Hayden Place	63,679 sq. ft. of office	CC			Existing storage warehouse per field check of 1/14/2009
25	Hampton Inn	3954 Sepulveda Blvd.	77-unit hotel	CC	43	45	Building permit
26	Huron Townhouses	3823-3833 Huron Avenue	15 new townhouses; 3 existing units to be removed	CC	6	6	Completed per City of Culver City

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
27	Irving Residential/Office	4043 Irving Place	Four story; 26 residential units and 3 office units	CC			Entitlements pending
28	Live/Work Lofts	10839 Washington Blvd.	3 Live/Work units and 12 parking spaces	CC	5	4	Appeared to be completed per field visit of 1/14/2009
29	Lux @ 9910 Mixed Use	9901 Washington Boulevard	14,112 sq. ft. mixed use development with 131 dwelling units; 12,178 sq ft. of retail and three levels of subterranean parking with 244 parking spaces	CC/LA			Entitlement stage
30	New vehicle repair shop	11167 Washington Place	Construction of a new vehicle repair shop with 1,196 sq. ft. of repair area with two service bays and 191 sq. ft. of office	CC			Entitlement stage
31	Office Building	9919 Jefferson Boulevard	113,467 sq. ft., 3-story office building	CC			Empty lot per field check of 1/14/2009
32	Office & Retail Bldg.	700-701 Corporate Pointe	240,612 sq. ft. of office and 4,242 sq. ft. of retail	CC	384	359	Vacant lot per field visit of 1/14/2009
33	Parcel B	9300 Culver Boulevard	74,600 sq. ft. of office, 21,700 sq. ft of restaurant and 21,700 sq. ft. of retail	CC	461	627	Surface parking lot per field visit of 1/14/2009
34	Modification to CUP, expanding school	12095-12101 Washington Boulevard	Conversion of a 28,000 sq. ft. office building into classrooms and administrative offices; addition of 2,000 sq. ft.	CC			No construction per field visit of 1/14/2009
35	Sony	10202 Washington Blvd.	Approved to build net new 100,000 sq. ft. of office, post-production, stage, and support uses	CC			Under construction per field visit of 1/14/2009
36	Southbay Ventures	4139/4145 Duquesne Avenue	6 units on 2 lots	CC			Fenced lot per field visit of 1/14/2009
37	Triangle Site - Washington/National Transit Oriented Development	NW corner of Washington and National Boulevards	New transit oriented development to include light rail station and mixed use development (preliminary concept includes up to 290 dwelling units; 149 room hotel; 70,000 sq. ft. office; 31,500 sq. ft. retail and 10,000 sq. ft. restaurant	CC	1,235	2,071	Empty lot per field visit of 1/15/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
38	Turning Point School (K through 8)	8794 National Boulevard	Addition/remodel of net 9,000 sq. ft.	CC	107	61	Closed school; no construction per field visit of 1/14/2009
39	Union 76	10638 Culver Boulevard	Gas station and convenience store with new car wash; 2,500 sq. ft.	CC			Existing gas station (no car wash) per field visit of 1/14/2009
40	Uptown Lofts	9900 Culver Boulevard	5,457 sq. ft. of office and 18 condominium units	CC	26	94	Under construction per field visit of 1/14/2009
41	Warner Parking Structure	8511 Warner Drive	51,520 sq. ft. retail/restaurant; 784 parking spaces on 5 levels	CC			Surface parking lot per field visit of 1/14/2009
42	11957 Washington Boulevard Office Project	11957 Washington Boulevard	73,569 sq. ft., 4-story office building	CC			Empty lot per field visit of 1/14/2009
43	Washington Place Office Condos	12402 Washington Place	42,000 sq. ft. 4-story office and retail building; 9,300 sq. ft. of retail; 30,400 sq. ft. of office	CC			Closed auto repair per field visit of 1/14/2009
44	Westfield Fox Hills Mall Expansion	200 Fox Hills Mall	293,786 sq. ft. of retail and 427 parking spaces	CC	299	1,275	Under construction; Completion 10/2009
45	West Los Angeles Community College Master Plan	Overland Avenue at Freshman Drive	Approx. 291,300 sq. ft. of new building and renovation. Anticipate future student population of approx. 18,904 students and 1,248 employees by Fall 2022. Project includes second access road, parking structures, landscaping and development of athletic facilities	CC/CO	669	664	Parking lot completed; math/science bldg. under construction per field check 1/2009
46	Best Western Jamaica Bay Inn (Parcel 27R)	4175 Admiralty Way	Renovation & Expansion 42-room hotel by an additional 69 rooms	CO	38	24	No construction per field visit of 1/9/2009
47	Boat Central (Parcels 52 and GG)	13501 Fiji Way	Dry-stack boat storage of 345 parking spaces; boat trailer storage of 24 parking spaces; mast-up sail boat storage of 30 parking spaces	CO	47	51	No construction per field visit of 1/9/2009
48	Del Rey Shores Apartments (Parcels 100 and 101)	4247-4275 Via Marina	544 apartments (202 existing units to be removed)	CO	120	111	No construction per field visit of 1/9/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
49	Diner (Parcel 33)	4211 Admiralty Way	351 Apartments; 24,500 sq. ft. retail; 10,000 sq. ft restaurant (existing restaurant to be removed)	CO	184	22	Existing Panifico's Restaurant per field visit of 1/9/2009
50	Fisherman's Village (Parcels 55, 56 & W)	13715 Fiji Way	26,570 sq. ft. of specialty retail; 785-seat restaurant; 132-room hotel; 9 boat slips	CO	98	209	No construction per field visit of 1/9/2009
51	Gateway Marina Del Rey (Parcel 95)	404-514 Washington Boulevard	16,350 sq. ft. specialty retail center; 9,160 sq. ft. high turn-over, sit-down restaurant with 240 seats; 7,890 sq. ft. of general office building, 6,100 sq. ft. walk-in bank 72 Apartments; 337 Parking Spaces (removal of 7,500 sq. ft. drive-up bank)	CO	-36	128	No construction per field visit of 1/9/2009; Existing Islands restaurant and Caldwell Bank
52	Government Office Building	Panay Way and Via Marina	26,000 sq. ft.	CO	40	57	No construction per field visit of 1/9/2009
53	Villas Apartments	4170 Admiralty Way (Admiralty Way and Palawan Way, NW Corner)	Congregate Care Facility 114 Occupied DU's, 5,000 sq. ft. of specialty retail; parking lot with 94 parking spaces, 6,000 sq. ft. of general office/commercial; parking structure with 447 parking spaces; removal of 6,000 sq. ft health club	CO			Construction completed per field visit of 1/9/2009
54	Legacy Partners Neptune Marina Apartments/Woodfin Suites Hotel (Parcels 10R, FF & 9U)	Marquesas Way and Via Marina	526 apartments (removal of 136 apartments); 288-room hotel; 1.47-acre public park	CO	253	228	No construction per field visit of 1/9/2009
55	Lincoln Boulevard Mixed Use Project	4363 Lincoln Boulevard	158 high-rise residential condominium units; 3,178 sq. ft. of specialty retail; parking structure with 409 parking spaces. Beverly Hills Rent-a car facility (48,000 sf. ft.) to be removed	CO	47	71	Existing rent-a-car facility per field visit of 1/9/2009
56	Lloyd Taber Marina del Rey Library (Parcel 40)	4533 Admiralty Way	Library	CO			Existing Library. No construction per field visit of 1/9/2009
57	Marina City Club Towers Marina del Rey	4333 Admiralty Way	600 units	CO	264	196	No construction per field visit of 1/9/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
58	Marina del Rey Apartment Community (Parcels 12 & 15)	Panay Way and Via Marina	940 apartments; 82 units senior apartments; 4,000 sq. ft. retail; 6,000 sq. ft. commercial	CO	171	152	No construction per field visit 1/9/2009
59	Marina Del Rey Center (Parcel 97)	514-586 Washington Boulevard	Replace two 1-story commercial structures with two larger 1-story structures (+486 sq. ft.)	CO	1	2	Existing strip mall. No construction per field visit of 1/9/2009
60	Marina del Rey Residential Project (Parcels 12, 15 and FF)	Panay Way and Via Marina	1201 residential units on 2 parcels on the west side of Marina Del Rey	CO			No construction per field visit of 1/9/2009
61	Marina Expressway Homes	Marina Expressway Eastbound & Mindanao Way	28 Single family condominiums	CO			No construction per field visit of 1/9/2009
62	Marriott Residence Inn (Parcel IR)	Admiralty Way and Via Marina	149-room hotel. Existing Marriott hotel on NE corner	CO	82	52	No construction per field visit of 1/9/2009
63	Sea Glass Town Homes	6719 Pacific Av	36 condominiums	CO			No construction per field visit of 1/9/2009
64	Villa Venetia Residential (Parcel 64)	13900-13910 Fiji Way	478 mid-rise apartments (removal of 224 existing apartments); 34 boat slips; 5,000 sq. ft. restaurant	CO	93	88	No construction per field visit of 1/9/2009
65	Waterside Shopping Center (Parcels 50 and 83)	13555 Fiji Way	4,880 sq. ft. of specialty retail, with removal of 2,400 sq. ft.	CO	6	21	Existing West Marine Boats appears to be a new facility
66	The Aerospace Corp. (Office and Laboratory)	2350 E El Segundo Boulevard	150,000 sq. ft. office and 15,000 sq. ft lab	ES			Final stages of construction
67	Commercial Buildings	126, 130, 134 & 138 Lomita St	4 new commercial buildings	ES			Nearing end of construction per field visit of 1/7/2009
68	Condominiums	347 Concord Street	3 units	ES	3	3	Existing apartments (project not begun) per field visit of 1/7/2009
69	Condominiums	425 & 429 Indiana Street	8 units	ES	8	8	Empty lot per field visit of 1/7/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
70	Condominiums	1700 Mariposa Avenue	11 units	ES	11	11	Empty lot per field visit of 1/7/2009
71	Condominiums	412 Richmond Street	4 units	ES	4	4	Existing apartments (project not begun) per field visit of 1/7/2009
72	Condominiums	203 Whiting Street	4 units	ES	4	4	Under construction per field visit of 1/7/2009
73	Corporate Headquarters Office	455/475 Continental Boulevard	330,000 sq. ft. office; 22,500 sq. ft. research and development	ES	664	632	Existing office building (project not begun) per field visit of 1/8/2009
74	El Segundo Corporate Campus	700-800 N Nash Street	1,740,000 sq. ft. office; 75,000 sq. ft. retail; 7,000 sq. ft. child care; 7,000 sq. ft. medical office; 19,000 sq. ft. health club; 75,000 sq. ft. restaurant; 100-room hotel; 25,000 sq. ft. light industrial, 75,000 sq. ft. research & development; 65,000 sq. ft. technology/telecommunications	ES	2,267	2,795	Partially completed. Health club and hotel components are on hold
75	Electronics Superstore	Aviation Boulevard and Utah Ave/135th St	152,504 sq. ft. electronics superstore in place of 90,243 sq. ft. R&D, 51,209 sq. ft. office, and 11,502 sq. ft. Warehouse	ES			Existing office building (project not begun) per field visit of 1/8/2009
76	High Bay Lab	901 N Nash St	55,772 sq. ft.	ES	69	60	Construction close to completion
77	Northrup-Grumman	SE corner of Mariposa Ave and Douglas Street	190,000 sq ft. industrial uses	ES	175	186	Under construction
78	Office	888 N Sepulveda Boulevard	120,000 sq. ft.	ES	217	214	Empty lot per field visit of 1/8/2009
79	Office	141 Main Street	commercial	ES			Existing closed restaurant per field visit of 1/7/2009
80	Plaza El Segundo Phase 2A	NE Corner of Sepulveda Blvd and Rosecrans Ave	commercial	ES			Empty lot per field visit of 1/8/2009. Project on hold
81	Segundo Business Park	222 Kansas Street (at Grand Avenue)	commercial	ES			Demolition permit only received by the City

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
82	Xerox Phase IV	1951-1961 El Segundo Bl	255,242 sq. ft. office; 350-room hotel	ES	629	614	Existing office building and surface lot per field visit 1/8/2009; Project on hold
83	Condominiums	13429-31 Kornblum Avenue	6 units	HA			Existing single family home per field visit of 1/7/2009
84	Condominiums	14629 Lemoli Avenue	3 units	HA			Construction completed per field visit of 1/7/2009
85	Condominiums	11533 Freeman Avenue	5 unit conversion	HA			Project completed per field visit of 1/7/2009
86	Condominiums	11975 Manor Drive	3 units	HA			Vacant lot per field visit of 1/7/2009
87	Condominiums/Office	13806 Hawthorne Blvd	171 units and 32,500 sq. ft. of office space	HA	213		Closed mortuary per field visit of 1/7/2009
88	Condominiums	11418 Grevillea Avenue	7 units	HA			Existing lawn mower business per field visit of 1/7/2009
89	Hotel Extensions	4334 W. Imperial Highway	165 rooms	HA			Under construction, per field check of 1/7/2009
90	L.A. Air Force Base - Lawndale Annex	East of Aviation Blvd and South of Rosecrans Avenue	285 condominium units	HA	142		Fusion Development at Aviation Blvd and 149th Place is completed. No other condominium projects seen per field visit of 1/7/2009
91	LA Air Force Base - Area A	SE corner of El Segundo Bl and Aviation Bl	625 condominiums	HA	330	405	Under construction per field visit of 1/8/2009
92	LA Air Force Base - Area B	NW corner of El Segundo Bl and Aviation Bl	63,000 sq. ft. warehouse; 560,000 sq. ft. office park; 93,750 sq. ft. base exchange; 43,125 sq. ft. health club; 34,463 sq. ft. medical office	HA	815	711	Existing surface parking lot per field visit of 1/8/2009
93	Prestige Villas	4500 116th Street	116 condominium units	HA	85		Existing closed RFK Medical Center per field visit of 1/7/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
94	Recycling Center at Ralph's Grocery Store	11873 Hawthorne Blvd	Recycling center	HA			No construction per field visit 1/7/2009
95	Single Family Homes	14000 Yukon Avenue	6 units	HA			Four existing single family homes per field visit of 1/7/2009
96	Wiseburn School District	5403 W. 138th St and 5309 W. 135th St and 13500 Aviation Blvd	School Renovation. Existing Peter Burnett School at 5403 W. 138th Street	HA			Construction at Juan Cabrillo Elementary School (5309 W. 135th Street) completed per field visit 1/7/2009
97	Adult School and Day Care	106 East Manchester Blvd.	27,477 sq. ft.; office conversion	IN			Construction completed per field visit of 1/9/2009
98	Auto Sales and Retail	Prairie Avenue and Imperial Highway, NE Cor	49,000 sq. ft.	IN			Under construction per field visit of 1/9/2009
99	Commercial Building Addition	234 W. Manchester Boulevard	12,029 sq. ft.	IN			Construction completed per field visit of 1/9/2009
100	Condominiums	501 East 99th Street	12 units	IN			Existing home per field visit of 1/9/2009
101	Condominiums	940 North Cedar Street	14 units	IN			Existing apartments per field visit 1/9/2009
102	Condominiums	448 North Edgewood Street	6 units	IN			Existing home per field visit of 1/9/2009
103	Condominium	417- 420 N. Market Street	12 units	IN			Fenced lot per field visit of 1/9/2009
104	Condominiums	450 N. Market Street	12 units	IN			Existing abandoned building per field visit of 1/9/2009
105	Condominiums	912 S. Myrtle Avenue	7 units	IN			Existing apartments per field visit of 1/9/2009
106	Condominiums	927 South Osage Avenue	7 units	IN			Existing home per field visit of 1/9/2009
107	Condominium	222 W. Spruce Avenue	10 units	IN			Vacant lot per field visit of 1/9/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
108	Hollywood Park Mixed-Use Development	1050 South Prairie Avenue	2,995 dwelling units; 300-room hotel; 620,000 sq. ft. retail; 75,000 sq. ft. office/commercial; 10,000 sq. ft. of civic use; 300-room hotel with 20,000 sq. ft. of meeting space. Pavilion/casino would be maintained on the project site.	IN	1,604	-39	Draft EIR released fall 2008
109	Mixed retail/restaurant	Florence Avenue and La Brea Avenue, SE corner	49,800 sq. ft.	IN			Vacant lot per field visit of 1/9/2009
110	Mixed retail/restaurant	Southwest corner of Century/Prairie (Haagen)	97,490 sq. ft.	IN			Existing Taco Bell per field visit of 1/9/2009
111	Residential	704 N. Market Street	6 units	IN			Vacant lot per field visit of 1/12/2009
112	Retail and Office	10318 S. Prairie Avenue	10,000 sq. ft.	IN			Under construction per field visit of 1/12/2009
113	Senior Center and Housing	111 N. Locust Street	95,188 sq. ft.	IN			Vacant lot per field visit of 1/12/2009
114	Shopping Center	11441 S. Crenshaw Boulevard	101,323 sq. ft.	IN			Burlington Coat Factory store completed; further construction pending per field visit of 1/12/2009
115	Shopping Center	433 North Centinela Avenue	7,384 sq. ft.	IN			Vacant lot per field visit of 1/12/2009
116	Shopping Center	10922 South Prairie Avenue	8,416 sq. ft.	IN			Vacant paved lot per field visit of 1/12/2009
117	Single Family Homes	11901 S. Yukon Avenue	9 units	IN			In construction per field visit of 1/12/2009
118	Transitional Housing	733 Hindry Avenue	232,966 sq. ft.	IN			Existing transitional housing per field visit of 1/12/2009
119	Transitional Housing	812 S. Osage Avenue	20 units	IN			Vacant lot per field visit of 1/12/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
120	Ambrose Hotel	901 Abbot Kinney Boulevard	57-room hotel, 1,200 sq. ft. of retail and 4,300 sq. ft. restaurant	LA	30	54	No construction. Existing building for lease per field check of 1/14/09
121	Animo High School	841 California Avenue	420-student charter school	LA	332	176	Under construction per field visit of 1/14/09
122	Bank of America	7215 W. Manchester Avenue	Walk-in bank	LA	16	81	Empty lot per field visit of 3/23/2009
123	Car Wash	9204 Airport Boulevard	15,251 sq. ft. of car rental facility to be removed	LA	36	110	No construction per field check of 1/12/2009
124	Central Region Elementary School	Teale Street E/O Lincoln Boulevard	650 students	LA	221		Empty lot per field visit of 1/14/2009
125	Chevron Gas Station	6101 W. Manchester Avenue	1,000 sq. ft. gas station with a drive through Starbucks; 2,000 sq. ft. 24-hour convenience store	LA	133	36	Under construction
126	Condominiums	7430 Arizona Avenue	43 units	LA			Under construction
127	Daycare Center	7900 S. Loyola Boulevard	16 student daycare center	LA	13	13	Daycare construction complete. William H. Hannon Library under construction per field visit of 1/14/2009
128	Grosvernor Court	5550 Grosvenor Boulevard	208 condo units	LA	92	146	Existing surface parking lot per field visit of 1/14/2009
129	Lincoln Boulevard Mixed Use	4004 S. Lincoln Boulevard	98 unit condos & 6020 sq. ft. retail	LA	108	101	Existing strip mall per field visit of 1/14/2009
130	Lincoln Boulevard/ Manchester Avenue	7280 - 7298 W. Manchester Avenue	Apartments to replace specialty retail	LA	36	32	Existing realtor and other structure per field check of 1/12/2009
131	Metro Bus Facility	La Cienega Boulevard at Lennox Boulevard	Metro bus maintenance facility with approx. 234 standard and 106 articulated buses, a dispatch center and maintenance shop	LA	243	239	Environmental review
132	Office Building	5901 Center Drive (at Howard Hughes Pkwy)	249,020 sq. ft., five-story office building	LA	386	371	Building permit application in review but no start date. Will be built to suit

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
133	Private School	5401 Beethoven Street	420 students	LA	294	66	Construction completed per field visit of 1/14/2009
134	Radisson Hotel	6225 W. Century Blvd	340 room hotel; 2,544-space parking structure w/1,733 spaces for airport parking	LA	332	342	Project buildout year is 2012
135	Residential Mixed Use Project	8601 Lincoln Boulevard (at Manchester Avenue)	527 apartments, 12 live/work units, 22,600 sq. ft. of ground retail uses and 8,000 sq. ft. of restaurant	LA	2	105	Construction nearing completion per field visit of 3/23/09
136	Villa Allegra	Sepulveda Blvd, W/S, south of Howard Hughes	Townhomes	LA		17	Under construction per field visit of 1/13/2009; Spring 2009 opening
137	The Village at Playa Vista (Playa Vista Phase II)	Jefferson Boulevard between McConnell Drive and Centinela Avenue	2,600 residential units; 175,000 sq. ft. office; 150,000 sq. ft. retail; 40,000 sq. ft. community serving	LA	1,626	2,302	Three office buildings in construction per field visit of 1/14/2009
138	Warehouse and Office	12700 Braddock Drive	134,557 sq. ft. warehouse; 1,357 sq. ft. office. 58,323 sq. ft. of University of CA laundry building to be removed	LA	-14	154	Existing storage facility per field visit of 1/14/2009
139	Washington Square	300 Washington Blvd (at Via Dolce)	123 unit condominiums; 6,000 sq. ft. office space. (Existing 176,671 sq. ft. office building to be removed)	LA	-222	-250	Under construction per field visit of 1/14/2009
140	Westchester Lutheran School Expansion	7831 Sepulveda Boulevard	600 students	LA	64	32	Under construction per field visit of 1/14/2009
141	Bank and Retail	1129 N. Sepulveda Boulevard	4,000 sq. ft. bank and 2,000 sq. ft. retail; demolition of existing gas station	MB			Fenced structure per field visit of 1/7/2009
142	Mixed-Use Project (former Good Stuff restaurant)	1300 Highland Avenue	15,000 sq. ft. commercial/office/condominium	MB			Under construction per field visit of 1/7/2009
143	Medical Plaza	222 Sepulveda Blvd (NE Corner of Sepulveda Blvd and 2nd St)	12,000 sq. ft. medical office building and 1,000 sq. ft. retail. (Existing 5,000 sq. ft. auto repair shop to be removed)	MB			Existing limousine detailing business per field visit of 1/7/2009

Table 4.2-5

Planned Development Projects List

No.	Project Name	Address	Description	City[1,2]	Net AM Trips	Net PM Trips	Comments
144	Retail	1727 Artesia Boulevard	5,800 sq. ft. retail	MB			Construction nearing completion per field visit of 1/7/2009
145	Retail	1700 Rosecrans Avenue	10,000 sq. ft. retail (from warehouse)	MB			Construction complete per field visit of 1/7/2009
146	Rite Aid Store	1100 Manhattan Beach Blvd	13,000 sq. ft. retail (Existing 8,600 sq. ft. gas station to be removed)	MB			Fenced empty lot per field visit of 1/7/2009
147	Walgreens	2400 Sepulveda Boulevard	15,000 sq. ft. retail (demolition of vacant Albertsons store)	MB			Not started per field visit of 1/7/2009

1 CC = Culver City; CO = County of Los Angeles; ES = El Segundo; HA = Hawthorne; IN = Inglewood; LA = City of Los Angeles; MB = Manhattan Beach

2 Projects in Culver City from "Culver City Related Projects List" dated November 6, 2008 and sent by Ms. Diana Chang, Sr. Management Analyst/Transportation Planner, City of Culver City staff to LAWA. Projects in the City of Los Angeles updated via e-mail from Mr. Eddie Guerrero, Transportation Engineer, LADOT on March 25, 2009. Projects in County of Los Angeles from "Related Projects List," dated April 3, 2008, developed and prepared by Suen Fei Lau, Associate Civil Engineer, Los Angeles County Department of Public Works. Updates to projects in El Segundo provided by Maryam Jonas, El Segundo Public Works Department, on January 21, 2009 via e-mail to LAWA staff. Projects in City of Hawthorne were based on the the City's website: http://www.cityofhawthorne.com/depts/planningcommdev/pending_applications/default.asp dated January 15, 2009 and updated via an e-mail from Mr. Christopher Palmer, Planning Assistant, City of Hawthorne, on January 20, 2009 to LAWA staff. Projects in Inglewood from "Related Projects" list dated 3/27/08. Projects in Manhattan Beach sent from Manhattan Beach City staff to LAWA in May 2008.

Source: Fehr & Peers, 2009.

Table 4.2-6

Future (2013) With Project Conditions Measured Against Future-Adjusted (2013) Without Project Conditions

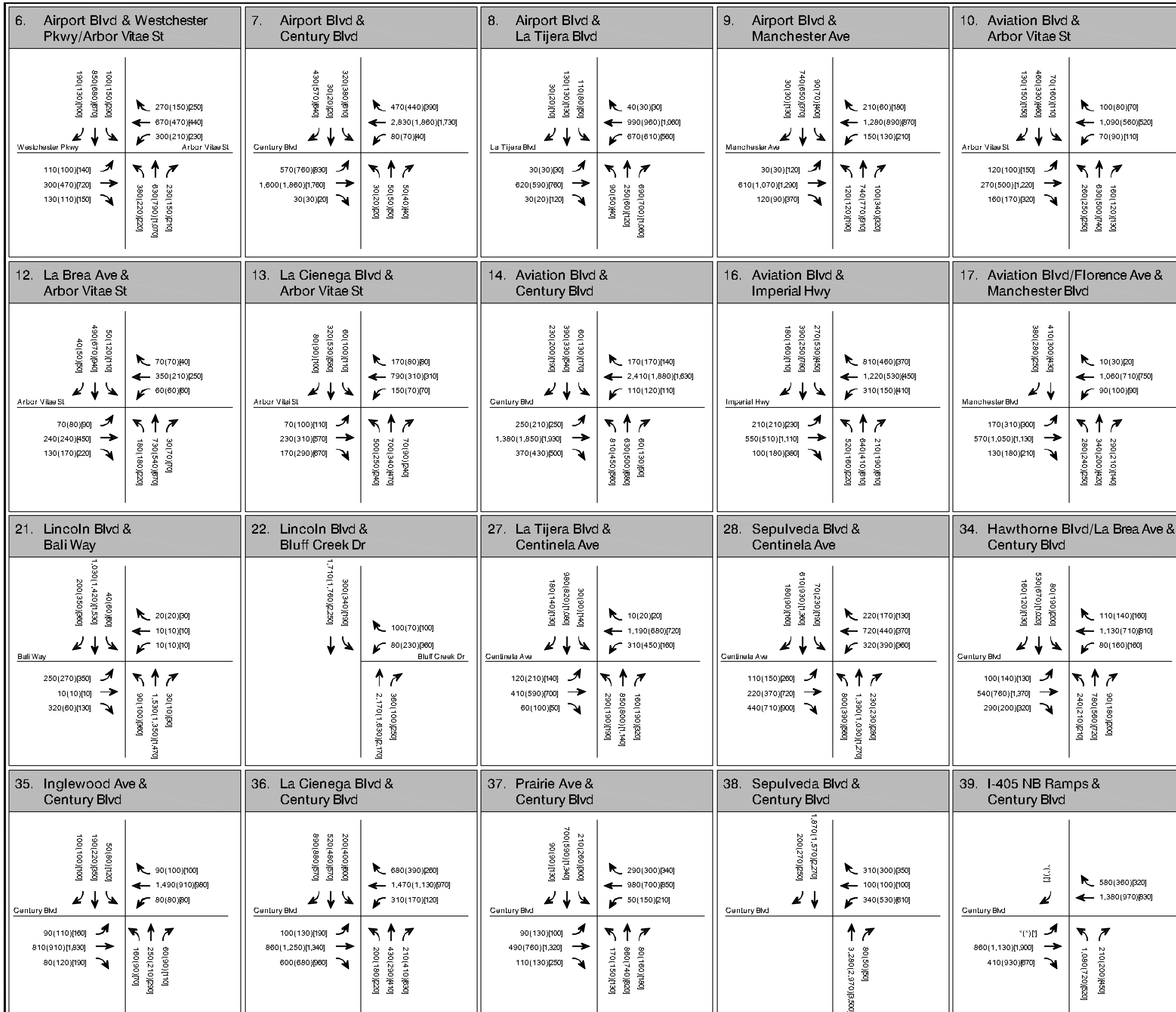
					Future-Adjusted (2013) Without Project Conditions AM		Future (2013) With Project Conditions AM		Significant Impact ?		Future-Adjusted (2013) Without Project Conditions MD		Future (2013) With Project Conditions MD		Significant Impact ?		Future-Adjusted (2013) Without Project Conditions PM		Future (2013) With Project Conditions PM		Significant Impact?	
Int #	Intersection	Jurisdiction	ATSAC	ATCS	V/C	LOS	V/C	LOS	Delta	Impact?	V/C	LOS	V/C	LOS	Delta	Impact?	V/C	LOS	V/C	LOS	Delta	Impact?
6	Airport Bl and Arbor Vitae St / Westchester Pky	LA	X	X	0.653	B	0.804	D	0.151	YES	0.569	A	0.620	B	0.051	NO	0.871	D	0.929	E	0.058	YES
7	Airport Blvd and Century Blvd	LA	X	X	0.718	C	0.864	D	0.145	YES	0.665	B	0.823	D	0.158	YES	0.768	C	0.865	D	0.097	YES
8	Airport Blvd (N/S) and La Tijera Blvd (E/W)	LA	X	X	0.652	B	0.690	B	0.038	NO	0.442	A	0.481	A	0.039	NO	0.614	B	0.639	B	0.025	NO
9	Airport Blvd and Manchester Ave	LA	X	X	0.718	C	0.755	C	0.036	NO	0.704	C	0.718	C	0.015	NO	1.125	F	1.144	F	0.018	YES
10	Arbor Vitae St and Aviation Blvd	Inglewood / LA	X	X	0.707	C	0.747	C	0.040	NO	0.477	A	0.510	A	0.033	NO	0.817	D	0.857	D	0.040	YES
12	Arbor Vitae St and La Brea Ave	Inglewood			0.497	A	0.503	A	0.006	NO	0.535	A	0.541	A	0.006	NO	0.747	C	0.753	C	0.006	NO
13	Arbor Vitae St and La Cienega Blvd	Inglewood	X	X	0.688	B	0.729	C	0.041	NO	0.550	A	0.576	A	0.026	NO	0.769	C	0.826	D	0.057	NO
14	Aviation Blvd and Century Blvd	LA	X	X	0.934	E	1.017	F	0.083	YES	0.665	B	0.726	C	0.061	YES	0.789	C	0.843	D	0.053	YES
16	Aviation Blvd and Imperial Highway	LA	X	X	0.797	C	0.816	D	0.018	NO	0.464	A	0.489	A	0.025	NO	0.860	D	0.886	D	0.026	YES
17	Aviation Bl / Florence Ave and Manchester Bl	Inglewood	X	X	0.779	C	0.796	C	0.017	NO	0.632	B	0.663	B	0.031	NO	0.703	C	0.716	C	0.013	NO
21	Bali Way and Lincoln Blvd	Caltrans / LA / LA County	X	X	0.505	A	0.515	A	0.009	NO	0.523	A	0.533	A	0.009	NO	0.771	C	0.787	C	0.016	NO
22	Bluff Creek Dr and Lincoln Blvd	Caltrans / LA	X	X	0.447	A	0.459	A	0.012	NO	0.414	A	0.425	A	0.011	NO	0.506	A	0.515	A	0.009	NO
27	Centinela Ave (E/W) and La Tijera Blvd (N/S)	LA	X	X	0.671	B	0.676	B	0.005	NO	0.675	B	0.704	C	0.029	NO	0.637	B	0.654	B	0.017	NO
28	Centinela Ave and Sepulveda Blvd	Culver City	X	X	0.797	C	0.803	D	0.006	NO	0.627	B	0.631	B	0.004	NO	0.813	D	0.821	D	0.008	NO
34	Century Blvd and Hawthorne Blvd / La Brea Ave	Inglewood			0.651	B	0.681	B	0.030	NO	0.651	B	0.671	B	0.020	NO	0.861	D	0.896	D	0.035	NO
35	Century Blvd and Inglewood Ave	Inglewood			0.683	B	0.704	C	0.021	NO	0.563	A	0.573	A	0.010	NO	0.811	D	0.834	D	0.023	NO
36	Century Blvd and La Cienega Blvd	Inglewood / LA / County of LA	X	X	0.843	D	0.896	D	0.053	YES	0.725	C	0.784	C	0.058	YES	1.069	F	1.127	F	0.058	YES
37	Century Blvd and Prairie Ave	Inglewood			0.729	C	0.748	C	0.019	NO	0.734	C	0.740	C	0.006	NO	0.925	E	0.954	E	0.029	NO
38	Century Blvd and Sepulveda Blvd	LA / Caltrans	X	X	0.573	A	0.593	A	0.020	NO	0.589	A	0.605	B	0.017	NO	0.697	B	0.720	C	0.023	NO
39	Century Blvd and I-405 NB On/Off Ramps	Caltrans / Inglewood	X	X	0.787	C	0.830	D	0.043	NO	0.568	A	0.603	B	0.035	NO	0.644	B	0.683	B	0.039	NO
43	Culver Blvd and Overland Ave	Culver City	X		0.794	C	0.797	C	0.003	NO	0.634	B	0.640	B	0.006	NO	0.971	E	0.974	E	0.003	NO
47	Douglas St and Imperial Highway	El Segundo / LA	X	X	0.323	A	0.333	A	0.009	NO	0.240	A	0.256	A	0.017	NO	0.412	A	0.422	A	0.010	NO
50	Duquesne Ave and Jefferson Blvd	Culver City	X		0.614	B	0.614	B	0.000	NO	0.497	A	0.497	A	0.000	NO	0.763	C	0.763	C	0.000	NO
55	El Segundo Blvd and Sepulveda Blvd	Caltrans / El Segundo			0.889	D	0.901	E	0.012	NO	0.833	D	0.841	D	0.008	NO	1.007	F	1.017	F	0.010	NO
56	Fiji Way and Lincoln Blvd	Caltrans / LA / LA County	X	X	0.603	B	0.615	B	0.012	NO	0.723	C	0.740	C	0.017	NO	0.835	D	0.846	D	0.011	NO
57	Florence Ave and La Brea Ave	Inglewood			0.800	C	0.803	D	0.003	NO	0.641	B	0.644	B	0.003	NO	0.997	E	1.000	E	0.003	NO
58	Florence Ave and La Cienega Blvd	Inglewood			0.853	D	0.894	D	0.041	NO	0.781	C	0.805	D	0.024	NO	1.088	F	1.107	F	0.019	NO
60	Grand Ave and Sepulveda Blvd	El Segundo			0.889	D	0.897	D	0.008	NO	0.738	C	0.747	C	0.009	NO	0.973	E	0.981	E	0.008	NO
65	Howard Hughes Pkwy and Sepulveda Bl	LA	X	X	0.569	A	0.569	A	0.000	NO	0.569	A	0.569	A	0.000	NO	0.569	A	0.569	A	0.000	NO
67	Imperial Hwy and La Cienega Blvd	LA	X	X	0.441	A	0.456	A	0.015	NO	0.240	A	0.257	A	0.017	NO	0.676	B	0.682	B	0.006	NO
71	Imperial Hwy and Sepulveda Blvd	Caltrans / El Segundo / LA	X	X	0.704	C	0.728	C	0.025	NO	1.040	F	1.067	F	0.027	YES	1.120	F	1.144	F	0.024	YES
73	Imperial Hwy and Nash St / I-105 WB Off-Ramp	El Segundo / Caltrans / LA	X	X	0.654	B	0.661	B	0.007	NO	0.285	A	0.300	A	0.015	NO	0.325	A	0.339	A	0.015	NO
74	Imperial Hwy and I-105 Ramps E/O Aviation Bl	Caltrans / LA	X	X	0.745	C	0.760	C	0.015	NO	0.301	A	0.320	A	0.018	NO	0.594	A	0.637	B	0.043	NO
78	Jefferson Blvd and Lincoln Blvd	Caltrans / LA	X	X	0.715	C	0.714	C	-0.001	NO	0.734	C	0.749	C	0.015	NO	0.805	D	0.812	D	0.007	NO
79	Jefferson Blvd (E/W) and Overland Ave (N/S)	Culver City	X		0.744	C	0.747	C	0.003	NO	0.576	A	0.579	A	0.003	NO	0.883	D	0.890	D	0.007	NO
81	Jefferson Blvd / Playa St and Sepulveda Blvd	Culver City	X		0.712	C	0.718	C	0.006	NO	0.726	C	0.732	C	0.006	NO	0.910	E	0.916	E	0.006	NO
82	Jefferson Blvd (E/W) and Slauson Ave (N/S)	Culver City	X		0.559	A	0.559	A	0.000	NO	0.637	B	0.640	B	0.003	NO	0.584	A	0.584	A	0.000	NO
88	La Cienega Blvd (N/S) and La Tijera Blvd (E/W)	Inglewood / LA	X	X	0.705	C	0.713	C	0.007	NO	0.501	A	0.540	A	0.039	NO	0.780	C	0.827	D	0.047	YES
96	La Cienega Bl and I-405 SB Ramps N/O Century	Caltrans / Inglewood / LA	X	X	0.736	C	0.773	C	0.036	NO	0.569	A	0.609	B	0.040	NO	0.693	B	0.744	C	0.051	YES
97	La Cienega Bl and I-405 SB Ramps S/O Century	Caltrans / Inglewood / LA	X	X	0.353	A	0.380	A	0.027	NO	0.430	A	0.461	A	0.031	NO	0.448	A	0.483	A	0.034	NO
99	La Tijera Blvd and Lincoln Blvd	Caltrans / LA	X	X	0.302	A	0.316	A	0.014	NO	0.228	A	0.247	A	0.019	NO	0.377	A	0.391	A	0.014	NO
100	La Tijera Blvd (N/S) and Manchester Ave (E/W)	LA	X	X	0.704	C	0.733	C	0.029	NO	0.547	A	0.573	A	0.025	NO	0.824	D	0.838	D	0.015	NO
101	La Tijera Blvd and Sepulveda Blvd	LA	X	X	0.753	C	0.838	D	0.085	YES	0.656	B	0.780	C	0.124	YES	0.771	C	0.876	D	0.105	YES
102	La Tijera Blvd and I-405 NB Ramps	Caltrans / LA	X	X	0.531	A	0.560	A	0.029	NO	0.414	A	0.435	A	0.021	NO	0.413	A	0.433	A	0.020	NO
103	La Tijera Blvd and I-405 SB Ramps	Caltrans / LA	X	X	0.463	A	0.480	A	0.018	NO	0.429	A	0.463	A	0.034	NO	0.631	B	0.664	B	0.033	NO
104	Lincoln Blvd and LMU Dr	Caltrans / LA	X	X	0.447	A	0.457	A	0.011	NO	0.384	A	0.403	A	0.019	NO	0.572	A	0.586	A	0.014	NO
105	Lincoln Blvd and Manchester Blvd	Caltrans / LA	X	X	0.519	A	0.537	A	0.018	NO	0.425	A	0.438	A	0.013	NO	0.589	A	0.600	A	0.011	NO
106	Lincoln Blvd and Marina Pointe Dr / Maxella Ave	Caltrans / LA	X	X	0.670	B	0.680	B	0.010	NO	0.631	B	0.640	B	0.009	NO	0.642	B	0.651	B	0.009	NO
107	Lincoln Blvd and Mindanao Way	Caltrans / LA	X	X	0.718	C	0.728	C	0.009	NO	0.779	C	0.788	C	0.009	NO	0.864	D	0.875	D	0.010	NO
108	Lincoln Blvd (E/W) and Sepulveda Blvd (N/S)	Caltrans / LA	X	X	0.377	A	0.425	A	0.048	NO	0.345	A	0.402	A	0.057	NO	0.515	A	0.561	A	0.046	NO
109	Lincoln Blvd and Venice Blvd	Caltrans / LA	X	X	0.892	D	0.910	E	0.018	YES	0.923	E	0.939	E	0.015	YES	0.891	D	0.911	E	0.020	YES
110	Lincoln Blvd and Washington Blvd	Caltrans / LA	X	X	0.808	D	0.818	D	0.010	NO	1.199	F	1.224	F	0.025	YES	1.203	F	1.220	F	0.017	YES
111	Lincoln Blvd and 83rd St	Caltrans / LA	X	X	0.689	B	0.700	B	0.011	NO	0.635	B	0.664	B	0.029	NO	0.651	B	0.662	B	0.011	NO

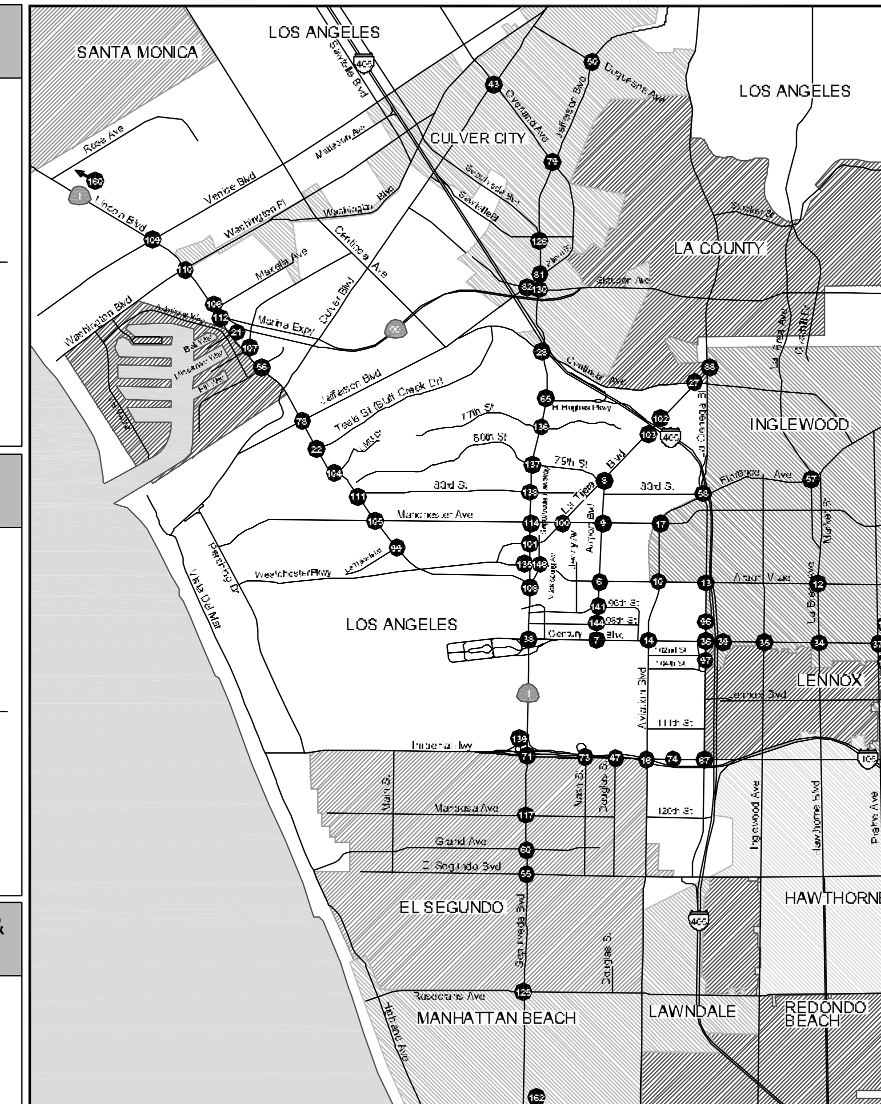
Table 4.2-6

Future (2013) With Project Conditions Measured Against Future-Adjusted (2013) Without Project Conditions

					Future-Adjusted (2013) Without Project Conditions AM		Future (2013) With Project Conditions AM		Significant Impact ?		Future-Adjusted (2013) Without Project Conditions MD		Future (2013) With Project Conditions MD		Significant Impact ?		Future-Adjusted (2013) Without Project Conditions PM		Future (2013) With Project Conditions PM		Significant Impact?	
Int #	**Intersection**	**Jurisdiction**	**ATSAC**	**ATCS**	**V/C**	**LOS**	**V/C**	**LOS**	**Delta**	**Impact?**	**V/C**	**LOS**	**V/C**	**LOS**	**Delta**	**Impact?**	**V/C**	**LOS**	**V/C**	**LOS**	**Delta**	**Impact?**
112	Lincoln Blvd and SR-90	Caltrans / LA County	X	X	0.807	D	0.815	D	0.008	NO	0.735	C	0.743	C	0.008	NO	0.755	C	0.763	C	0.008	NO
114	Manchester Ave and Sepulveda Blvd	LA	X	X	0.750	C	0.802	D	0.052	YES	0.791	C	0.827	D	0.036	YES	0.924	E	0.980	E	0.056	YES
117	Mariposa Ave and Sepulveda Blvd	El Segundo/Caltrans			0.829	D	0.829	D	0.000	NO	0.769	C	0.790	C	0.021	NO	0.844	D	0.858	D	0.014	NO
125	Rosecrans Ave and Sepulveda Blvd	El Segundo / Manhattan Beach / Caltrans			1.114	F	1.134	F	0.020	YES	0.896	D	0.910	E	0.014	YES	1.044	F	1.054	F	0.010	YES
126	Sawtelle Blvd (E/W) and Sepulveda Blvd (N/S)	Culver City	X		0.503	A	0.506	A	0.003	NO	0.597	A	0.599	A	0.002	NO	0.688	B	0.690	B	0.002	NO
130	Sepulveda Blvd and Slauson Avenue	Culver City	X		0.566	A	0.573	A	0.007	NO	0.644	B	0.654	B	0.010	NO	0.738	C	0.756	C	0.018	NO
135	Sepulveda Blvd and Westchester Pkwy	LA	X	X	0.615	B	0.717	C	0.102	YES	0.580	A	0.640	B	0.060	NO	0.831	D	0.882	D	0.051	YES
136	Sepulveda Blvd and 76th/77th Street	LA	X	X	0.835	D	0.882	D	0.047	YES	0.527	A	0.550	A	0.023	NO	0.704	C	0.730	C	0.026	NO
137	Sepulveda Blvd and 79th St/80th St	LA	X	X	0.645	B	0.693	B	0.049	NO	0.422	A	0.447	A	0.025	NO	0.535	A	0.573	A	0.038	NO
138	Sepulveda Blvd and 83rd St	LA	X	X	0.473	A	0.529	A	0.055	NO	0.365	A	0.402	A	0.037	NO	0.535	A	0.573	A	0.038	NO
139	Sepulveda Blvd and I-105 WB Ramp N/O Imperial	Caltrans/LA	X	X	0.911	E	0.972	E	0.061	YES	0.855	D	0.936	E	0.081	YES	0.829	D	0.891	D	0.063	YES
141	96th Street and Airport Blvd	LA	X	X	0.406	A	0.464	A	0.058	NO	0.462	A	0.467	A	0.004	NO	0.605	B	0.624	B	0.018	NO
144	98th Street and Airport Blvd	LA	X	X	0.423	A	0.460	A	0.037	NO	0.530	A	0.577	A	0.047	NO	0.610	B	0.653	B	0.043	NO
146	Sepulveda Eastway and Westchester Pkwy	LA	X	X	0.480	A	0.507	A	0.027	NO	0.533	A	0.597	A	0.063	NO	0.437	A	0.473	A	0.037	NO
147	Century Boulevard and Crenshaw Boulevard	Inglewood			0.659	B	0.676	B	0.017	NO	0.722	C	0.728	C	0.006	NO	0.876	D	0.905	E	0.029	NO
160	Rose Ave and Lincoln Blvd	LA	X	X	0.910	E	0.917	E	0.007	NO	0.787	C	0.797	C	0.010	NO	0.850	D	0.867	D	0.017	NO
161	Century Blvd and Western Ave	LA	X	X	0.773	C	0.789	C	0.017	NO	0.513	A	0.518	A	0.005	NO	0.778	C	0.800	C	0.022	NO
162	Manhattan Beach Blvd and Sepulveda Blvd	Manhattan Beach			1.125	F	1.132	F	0.007	NO	0.819	D	0.826	D	0.007	NO	1.151	F	1.160	F	0.009	NO
	Number of Impacts Per Time Period									**11**						**10**						**17**
	Number of Intersections with an Impact in any Time Period																					**18**

Source: Fehr & Peers, 2009.





Legend

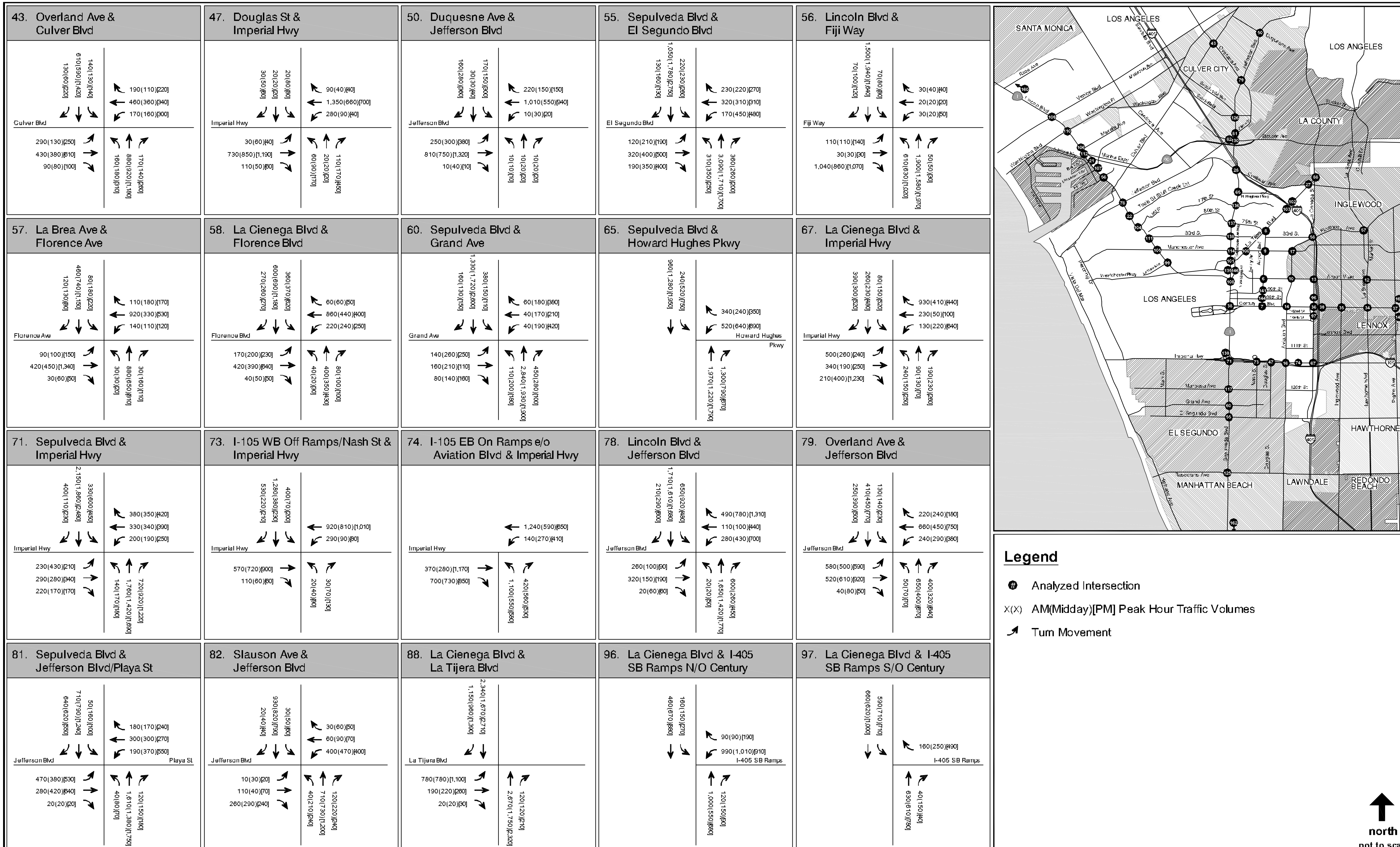
- Analyzed Intersection
- X(X) AM(Midday)[PM] Peak Hour Traffic Volumes
- Turn Movement

north
not to scale

LAX Bradley West Project Draft EIR

Future (2013) With Project Traffic Volumes

Figure
4.2-4a



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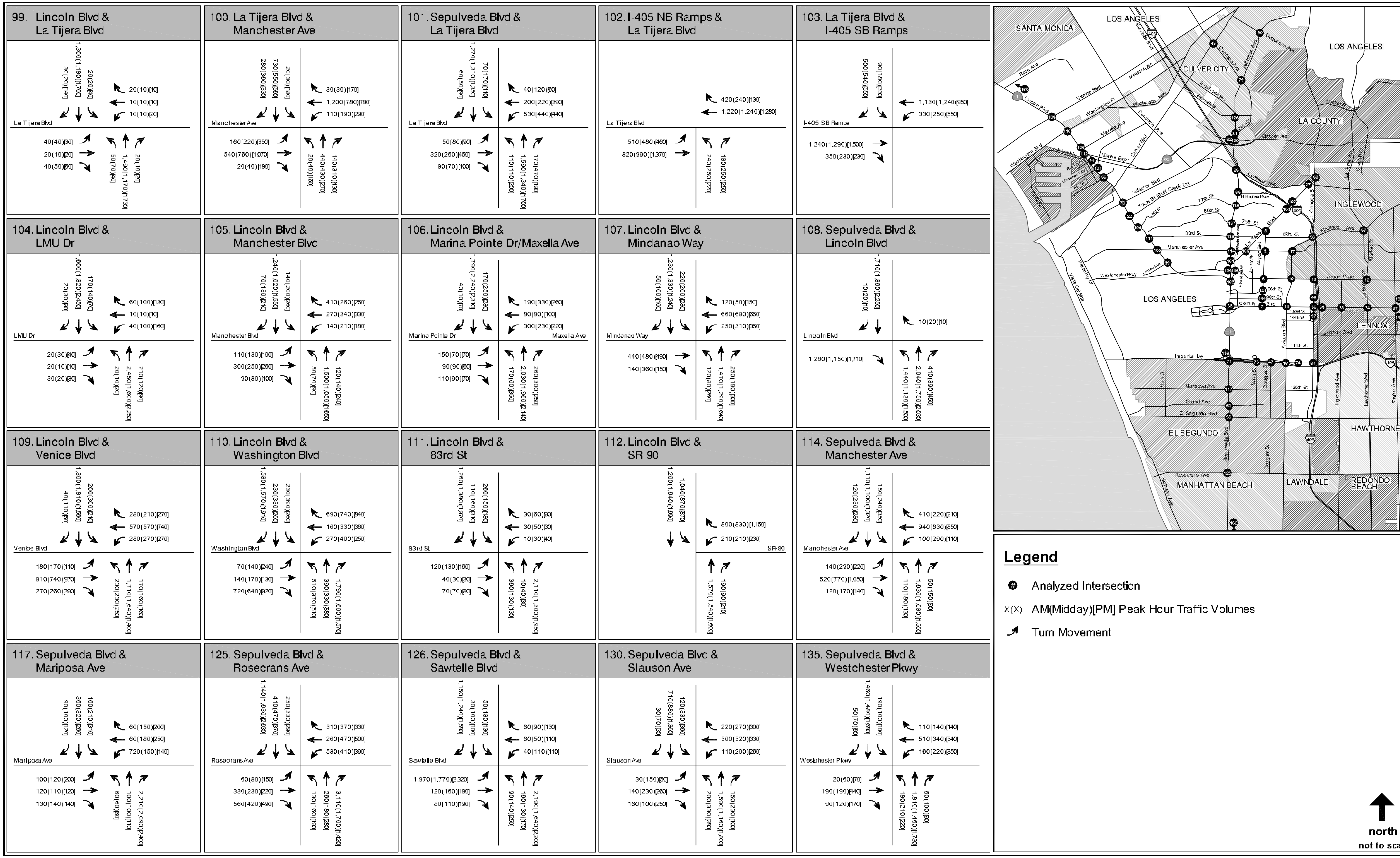
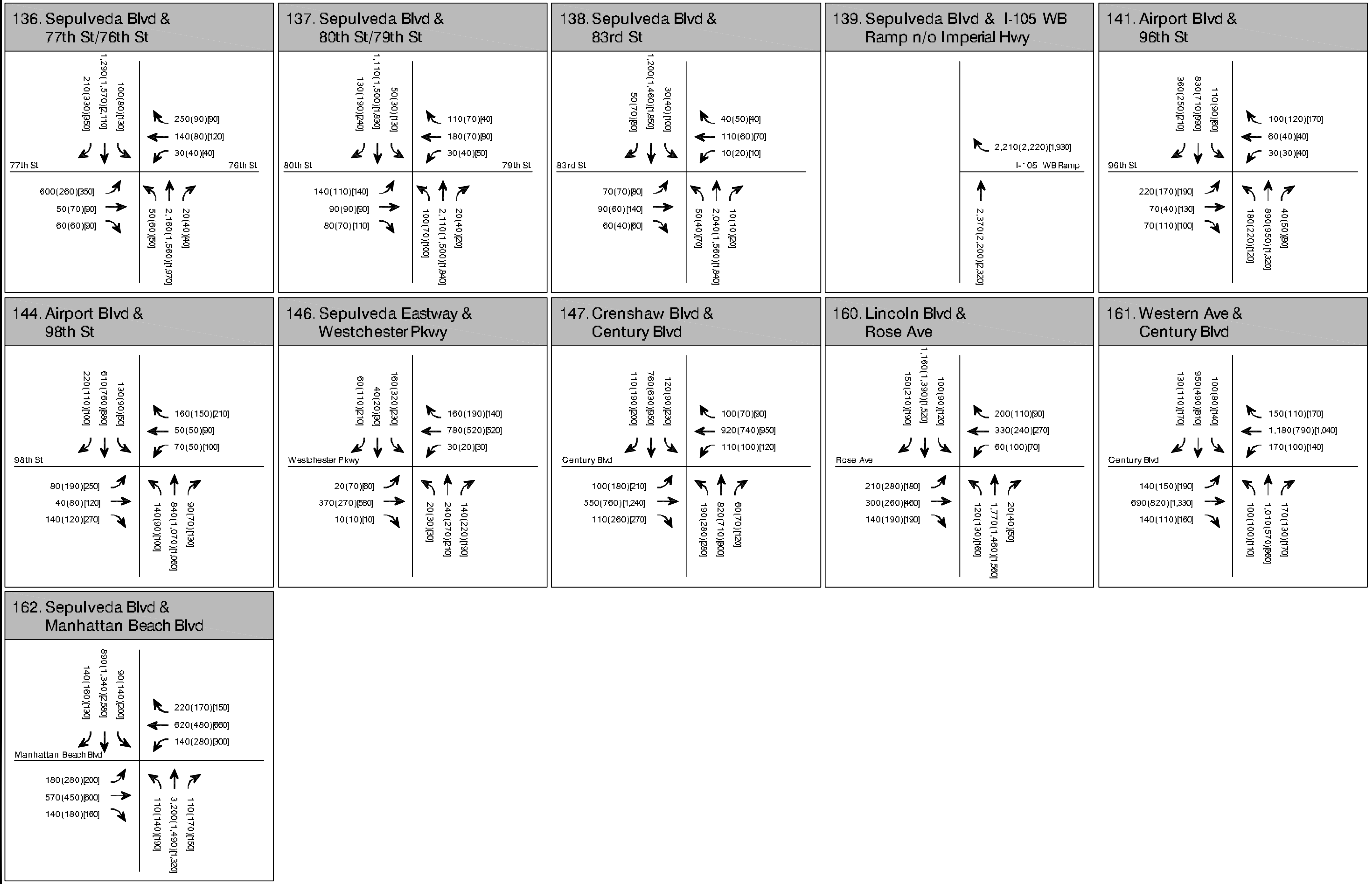
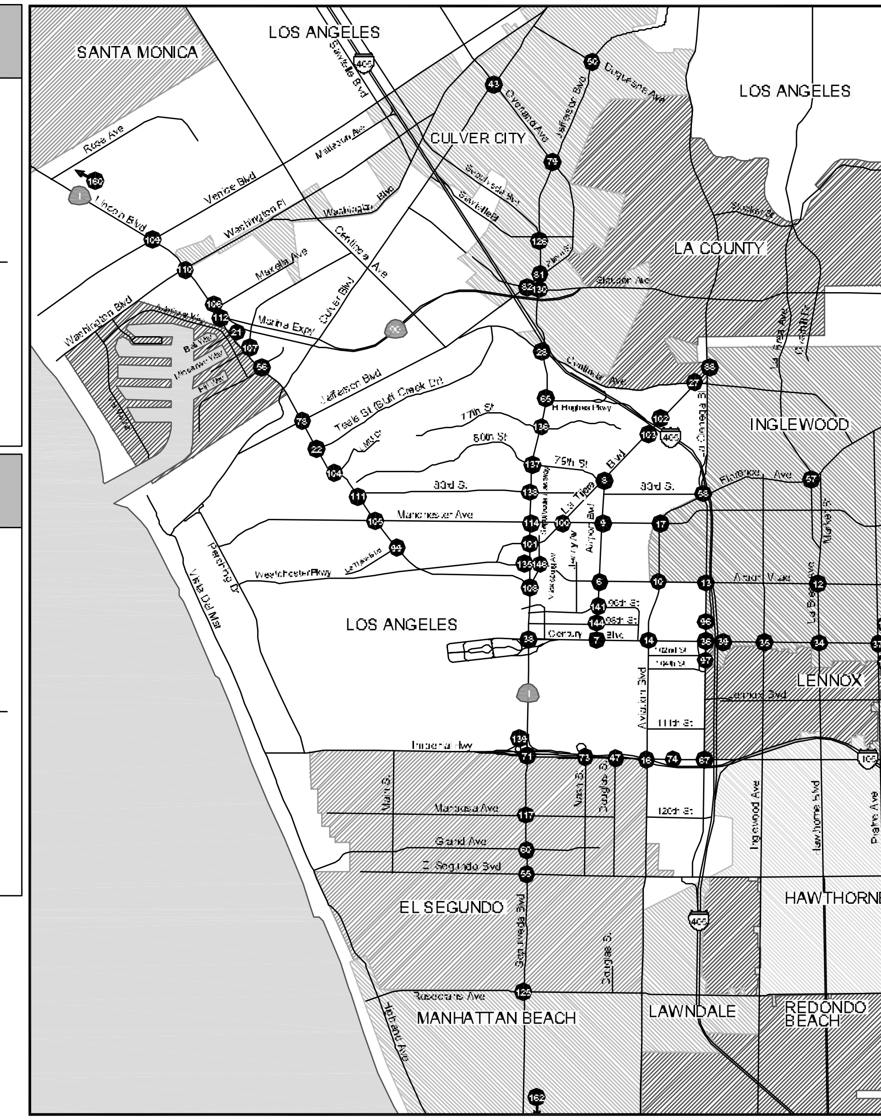
Future (2013) With Project Traffic Volumes

Figure 4.2-4b



LAX Bradley West Project Draft EIR	Future (2013) With Project Traffic Volumes	Figure 4.2-4c





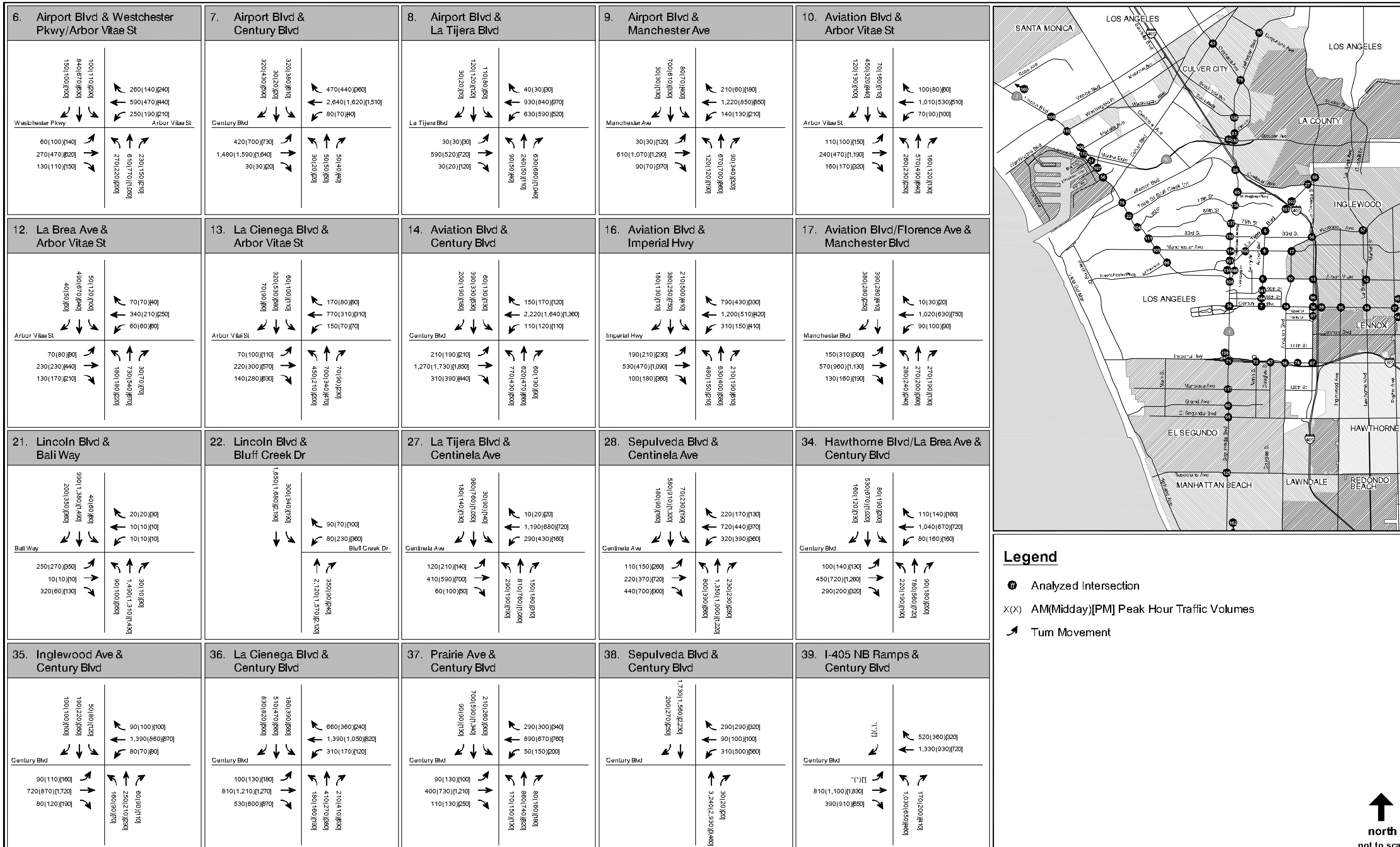
Legend

- Analyzed Intersection
- X(X) AM(Midday)[PM] Peak Hour Traffic Volumes
- Turn Movement

north
not to scale

Future (2013) With Project Traffic Volumes

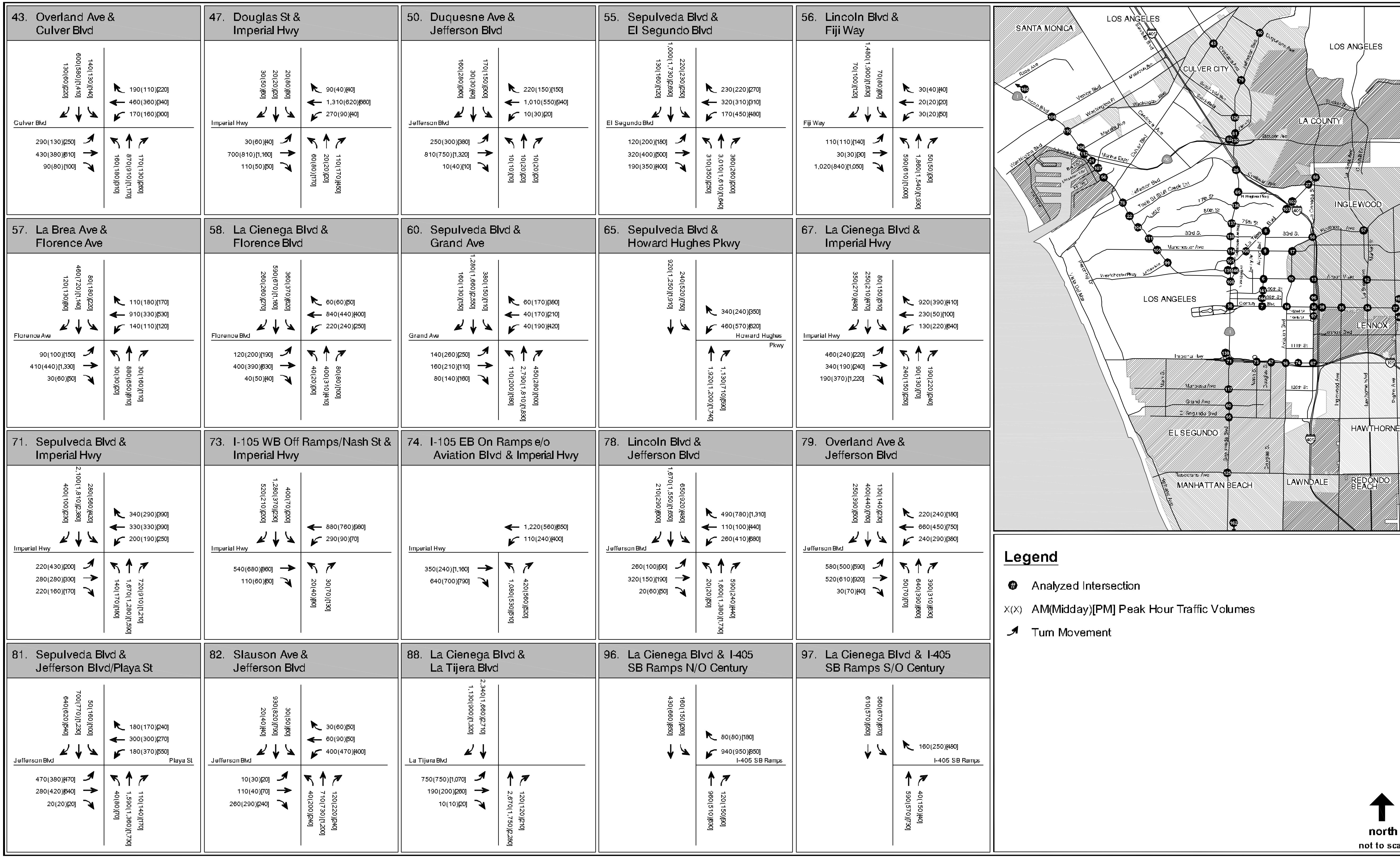
Figure
4.2-4d



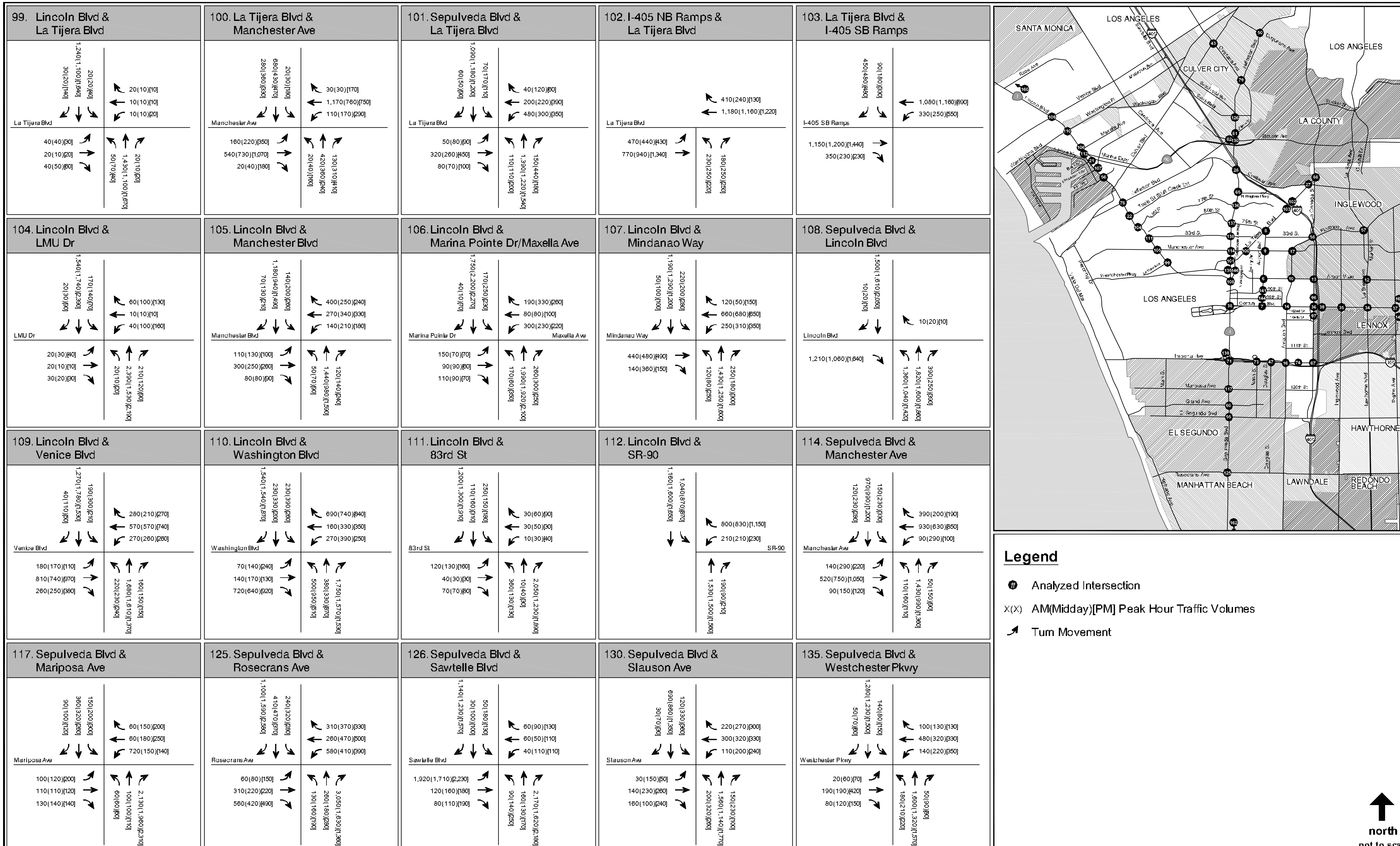
LAX Bradley West Project Draft EIR

Future-Adjusted (2013) Without Project Traffic Volumes

Figure 4.2-5a



LAX Bradley West Project Draft EIR	Future-Adjusted (2013) Without Project Traffic Volumes	Figure 4.2-5b



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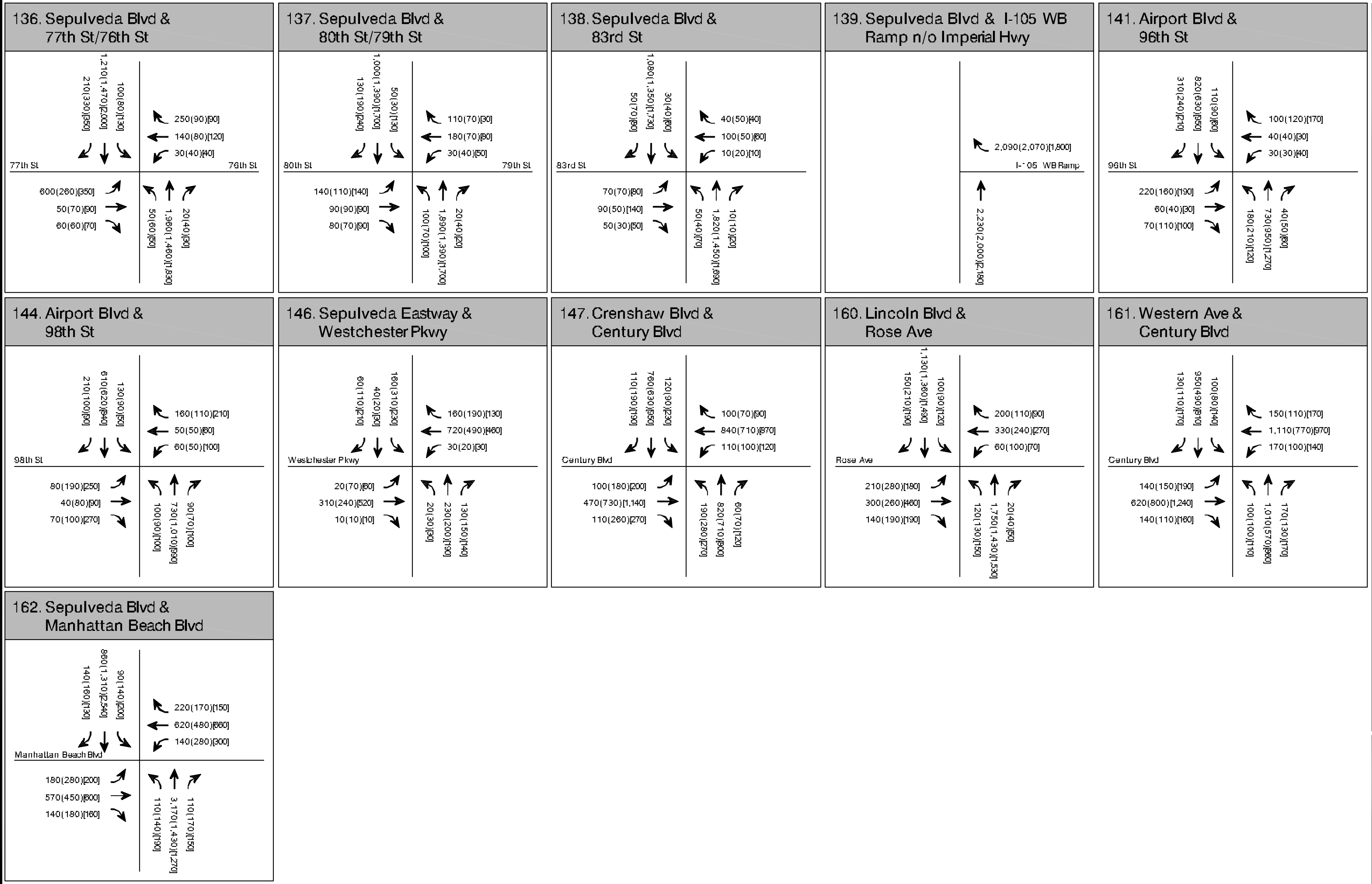
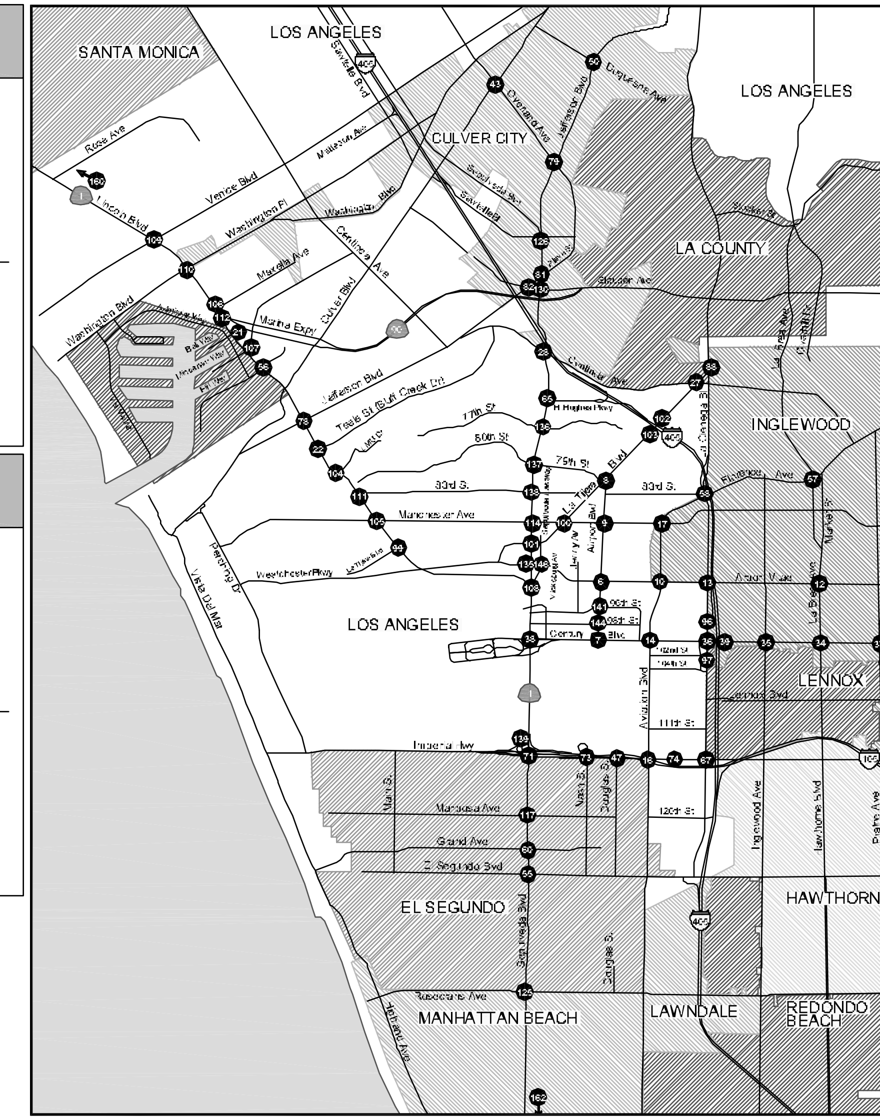
Future-Adjusted (2013) Without Project Traffic Volumes

Figure 4.2-5c





Legend

- Analyzed Intersection
- X(X) AM(Midday)[PM] Peak Hour Traffic Volumes
- Turn Movement

north
not to scale

LAX Bradley West Project Draft EIR

Future-Adjusted (2013) Without Project Traffic Volumes

Figure
4.2-5d

As shown in **Table 4.2-6**, it is anticipated that project-related traffic, including ambient growth in international passenger activity at TBIT by 2013, would result in significant impacts at 18 of the 71 intersections when comparing Future (2013) With Project against Future-Adjusted (2013) Without Project levels of service. The significantly impacted intersections include the following:

- 6. Airport Boulevard and Arbor Vitae Street/Westchester Parkway
- 7. Airport Boulevard and Century Boulevard
- 9. Airport Boulevard and Manchester Avenue
- 10. Arbor Vitae Street and Aviation Boulevard
- 14. Aviation Boulevard and Century Boulevard
- 16. Aviation Boulevard and Imperial Highway
- 36. Century Boulevard and La Cienega Boulevard
- 71. Imperial Highway and Sepulveda Boulevard
- 88. La Cienega Boulevard and La Tijera Boulevard
- 96. La Cienega Boulevard and I-405 Ramps N/O Century Boulevard
- 101. La Tijera Boulevard and Sepulveda Boulevard
- 109. Lincoln Boulevard and Venice Boulevard
- 110. Lincoln Boulevard and Washington Boulevard
- 114. Manchester Avenue and Sepulveda Boulevard
- 125. Rosecrans Avenue and Sepulveda Boulevard
- 135. Sepulveda Boulevard and Westchester Parkway
- 136. Sepulveda Boulevard and 76th/77th Street
- 139. Sepulveda Boulevard and I-105 Ramp north of Imperial Highway

As indicated in Section 2.4.5, the activity level forecast used in the impacts analysis is based on 2008 data, and is considered conservative in light of the current economic recession and the expected decrease in aviation activity worldwide that would likely occur as a result. As such, the delineation of significantly impacted intersections presented above is also considered conservative.

4.2.8.2 CMP Impact Analysis

Several analyses were conducted to comply with the Los Angeles County CMP requirements. This section presents a regional analysis to quantify impacts of the proposed project on the regional freeway system serving the project area, including segments on the I-405, I-10 and I-105 freeways, CMP freeway monitoring locations, and CMP intersection monitoring stations included in the Los Angeles County CMP roadway network. Traffic impacts were determined using the same methodology described in Section 4.2.8.1 used to determine the project's impacts to intersections by comparing Future (2013) With Project Conditions against Future-Adjusted (2013) Without Project Conditions. The significance thresholds used for the CMP analysis are identified in Section 4.2.5.

CMP Arterial Intersection Analysis

There are 14 CMP arterial monitoring stations within the study area:

- 26. Centinela Avenue and La Cienega Boulevard
- 29. Centinela Boulevard and Venice Boulevard
- 55. El Segundo Boulevard and Sepulveda Boulevard
- 85. La Brea Avenue and Manchester Avenue
- 93. La Cienega Boulevard and Stocker Avenue
- 105. Lincoln Boulevard and Manchester Avenue
- 108. Lincoln Boulevard and Sepulveda Boulevard
- 109. Lincoln Boulevard and Venice Boulevard
- 112. Lincoln Boulevard and SR-90
- 114. Manchester Avenue and Sepulveda Boulevard
- 121. Overland Avenue and Venice Boulevard

- 125. Rosecrans Avenue and Sepulveda Boulevard
- 200. La Cienega Boulevard and Jefferson Boulevard
- 201. Manchester Avenue and Crenshaw Boulevard

The CMP arterial monitoring stations identified for analysis were analyzed using LADOT's CalcaDB software which is based on the analysis method described in the Circular 212 or ICU methodology. **Table 4.2-7** delineates the project's impacts to the 14 arterial monitoring stations based on a comparison between Future (2013) With Project Conditions and Future-Adjusted (2013) Without Project Conditions. As indicated in the table, two of the 14 arterial monitoring stations would be significantly impacted; Intersection 93 - La Cienega Boulevard and Stocker Avenue and Intersection 125 - Rosecrans Avenue and Sepulveda Boulevard. The associated level of service sheets are provided in Appendix C-5.

Table 4.2-7

CMP Arterial Monitoring Stations Impact Analysis: Future (2013) With Project Conditions Measured Against Future-Adjusted (2013) Without Project Conditions

				Future-Adjusted (2013) Without Project Conditions		Future (2013) With Project Conditions			
Int #	**Intersection**	**Jurisdiction**	**Peak Hour**	**V/C**	**LOS**	**V/C**	**LOS**	**Increase in V/C**	**Project Impact?**
26	La Cienega Blvd	Inglewood/	AM	1.037	F	1.044	F	0.007	NO
	and Centinela Ave	LA	PM	1.067	F	1.078	F	0.011	NO
29	Centinela Ave	LA	AM	1.032	F	1.035	F	0.003	NO
	and Venice Blvd		PM	1.098	F	1.100	F	0.002	NO
55	El Segundo Blvd	Caltrans/	AM	0.911	E	0.926	E	0.015	NO
	and Sepulveda Blvd	El Segundo	PM	1.023	F	1.033	F	0.010	NO
85	Manchester Blvd	Inglewood	AM	0.811	D	0.811	D	0.000	NO
	and La Brea Ave		PM	0.935	E	0.935	E	0.000	NO
93	La Cienega Blvd	LA County	AM	1.363	F	1.372	F	0.009	NO
	and Stocker Ave		PM	1.536	F	1.564	F	0.028	YES
105	Lincoln Blvd	Caltrans/LA	AM	0.519	A	0.537	A	0.018	NO
	and Manchester Blvd		PM	0.589	A	0.600	A	0.011	NO
108	Lincoln Blvd	Caltrans/LA	AM	0.377	A	0.425	A	0.048	NO
	and Sepulveda Blvd		PM	0.515	A	0.561	A	0.046	NO
109	Lincoln Blvd	Caltrans/LA	AM	0.892	D	0.910	E	0.018	NO
	and Venice Blvd		PM	0.891	D	0.911	E	0.020	NO
112	Lincoln Blvd	Caltrans/	AM	0.741	C	0.750	C	0.009	NO
	and SR-90	LA County	PM	0.709	C	0.718	C	0.009	NO
114	Manchester Ave	LA	AM	0.750	C	0.802	D	0.052	NO
	and Sepulveda Blvd		PM	0.924	E	0.980	E	0.056	NO
121	Overland Ave	Culver City/	AM	0.856	D	0.859	D	0.003	NO
	and Venice Blvd	LA	PM	0.951	E	0.955	E	0.004	NO
125	Rosecrans Ave	El Segundo/	AM	1.144	F	1.164	F	0.020	YES
	and Sepulveda Blvd	Manhattan Beach	PM	1.076	F	1.088	F	0.012	NO
200	La Cienega Blvd	LA	AM	1.202	F	1.205	F	0.003	NO
	and Jefferson Blvd		PM	1.149	F	1.156	F	0.007	NO
201	Crenshaw Blvd	Inglewood	AM	Not Required[1]					
	and Manchester Blvd		PM						

[1] Additional study is not required if the proposed project does not add 50 or more trips during either the a.m. or p.m. weekday peak hours of adjacent street traffic at CMP arterial monitoring stations.

Source: Fehr & Peers, 2009.

CMP Freeway Analysis

A regional analysis was conducted to quantify potential impacts of project traffic on the regional freeway system serving the project area. A total of 73 freeway mainline locations were identified within the sphere of influence of the project. These mainline locations are located on five major freeways, namely the I-10, US 101, I-105, I-110, and I-405. 14 of the 73 mainline locations are identified as CMP Freeway Monitoring Stations in the *2004 Congestion Management Program for Los Angeles County*, including:

- Route 10, at postmile R2.17, Lincoln Boulevard
- Route 10, at postmile R6.75, east of Overland Avenue
- Route 10, at postmile R10.71, east of La Brea Avenue
- Route 10, at postmile 13.53, Budlong Avenue
- Route 101, at postmile 13.98, Coldwater Canyon Avenue
- Route 101, at postmile 23.40, Winnetka Avenue
- Route 105, at postmile R1.00, east of Sepulveda Boulevard (Junction Route 1)
- Route 105, at postmile R5.50, east of Crenshaw Boulevard
- Route 110, at postmile 15.86, Manchester Avenue
- Route 405, at postmile 11.90, south of Route 110
- Route 405, at postmile 18.63, north of Inglewood Avenue
- Route 405, at postmile 24.27, north of La Tijera Boulevard
- Route 405, at postmile 28.30, north of Venice Boulevard
- Route 405, at postmile 35.81, south of Mulholland Drive

Existing freeway mainline traffic volumes were obtained from the *2007 Traffic Volumes on California State Highways*[69] for the selected freeway mainline locations (including CMP stations) and were increased by 1 percent in accordance with the annual average rate of increase in vehicle-miles of travel on California State Highways published in the aforementioned document to estimate existing (2008) conditions for these freeway segments. Peak hour volumes by direction were derived by applying directional and peak hour factors derived from the *2007 Traffic Volumes on California State Highways*, and freeway LOS was analyzed using the demand-to-capacity (D/C) methodology. The D/C ratios were calculated for each freeway segment using a capacity of 2,000 vehicles per hour per lane (vphpl) for freeway mixed-flow lanes, and 1,500 vphpl for HOV lanes. Freeway segment levels of service were determined based on D/C ratios and the definitions shown in **Table 4.2-8**.

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[69] California Department of Transportation, 2007 Traffic Volumes on California State Highways, 2007.

Table 4.2-8

Freeway Segment Level Of Service Definitions

Level of Service	Demand/Capacity Ratio	Flow Conditions
A	0.00 - 0.35	Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed.
B	>0.35 - 0.54	Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.
C	>0.54 - 0.77	Stable traffic flow, but less freedom to select speed, change lanes or pass. Density increasing.
D	>0.77 - 0.93	Approaching unstable flow. Speeds tolerable but subject to sudden and considerable variation. Less maneuverability and driver comfort.
E	>0.93 - 1.00	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort.
F(0)	>1.00 - 1.25	Forced traffic flow. Speed and flow may be greatly reduced with high densities.
F(1)	>1.25 - 1.35	Forced traffic flow. Severe congested conditions prevail for more than one hour. Speed and flow may drop to zero with high densities.
F(2)	>1.35 - 1.45	Forced traffic flow. Severe congested conditions prevail for more than one hour. Speed and flow may drop to zero with high densities.
F(3)	>1.45	Forced traffic flow. Severe congested conditions prevail for more than one hour. Speed and flow may drop to zero with high densities.

Source: Adapted from Los Angeles County Metropolitan Transportation Authority, 2004 Congestion Management Program for Los Angeles County, July 2004.

Traffic forecasts for the Future-Adjusted (2013) Without Project scenario were developed by adding the difference between the forecasted traffic volume and the validated base year traffic volume to the 2008 count. The Future (2013) With Project scenario was then developed by adding project-only trips to the Future-Adjusted (2013) Without Project volumes.

The significant impact criteria established by the CMP states that a project would generate significant regional freeway impacts if the project increases traffic demand on a CMP facility by 2 percent of capacity (V/C >= 0.02), causing or worsening LOS F (V/C > 1.00). **Table 4.2-9** displays the segment analysis at the 14 freeway monitoring stations. The additional segment analysis at the remaining 59 non-monitoring locations is displayed in Appendix C-6 of this EIR.

As shown in **Table 4.2-9** and Appendix C-6, the proposed project would not result in a significant impact on the adjacent freeway segments during either of the a.m. or p.m. peak hours.

In addition to the CMP arterial intersection and freeway analysis summarized above, seven study intersections and three freeway facilities were analyzed using procedures and methodologies contained in the *Highway Capacity Manual* (HCM, 2000) for Future-Adjusted (2013) Without Project conditions and Future (2013) With Project Conditions. Appendix C-8 displays the average control delay per vehicle and level of service for all seven signalized intersections based on the average delay of all vehicles passing through the intersection, as well as the density (passenger cars per hour per lane) and level of service for all three freeway facilities. In general, as can be seen in comparing the data in Appendices C-6 and C-8, the intersection levels of service calculated using the HCM methodology are comparable to the corresponding intersection levels of service based on the CMA methodology presented in Section 4.2.8.1. Likewise, the freeway facility levels of service calculated using the HCM methodology are comparable to the corresponding freeway facility levels of service based on the CMP methodology presented in Section 4.2.8.2.

Table 4.2-9

CMP Freeway Monitoring Stations Impact Analysis - Future (2013) With Project Conditions Measured Against Future-Adjusted (2013) Without Project Conditions

Postmile	Route	Segment	Mixed Flow Lanes	HOV Lanes	Future Capacity	Future-Adjusted (2013) Without Project Volumes		Project Only Trips		Future (2013) With Project Volumes		Future-Adjusted (2013) Without Project V/C & LOS				Future (2013) With Project V/C & LOS				Delta		Signficant Impact?	
						AM	PM	AM	PM	AM	PM	AM		PM		AM		PM		AM	PM	AM	PM
2.155	10 EB	Santa Monica, Jct. Rte. 1, Lincoln Blvd Interchange	3		6,000	5,540	5,510	30	30	5,570	5,540	0.923	D	0.918	D	0.928	D	0.923	D	0.005	0.005	NO	NO
2.155	10 WB	Santa Monica, Jct. Rte. 1, Lincoln Blvd Interchange	3		6,000	6,410	4,910	20	30	6,430	4,940	1.068	F(0)	0.818	D	1.072	F(0)	0.823	D	0.003	0.005	NO	NO
6.402	10 EB	Los Angeles, Overland Ave Interchange	5		10,000	10,110	9,550	10	10	10,120	9,560	1.011	F(0)	0.955	E	1.012	F(0)	0.956	E	0.001	0.001	NO	NO
6.402	10 WB	Los Angeles, Overland Ave Interchange	4		8,000	10,470	8,650	10	0	10,480	8,650	1.309	F(1)	1.081	F(0)	1.310	F(1)	1.081	F(0)	0.001	0.000	NO	NO
10.43	10 EB	Los Angeles, La Brea Ave Interchange	5		10,000	10,490	10,280	20	10	10,510	10,290	1.049	F(0)	1.028	F(0)	1.051	F(0)	1.029	F(0)	0.002	0.001	NO	NO
10.43	10 WB	Los Angeles, La Brea Ave Interchange	4		8,000	11,270	9,180	10	10	11,280	9,190	1.409	F(2)	1.148	F(0)	1.410	F(2)	1.149	F(0)	0.001	0.001	NO	NO
13.303	10 EB	Los Angeles, Normandie Ave Interchange	6		12,000	8,220	13,390	10	10	8,230	13,400	0.685	C	1.116	F(0)	0.686	C	1.117	F(0)	0.001	0.001	NO	NO
13.303	10 WB	Los Angeles, Normandie Ave Interchange	6		12,000	12,870	8,720	10	10	12,880	8,730	1.073	F(0)	0.727	C	1.073	F(0)	0.728	C	0.001	0.001	NO	NO
13.878	101 NB	Los Angeles, Coldwater Canyon Ave Interchange	5		10,000	9,600	8,640	20	10	9,620	8,650	0.960	E	0.864	D	0.962	E	0.865	D	0.002	0.001	NO	NO
13.878	101 SB	Los Angeles, Coldwater Canyon Ave Interchange	5		10,000	8,900	10,020	10	10	8,910	10,030	0.890	D	1.002	F(0)	0.891	D	1.003	F(0)	0.001	0.001	NO	NO
23.264	101 NB	Los Angeles, Winnetka Ave Interchange	5		10,000	9,420	8,460	30	40	9,450	8,500	0.942	E	0.846	D	0.945	E	0.850	D	0.003	0.004	NO	NO
23.264	101 SB	Los Angeles, Winnetka Ave Interchange	5		10,000	7,660	9,300	60	30	7,720	9,330	0.766	C	0.930	D	0.772	D	0.933	E	0.006	0.003	NO	NO
0.5	105 EB	Los Angeles, Jct. Rte. 1, Sepulveda Blvd Interchange	3		6,000	3,710	4,110	290	70	4,000	4,180	0.618	C	0.685	C	0.667	C	0.697	C	0.048	0.012	NO	NO
0.5	105 WB	Los Angeles, Jct. Rte. 1, Sepulveda Blvd Interchange	3		6,000	4,250	2,970	120	120	4,370	3,090	0.708	C	0.495	B	0.728	C	0.515	B	0.020	0.020	NO	NO
4.705	105 EB	Inglewood, Crenshaw Blvd Interchange	4	1	9,500	9,210	11,030	190	90	9,400	11,120	0.969	E	1.161	F(0)	0.989	E	1.171	F(0)	0.020	0.009	NO	NO
4.705	105 WB	Inglewood, Crenshaw Blvd Interchange	4	1	9,500	11,000	8,250	90	90	11,090	8,340	1.158	F(0)	0.868	D	1.167	F(0)	0.878	D	0.009	0.009	NO	NO
15.976	110 NB	Los Angeles, Manchester Ave Interchange	4	2	11,000	10,830	10,080	60	40	10,890	10,120	0.985	E	0.916	D	0.990	E	0.920	D	0.005	0.004	NO	NO
15.976	110 SB	Los Angeles, Manchester Ave Interchange	4	2	11,000	10,220	11,740	50	40	10,270	11,780	0.929	D	1.067	F(0)	0.934	E	1.071	F(0)	0.005	0.004	NO	NO
12.97	405 NB	Carson, Jct. Rte. 110, Harbor Freeway Interchange	5	1	11,500	10,480	8,950	30	40	10,510	8,990	0.911	D	0.778	D	0.914	D	0.782	D	0.003	0.003	NO	NO
12.97	405 SB	Carson, Jct. Rte. 110, Harbor Freeway Interchange	4	1	9,500	8,880	9,700	50	20	8,930	9,720	0.935	E	1.021	F(0)	0.940	E	1.023	F(0)	0.005	0.002	NO	NO
18.233	405 NB	Lawndale, Inglewood Ave Interchange	4	1	9,500	11,580	9,560	100	90	11,680	9,650	1.219	F(0)	1.006	F(0)	1.229	F(0)	1.016	F(0)	0.011	0.009	NO	NO
18.233	405 SB	Lawndale, Inglewood Ave Interchange	4	1	9,500	8,470	10,390	100	70	8,570	10,460	0.892	D	1.094	F(0)	0.902	D	1.101	F(0)	0.011	0.007	NO	NO
24.273	405 NB	Los Angeles, La Tijera Blvd/Howard Hughes Parkway Interchange	4	1	9,500	13,170	8,620	50	20	13,220	8,640	1.386	F(2)	0.907	D	1.392	F(2)	0.909	D	0.005	0.002	NO	NO
24.273	405 SB	Los Angeles, La Tijera Blvd/Howard Hughes Parkway Interchange	4	1	9,500	9,680	11,620	100	120	9,780	11,740	1.019	F(0)	1.223	F(0)	1.029	F(0)	1.236	F(0)	0.011	0.013	NO	NO
27.964	405 NB	Culver City, Jct. Rte. 187, Venice Blvd Interchange	5	1	11,500	12,830	8,790	200	110	13,030	8,900	1.116	F(0)	0.764	C	1.133	F(0)	0.774	D	0.017	0.010	NO	NO
27.964	405 SB	Culver City, Jct. Rte. 187, Venice Blvd Interchange	5	1	11,500	7,560	12,010	140	170	7,700	12,180	0.657	C	1.044	F(0)	0.670	C	1.059	F(0)	0.012	0.015	NO	NO
37.026	405 NB	Los Angeles, Mulholland Dr Interchange	6	1	13,500	6,620	12,750	160	60	6,780	12,810	0.490	B	0.944	E	0.502	B	0.949	E	0.012	0.004	NO	NO
37.026	405 SB	Los Angeles, Mulholland Dr Interchange	5	1	11,500	13,070	8,410	60	80	13,130	8,490	1.137	F(0)	0.731	C	1.142	F(0)	0.738	C	0.005	0.007	NO	NO

Source: Fehr & Peers, 2009.

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4.2.9 Mitigation Measures

Potential intersection improvements were identified and evaluated for all intersections identified in Section 4.2.8 as being significantly impacted. Such improvements include the addition of, or improvements to, travel- and turn-lanes, traffic signal enhancements, and intersection restriping. Locations where additional right-of-way may be required are noted. In some cases, it was determined that the improvements would not be feasible to implement and that the impact would be significant and unavoidable. In other cases, it would be feasible to implement the mitigation under consideration. The discussion below presents both those improvements that were considered but determined to be infeasible, as well as those improvements that would be feasible and are thereby included in the recommended mitigation program for the project.

Intersection Improvements Considered but Determined to be Infeasible

The following improvements were identified at the intersections that were anticipated to be significantly impacted, but were determined to be infeasible to implement. For each intersection, the improvement is described, as is the reason it is not considered to be feasible to implement.

- **Airport Boulevard and Arbor Vitae Street/Westchester Parkway (Intersection #6)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the westbound approach to the Airport Boulevard and Arbor Vitae Street/Westchester Parkway intersection to provide two left-turn lanes, one through lane, and a through/right lane and widen the northbound approach to provide two left-turn lanes, two through lanes, and one right-turn lane. However, this improvement is infeasible due to right-of-way constraints on the northeast and southeast corners associated with widening the northbound and westbound approaches. Therefore, this impact would be significant and unavoidable.

- **Airport Boulevard and Century Boulevard (Intersection #7)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to restripe the southbound approach at the Airport Boulevard and Century Boulevard intersection to provide two left-turn lanes, one through-left lane, and two right-turn lanes. However, in discussions with LADOT, the approval of the installation of southbound dual right-turn lanes would require the installation of an exclusive southbound right-turn signal phase. The addition of a new southbound right-turn phase would negate the capacity enhancements achieved with the proposed southbound lane reconfiguration. Therefore, this impact would be significant and unavoidable.

- **Aviation Boulevard and Century Boulevard (Intersection #14)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the westbound approach to the Aviation Boulevard and Century Boulevard intersection to provide one left-turn lane, four through lanes, and a through/right lane and widen the eastbound approach to provide one left-turn lane, four through lanes, and a right-turn lane. However, this improvement is infeasible due to right-of-way constraints associated with the existing above-grade railroad bridge just west of the intersection. Therefore, this impact would be significant and unavoidable.

- **Aviation Boulevard and Imperial Highway (Intersection #16)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the eastbound approach to the Aviation Boulevard and Imperial Highway intersection to provide two left-turn lanes, three through lanes, and a right-turn lane. However, this improvement is infeasible due to right-of-way constraints along the south side of Imperial Highway west of Aviation Boulevard. Therefore, this impact would be significant and unavoidable.

- **Century Boulevard and La Cienega Boulevard (Intersection #36)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the southbound approach to the Century Boulevard and La Cienega Boulevard intersection to provide two left-turn lanes, two through lanes, and two right-turn lanes and widen the westbound approach to provide two left-turn lanes, three through lanes, and a right-turn lane. However, this improvement is infeasible due to right-of-way constraints on the northwest and northeast corners associated with widening the southbound and westbound approaches, respectively. Therefore, this impact would be significant and unavoidable.

- **La Cienega Boulevard and La Tijera Boulevard (Intersection #88)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the southbound approach to the La Cienega Boulevard and La Tijera Boulevard intersection to provide three through lanes and two right-turn lanes. However, this improvement is considered infeasible due to right-of-way constraints on the west side of La Cienega Boulevard north of La Tijera Boulevard. Therefore, this impact would be significant and unavoidable.

- **La Cienega Boulevard and Stocker Avenue (Intersection #93)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the northbound approach to the La Cienega Boulevard and Stocker Avenue intersection to provide three through lanes and a free right-turn lane. The existing northbound right-turn lane is generally blocked by northbound through vehicles queuing back from the intersection during the AM and PM peak hours, effectively causing the northbound approach to operate as two through lanes and a shared through/right-turn lane. In order to address that critical movement, the northbound approach would need to be widened in order to increase the length of the northbound right-turn lane to a distance where through vehicles no longer block right-turning vehicles. However, this improvement is considered infeasible due to right-of-way constraints associated with the presence of high voltage power lines and a large transmission line tower at the southeast corner of the intersection. Therefore, this impact would be significant and unavoidable.

- **Lincoln Boulevard and Venice Boulevard (Intersection #109)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the northbound approach to the Lincoln Boulevard and Venice Boulevard intersection to provide two left-turn lanes, three through lanes, and a right-turn lane and widen the southbound approach to provide two left-turn lanes, three through lanes, and a right-turn lane. However, this improvement is considered infeasible due to right-of-way constraints north and south of the intersection along Lincoln Boulevard associated with providing an additional travel lane in both directions. Therefore, this impact would be significant and unavoidable.

- **Lincoln Boulevard and Washington Boulevard (Intersection #110)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the northbound approach to the Lincoln Boulevard and Washington Boulevard intersection to provide two left-turn lanes, three through lanes, and a through/right lane and widen the southbound approach to provide two left-turn lanes, three through lanes, and a through/right lane. However, this improvement is considered infeasible due to right-of-way constraints north and south of the intersection along Lincoln Boulevard associated with providing an additional travel lane in both directions. Therefore, this impact would be significant and unavoidable.

- **Manchester Avenue and Sepulveda Boulevard (Intersection #114)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the southbound approach to the Manchester Avenue and Sepulveda Boulevard intersection to provide two left-turn lanes, three through lanes, and one right-turn lane. However, this improvement is considered infeasible due to right-of-way constraints on the northwest corner associated with widening the southbound approach. Therefore, this impact would be significant and unavoidable.

- **Rosecrans Avenue and Sepulveda Boulevard (Intersection #125)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to restripe the northbound approach to the Rosecrans Avenue and Sepulveda Boulevard intersection to provide two left-turn lanes, four through lanes, and one right-turn lane and widen the southbound approach to provide two left-turn lanes, four through lanes, and one right-turn lane. However, this improvement is considered infeasible due to right-of-way constraints north and south of the intersection along Sepulveda Boulevard associated with providing an additional southbound travel lane. Therefore, this impact would be significant and unavoidable.

- **Sepulveda Boulevard and Westchester Parkway (Intersection #135)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the westbound approach to the Sepulveda Boulevard and Westchester Parkway intersection to provide two left-turn lanes, two through lanes, and a right-turn lane. This improvement is considered infeasible due to right-of-way constraints on Westchester Parkway east of Sepulveda Boulevard. However, with the elimination of parking on Westchester Parkway and the elimination of the functional eastbound right-turn lane, there is sufficient right-of-way to provide an additional westbound left-turn lane in order to partially mitigate this intersection. The loss of parking on Westchester Parkway is not considered a burden in this immediate area since there are large surface parking lots within a short walking distance, and parking is permitted on both sides of Sepulveda Boulevard. Even with this partial mitigation, the residual impact would be significant and unavoidable.

- **Sepulveda Boulevard and I-105 Ramp north of Imperial Highway (Intersection #139)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the northbound approach to the Sepulveda Boulevard and I-105 Ramp north of Imperial Highway intersection to four through lanes. However, this measure is considered infeasible due to right-of-way constraints associated with the Sepulveda tunnel under the south runways of LAX. Therefore, this impact would be significant and unavoidable.

Intersection Improvements Determined to be Feasible

The following improvements were identified at the intersections that were anticipated to be significantly impacted and were determined to be feasible to implement.

- **Airport Boulevard and Manchester Avenue (Intersection #9)**

  Restripe the eastbound approach to the Airport Boulevard and Manchester Avenue intersection to provide one left-turn lane, two through lanes, and a through/right lane. With implementation of this measure, three parking spaces on the south side of Manchester Avenue west of Belford Avenue and two parking spaces on the south side of Manchester Avenue east of Belford Avenue would need to be restricted during the PM peak period. The loss of five parking spaces during the PM peak period is not considered a burden to this immediate area since the commercial businesses on the south side of Manchester Avenue west of Belford Avenue have an off-street parking lot, and there is parking allowed on both sides of Belford Avenue and on the north side of Manchester Avenue. Alternatively, restripe and modify the traffic signal for the westbound approach to the Airport Boulevard and Manchester Avenue intersection to provide two left-turn lanes, two through lanes, and a right-turn lane. Implementation of either mitigation measure would reduce the impact to a less-than-significant level.

- **Arbor Vitae Street and Aviation Boulevard (Intersection #10)**

  Widen the eastbound approach to the Arbor Vitae Street and Aviation Boulevard intersection to provide one left-turn lane, two through lanes, and a right-turn lane. Implementation of this mitigation measure would reduce the impact to a less-than-significant level.

- **Imperial Highway and Sepulveda Boulevard (Intersection #71)**

  Restripe the northbound approach to the Imperial Highway and Sepulveda Boulevard intersection to provide one left-turn lane, three through lanes, and two right-turn lanes. Implementation of this mitigation measure would reduce the impact to a less-than-significant level. While restriping this intersection as described above would mitigate this impact, an alternative would be to widen the east side of Sepulveda Boulevard south of Imperial Highway to provide one left-turn lane, three through lanes, and two right-turn lanes on the northbound approach. However, provided the right-of-way is available, the provision of additional travel lane area would require disruption of traffic flows, generation of construction-related air pollutant emissions and noise impacts, and therefore the restriping is recommended rather than the widening.

- **La Cienega Boulevard and I-405 Ramps N/O Century Boulevard (Intersection #96)**

  Widen the southbound approach to the La Cienega Boulevard and I-405 Ramps N/O Century Boulevard intersection to provide two left-turn lanes and two through lanes. Implementation of this mitigation measure would reduce the impact to a less-than-significant level.

- **La Tijera Boulevard and Sepulveda Boulevard (Intersection #101)**

  Restripe the westbound approach to the La Tijera Boulevard and Sepulveda Boulevard intersection and modify the traffic signal at the intersection to provide two left-turn lanes, one through lane, and a through/right lane. Implementation of this mitigation measure would reduce the impact to a less-than-significant level. This mitigation measure would also change the westbound left-turn phasing from protected/permissive to protected only.

- **Sepulveda Boulevard and 76th/77th Street (Intersection #136)**

  Restripe the eastbound approach to the Sepulveda Boulevard and 76th/77th Street intersection to provide two left-turn lanes, a through/left-turn lane, and one right-turn lane. Implementation of this mitigation measure would reduce the impact to a less-than-significant level.

Graphic depictions of the improvements described above are included in Appendix C-3. Improvements that were considered for each intersection are depicted, including those improvements determined to be infeasible.[70]

Timing for Implementation of Feasible Intersection Improvements

As indicated in Section 2.4.5 of this EIR, international passenger activity levels at TBIT are assumed in the EIR analysis to increase from 16.7 MAP in 2008 to 21.8 MAP in 2013. The impacts analysis presented in Section 4.2.8 above is based on the additional vehicle trip generation associated with the 5.1 MAP increase in international passenger activity levels. The timing for implementation of the feasible improvements described above will be coordinated with the growth in international passenger activity levels at TBIT based on 1 MAP increments (i.e., 17.7 MAP, 18.7 MAP, 19.7 MAP, etc.). In order to determine which intersection improvements are required under each increment of growth, each significantly impacted intersection where feasible improvements are proposed was analyzed to identify the level of growth that triggers the significant impact. This was done by comparing the intersection LOS and V/C ratio under "Without Project" conditions and "With Project" conditions at each progressive increment of growth until the significant impact was triggered. The "Without Project" conditions were determined for each MAP level by linear interpolation of growth in ambient traffic that would occur over a sequence of five 1-MAP increases in passenger activity levels at TBIT. "With Project" conditions were then determined for each MAP level by linear interpolation of growth in project vehicle trips that would occur over a sequence of five 1-MAP increases in passenger activity levels at TBIT. Impacts were then determined for each MAP level by comparing the corresponding "with" and "without" project scenarios. If the difference in LOS was calculated to exceed the threshold guidelines defined by the jurisdiction in which the intersection was located, then the recommended improvement(s) was identified for construction once the airport reached the corresponding growth in MAP.

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70 The intersection improvements shown in Appendix C-3 focus on the 71 intersections evaluated within the study area, as identified in Section 4.2.3. The improvements for Intersection #93 (La Cienega Boulevard and Stocker Avenue) are not shown in Appendix C-3 because that intersection is addressed as part of the CMP analysis as an arterial monitoring station, as described in Section 4.2.8.2, which is separate from the 71 intersections.

The impact comparison for these conditions is depicted in Appendix C-9 of this EIR. The associated level of service sheets are also provided in Appendix C-9. The following identifies the intersection mitigation improvements associated with each increment of MAP growth over 2008 conditions (16.7 MAP for international travel at TBIT), as will be determined annually, based on calendar year passenger counts at LAX.

One MAP Increase (i.e., 17.7 MAP)

No improvements are necessary at an increase of one MAP (i.e., 17.7 MAP) at TBIT as part of the Bradley West Project.

Two MAP Increase (i.e., 18.7 MAP)

The following intersection improvements shall be implemented at an increase of two MAP (i.e., 18.7 MAP) at TBIT as part of the Bradley West Project.

- Modify the Intersection of La Tijera Boulevard and Sepulveda Boulevard (Intersection #101)

Three MAP Increase (i.e., 19.7 MAP)

In addition to the improvements identified above, improvements at the following three intersections shall be implemented at an increase of three MAP (i.e., 19.7 MAP) at TBIT as part of the Bradley West Project.

- Modify the Intersection of Airport Boulevard and Manchester Avenue (Intersection #9)
- Modify the Intersection of Imperial Highway and Sepulveda Boulevard (Intersection #71)
- Modify the Intersection of Sepulveda Boulevard and 76th/77th Street (Intersection #136)

Four MAP Increase (i.e., 20.7 MAP)

In addition to the improvements identified above, improvements at the following two intersections shall be implemented at an increase of four MAP (i.e., 20.7 MAP) at TBIT as part of the Bradley West Project.

- Modify the Intersection of Arbor Vitae Street and Aviation Boulevard (Intersection #10)
- Modify the Intersection of La Cienega Boulevard and I-405 Ramps N/O Century Boulevard (Intersection #96)

Five MAP Increase (i.e., 21.7 MAP)

All feasible intersection improvements would be implemented before a five MAP increase at TBIT is reached.

Recommended Mitigation Program

In summary, based on the information provided above, the following mitigation measures are proposed to address off-airport surface transportation impacts associated with the Bradley West Project:

- **MM-ST (BWP)-4. Modify the Intersection of Airport Boulevard and Manchester Avenue (Intersection #9).**

  The eastbound approach to the Airport Boulevard and Manchester Avenue intersection shall be restriped to provide one left-turn lane, two through lanes, and a through/right lane. Three parking spaces on the south side of Manchester Avenue west of Belford Avenue and two parking spaces on the south side of Manchester Avenue east of Belford Avenue shall be restricted during the PM peak period. Alternatively, the westbound approach to the Airport Boulevard and Manchester Avenue intersection shall be restriped and the traffic signal modified to provide two left-turn lanes, two through lanes, and a right-turn lane. This mitigation measure will be implemented to the standards and satisfaction of the City of Los Angeles. Implementation of this measure shall occur if/when international passenger activity levels at TBIT increase to 19.7 million annual passengers.

- **MM-ST (BWP)-5. Modify the Intersection of Arbor Vitae Street and Aviation Boulevard (Intersection #10).**

  The eastbound approach to the Arbor Vitae Street and Aviation Boulevard intersection shall be widened to provide one left-turn lane, two through lanes, and a right-turn lane. This mitigation measure will be implemented to the standards and satisfaction of the City of Los Angeles and City of Inglewood. Implementation of this measure shall occur if/when international passenger activity levels at TBIT increase to 20.7 million annual passengers.

- **MM-ST (BWP)-6. Modify the Intersection of Imperial Highway and Sepulveda Boulevard (Intersection #71).**

  The northbound approach to the Imperial Highway and Sepulveda Boulevard intersection shall be restriped to provide one left-turn lane, three through lanes, and two right-turn lanes. While restriping this intersection as described above would mitigate this impact, an alternative would be to widen the east side of Sepulveda Boulevard south of Imperial Highway to provide one left-turn lane, three through lanes, and two right-turn lanes on the northbound approach. However, provided the right-of-way is available, the provision of additional travel lane area would require disruption of traffic flows, generation of construction-related air pollutant emissions and noise impacts, and therefore the restriping is recommended rather than the widening. This mitigation measure will be implemented to the standards and satisfaction of the City of Los Angeles, City of El Segundo, and Caltrans. Implementation of this measure shall occur if/when international passenger activity levels at TBIT increase to 19.7 million annual passengers.

- **MM-ST (BWP)-7. Modify the Intersection of La Cienega Boulevard and I-405 Ramps N/O Century Boulevard (Intersection #96).**

  The southbound approach to the La Cienega Boulevard and I-405 Ramps N/O Century Boulevard intersection shall be widened to provide two left-turn lanes and two through lanes. This mitigation measure will be implemented to the standards and satisfaction of the City of Los Angeles, City of Inglewood, and Caltrans. Implementation of this measure shall occur if/when international passenger activity levels at TBIT increase to 20.7 million annual passengers.

- **MM-ST (BWP)-8. Modify the Intersection of La Tijera Boulevard and Sepulveda Boulevard (Intersection #101).**

  The westbound approach to the La Tijera Boulevard and Sepulveda Boulevard intersection shall be restriped and the traffic signal modified to provide two left-turn lanes, one through lane, and a through/right lane. This mitigation measure will be implemented to the standards and satisfaction of the City of Los Angeles. Implementation of this measure shall occur if/when international passenger activity levels at TBIT increase to 18.7 million annual passengers.

- **MM-ST (BWP)-9. Modify the Intersection of Sepulveda Boulevard and 76th/77th Street (Intersection #136).**

  The eastbound approach to the Sepulveda Boulevard and 76th/77th Street intersection shall be restriped to provide two left-turn lanes, a through/left-turn lane, and one right-turn lane. This mitigation measure will be implemented to the standards and satisfaction of the City of Los Angeles. Implementation of this measure shall occur if/when international passenger activity levels at TBIT increase to 19.7 million annual passengers.

4.2.10 Level of Significance after Mitigation

Table 4.2-10 summarizes the final LOS for the six significantly impacted intersections identified in Section 4.2.8 that can be mitigated through the feasible intersection improvements identified in Section 4.2.9. Those intersections include the following:

- 9. Airport Boulevard and Manchester Avenue
- 10. Arbor Vitae Street and Aviation Boulevard

- 71. Imperial Highway and Sepulveda Boulevard
- 96. La Cienega Boulevard and I-405 Ramps N/O Century Boulevard
- 101. La Tijera Boulevard and Sepulveda Boulevard
- 136. Sepulveda Boulevard and 76th/77th Street

As shown in **Table 4.2-10**, the improvements included in the recommended mitigation program would reduce impacts at those six intersections to a level that is less than significant, including under either of the improvement alternatives described for Intersections #9 and #71. The proposed timing/phasing of mitigation measures is designed to provide for the recommended intersection improvements in coordination with incremental increases in passenger activity levels at TBIT. This analysis assumes that there would be situations, including unexpected conditions and circumstances, where a proposed improvement(s) would not yet be completed by the time the impact occurs, and consequently there would be a temporary significant and unavoidable impact until the recommended improvements are in-place. Examples of unanticipated conditions and circumstances include, but are not limited to, delays in receiving required permits and approvals, coordination with affected jurisdictions, unexpected site conditions such as subsurface contamination, and coordination with other circulation system improvements nearby (i.e., schedule in coordination with other projects nearby that require lane closures or detours).

As discussed in Section 4.2.9 above, existing constraints at the remaining 13 significantly impacted intersections render potential intersection improvements infeasible. Those intersections include the following:

- 6. Airport Boulevard and Arbor Vitae Street/Westchester Parkway
- 7. Airport Boulevard and Century Boulevard
- 14. Aviation Boulevard and Century Boulevard
- 16. Aviation Boulevard and Imperial Highway
- 36. Century Boulevard and La Cienega Boulevard
- 88. La Cienega Boulevard and La Tijera Boulevard
- 93. La Cienega Boulevard and Stocker Avenue
- 109. Lincoln Boulevard and Venice Boulevard
- 110. Lincoln Boulevard and Washington Boulevard
- 114. Manchester Avenue and Sepulveda Boulevard
- 125. Rosecrans Avenue and Sepulveda Boulevard
- 135. Sepulveda Boulevard and Westchester Parkway
- 139. Sepulveda Boulevard and I-105 Ramp north of Imperial Highway

In the absence of feasible mitigation measures, the impacts at those 13 intersections would be significant and unavoidable.

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Table 4.2-10

Off-Airport Surface Transportation Impacts - Intersection Level of Service With Recommended Mitigation Program[1]

					Future-Adjusted (2013) Without Project Conditions AM		Mitigated Future (2013) With Project Conditions AM		Significant Impact?		Future-Adjusted (2013) Without Project Conditions MD		Mitigated Future (2013) With Project Conditions MD		Significant Impact		Future-Adjusted (2013) Without Project Conditions PM		Mitigated Future (2013) With Project Conditions PM		Significant Impact?	
Int #	**Intersection**	**Jurisdiction**	**ATSAC**	**ATCS**	**V/C**	**LOS**	**V/C**	**LOS**	**Delta**	**Impact?**	**V/C**	**LOS**	**V/C**	**LOS**	**Delta**	**Impact?**	**V/C**	**LOS**	**V/C**	**LOS**	**Delta**	**Impact?**
9	Airport Blvd and Manchester Ave	LA	X	X	0.718	C	0.755	C	0.036	NO	0.704	C	0.611	B	-0.093	NO	1.125	F	1.077	E	-0.048	NO
10	Arbor Vitae St and Aviation Blvd	Inglewood / LA	X	X	0.707	C	0.747	C	0.040	NO	0.477	A	0.507	A	0.030	NO	0.817	D	0.750	C	-0.067	NO
71	Imperial Hwy and Sepulveda Blvd	Caltrans / El Segundo / LA	X	X	0.704	C	0.678	B	-0.025	NO	1.040	F	0.780	C	-0.260	NO	1.120	F	0.750	C	-0.369	NO
96	La Cienega Blvd and I-405 SB Ramps N/O Century	Caltrans / Inglewood / LA	X	X	0.736	C	0.720	C	-0.016	NO	0.569	A	0.560	A	-0.009	NO	0.693	B	0.656	B	-0.037	NO
101	La Tijera Blvd and Sepulveda Blvd	LA	X	X	0.753	C	0.665	B	-0.088	NO	0.656	B	0.636	B	-0.020	NO	0.771	C	0.732	C	-0.039	NO
136	Sepulveda Blvd and 76th/77th Street	LA	X	X	0.835	D	0.803	D	-0.032	NO	0.527	A	0.527	A	0.000	NO	0.704	C	0.698	B	-0.006	NO

[1] The recommended mitigation program includes those intersections for which feasible intersection improvements were identified. Potential intersection improvements for other significantly impacted intersections not included in this table were determined to be infeasible. See discussion in Section 4.2.9.

Source: Fehr & Peers, 2009.

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4.3 Construction Surface Transportation

4.3.1 Introduction

By way of background, the LAX Master Plan Final EIR analyzed future roadway traffic impacts for the entirety of the Master Plan including a peak construction year of 2008, when it was previously anticipated that many of the Master Plan projects would be under construction. For operational conditions, the LAX Master Plan Final EIR analyzed future roadway traffic impacts at Master Plan buildout, previously anticipated to be 2015. The Master Plan Final EIR analyzed traffic impacts associated with several alternatives considered for the Master Plan, including Alternative D, which was ultimately approved. In conjunction with the evaluation of traffic impacts, the Final EIR proposed numerous Master Plan commitments and mitigation measures to address potential traffic impacts associated with construction and operation of the Master Plan. The LAX Master Plan Final EIR provides a programmatic evaluation of the overall impacts of the Master Plan, understanding that a more detailed analysis of impacts particular to individual projects within the Master Plan can be better evaluated at the more detailed levels of project planning. That is the case here relative to the Bradley West Project. The traffic analysis presented in this section addresses the construction traffic impacts specific to the Bradley West Project that were not otherwise covered in the Master Plan Final EIR. The impacts were determined for both the peak construction period for the Bradley West Project (Q4 2011) and the overall cumulative peak (Q4 2010).[71] In this case, the peak construction month for the Bradley West Project does not correspond to the peak cumulative condition, which includes traffic from the construction of other known projects anticipated to be under construction during the approximately 5-year Bradley West Project construction schedule.

The information provided in this project-level tiered EIR was prepared to examine, at a greater level of detail, the potential surface transportation impacts specifically associated with development of the Bradley West Project. This Bradley West Project analysis "tiers" from the analysis and findings of the LAX Master Plan Final EIR. However, this Bradley West Project analysis incorporates current traffic data and information obtained subsequent to LAX Master Plan Final EIR publication. For example, procedures and certain assumptions used in this analysis were based on the traffic analysis conducted for the South Airfield Improvement Project (SAIP) EIR, which was published in 2005. The SAIP was the first Master Plan project to be constructed and the EIR for the SAIP was tiered from the LAX Master Plan Final EIR. Subsequent to the SAIP, construction analysis methodologies and data were updated to assess the potential impacts associated with construction of the LAX Crossfield Taxiway Project (CFTP), which was documented in the CFTP Draft EIR published in September 2008. Given that the traffic conditions resulting from the construction of both the CFTP and the Bradley West Project will be assessed against the same Baseline (2008) traffic conditions, and that both projects are similar in terms of regional approach/departure patterns and construction peaking characteristics, the analysis procedures and data were applied and updated as appropriate for the Bradley West Project based on the particular characteristics of the project.

The anticipated traffic impacts at intersections that would accommodate traffic from construction vehicles are assessed herein, including construction employee vehicles, construction equipment and material delivery trucks, and other construction-related roadway traffic activity (i.e., employee shuttles and transfer trucks). Applicable LAX Master Plan commitments and mitigation measures consistent with the Master Plan Mitigation Monitoring and Reporting Program (MMRP) were incorporated to mitigate potential construction-related impacts and are considered part of the proposed project.

This analysis addresses, in particular, the impacts from construction-related traffic that would occur during the peak period of project construction. This peak-period analysis is considered to provide conservative

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71 The peak construction period related to construction traffic impacts is anticipated to occur in the fourth quarter of 2011. This is different from the peak construction period related to air quality impacts, which is anticipated to occur in the third quarter of 2010. The reason for that difference is that the peak traffic generation would occur during completion of the new buildings at TBIT, which involve a substantial number of workers, but not necessarily equipment that has air pollutant emissions; whereas the peak air pollutant emissions would occur in conjunction with the demolition and reconstruction of aircraft apron and taxiway areas, which involves a substantial amount of heavy construction equipment that has air pollutant emissions.

results in that project-related traffic during periods when construction activities are less intensive will result in fewer traffic impacts than presented herein. The analysis focuses on construction-related impacts associated with the proposed Bradley West Project. Potential impacts associated with the operation of the Bradley West Project are discussed in Section 4.1, *On-Airport Surface Transportation*, and Section 4.2, *Off-Airport Surface Transportation*, of this EIR.

4.3.2 Methodology

4.3.2.1 Overview

As noted above, this analysis focuses on construction impacts related to the Bradley West Project. The analysis methodology is based largely on the approach used for the SAIP and the CFTP, which are generally similar in nature, scope, and location to the Bradley West Project. Given that both the Bradley West Project and the CFTP share the same Baseline (2008) conditions, no new traffic data were collected for the Bradley West Project analysis and many of the assumptions used for the Bradley West Project and documented herein were assumed to be the same as those used for the aforementioned traffic studies.

The Bradley West Project study area consists of a focused area that includes those intersections and roadways anticipated to be directly or indirectly affected by the construction associated with the Bradley West Project. Given the similarities between the previous projects and the Bradley West Project, the geographic limits of the Bradley West Project study area and the potentially affected intersections continue to include the study area selected as part of the CFTP, which were determined through consultation with Los Angeles World Airports (LAWA) and the Los Angeles Department of Transportation (LADOT). However, for the Bradley West Project analysis, the study area previously used for the CFTP was expanded to include additional intersections that could potentially be affected, given that the location of the Bradley West Project employee parking and staging locations vary from the location assumed for the CFTP. As described in more detail in Section 4.3.3 below, construction staging and construction parking for the Bradley West Project would be distributed between several locations situated around the airport. The nature and intensity of construction would vary over the approximately 5-year construction period, as would also the associated need for, and distribution of, construction staging and parking. The exact characteristics of how and when those needs would change are unknown at this time. As such, a conservative approach has been applied to the construction traffic impacts analysis whereby all the construction employee parking, which constitutes the vast majority (i.e., over 90 percent) of the project's construction-related peak-hour trips during the peak construction period (fourth quarter of 2011), is analyzed under four different scenarios. The first scenario focuses on the use of a construction employee parking area located at the northwest corner of the airport. The second scenario focuses on the use of construction employee parking areas located at the southeast corner or east edge of the airport. The third and fourth scenarios provide a sensitivity analysis that assumes the potential for a temporary surge in the number of construction workers and concurrent use of both employee parking areas in the northwest and in the southeast. (See Section 4.3.4.2 below for more detail regarding these four scenarios.)

The study area for the impacts analysis includes those roads and intersections that would most likely be affected by employee and truck traffic associated with construction of the Bradley West Project. The methodology used in this analysis is based on data and procedures used for the LAX Master Plan Final EIR traffic study,[72] subsequently updated and refined based on analyses prepared for the SAIP and CFTP traffic studies. The procedures are also consistent with the information and requirements defined in Los Angeles Department of Transportation (LADOT) Traffic Study Policies and Procedures, revised by the LADOT in March 2002, notwithstanding that a construction traffic analysis such as this is not typically required by LADOT.

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72 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004, Section 4.3.

The following steps and assumptions were used to develop the analysis methodology.

- The study area (explained further in Section 4.3.3.1 below) was defined according to the travel paths that would be used by construction traffic to access the project site, equipment, materials staging, and parking areas. Construction delivery vehicle travel paths would be regulated according to the construction traffic management plan detailed within the LAX Master Plan Mitigation Monitoring and Reporting Program. The specific mitigation commitments associated with the LAX Master Plan are described in more detail within Section 4.3.7 below. Although the proposed Bradley West Project improvements are located in the mid-field just west of the Central Terminal Area (CTA), construction delivery and employee parking would be located at various areas near the northwest, west, east, and boundaries of the airport. Consequently, all Bradley West Project construction employee vehicle activity would access the proposed parking and staging areas via off-airport roads adjacent to the airport. Construction materials would be transferred from the staging areas via service roads within the airport boundaries and, therefore, material transfers would not affect the public on-airport roadway system. Bradley West Project construction vehicles would not access the CTA roadways.
- Intersection traffic volume data were collected at the key study area intersections in July and August 2008 during the a.m. commute peak hours (7:00 a.m. to 9:00 a.m.) and the p.m. commute peak hours (4:30 p.m. to 6:30 p.m.). These data were then adjusted to represent peak hour volumes that would occur during (a) the a.m. peak inbound hour for construction employees and deliveries and (b) the p.m. peak outbound hour for construction employees and deliveries. Pursuant to the mitigation requirements set forth in the LAX Master Plan Final EIR, construction truck delivery and construction employee traffic activity would not be scheduled during the morning or afternoon commute peak periods. The estimated peak hours for construction-related traffic were determined by reviewing the estimated hourly construction-related trip activity. The a.m. peak construction hour was determined to be 5:00 a.m. to 6:00 a.m. and the p.m. peak construction hour was determined to be 3:30 p.m. to 4:30 p.m.
- Key off-airport intersections, including intersections with freeway ramps in the proposed study area, were analyzed. Impacts to roadway segments and freeway[73] links, typically required to be analyzed during peak commute periods, were not analyzed because peak construction-related traffic activity is anticipated to occur outside of peak commute periods.

In general, this analysis complements the assumptions and analyses included in the LAX Master Plan Final EIR and subsequent detailed project-level construction traffic studies prepared for the SAIP EIR and the CFTP EIR. Additional data were collected as part of this study to prepare technical analyses that (a) incorporate the most current available data, (b) accommodate a more focused study area, and (c) consider alternative peak hours that were not specifically modeled or analyzed in the LAX Master Plan Final EIR (i.e., construction peak hours specific to Bradley West Project construction).

The following describes the methodology and assumptions underlying the various traffic conditions considered in this traffic analysis, and how the project's direct and indirect (cumulative) impacts were identified relative to those conditions.

4.3.2.2 Determination of Baseline (2008) Traffic Conditions

The Baseline conditions used in the analysis of project-related construction traffic impacts are defined as the existing conditions within the Bradley West Project traffic study area at the time the Notice of Preparation (NOP) for the Bradley West Project Draft EIR was published in 2008. For purposes of this analysis, intersection turning movement volumes collected in July and August 2008, which represent the

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73 During a review of the proposed analysis methodology and study area for the SAIP, LADOT staff indicated in a July 29, 2004, e-mail that "intersection analysis for this type of study is more than sufficient" and that roadway and freeway link analyses would not be required. A Congestion Management Program (CMP) analysis is not required for construction-related activity because it is not anticipated that the Bradley West Project would generate traffic during the a.m. or p.m. peak commute periods. Additionally, because the Bradley West Project would not alter roadway circulation patterns or increase traffic volumes subsequent to construction, a CMP analysis is not required for post-construction traffic operations.

most current comprehensive traffic counts completed by LAWA, were used as a basis for preparing the traffic analysis and assessing potential project-related traffic impacts. The use of 2008 traffic conditions as the baseline for evaluating construction traffic impacts is reasonable and appropriate, given that construction traffic is anticipated to begin in late 2009 and reach a peak in 2010. The background traffic conditions in 2009 and 2010 are not anticipated to be substantially different from those in 2008; hence, a 2008 baseline is considered to provide a suitable basis for assessing the significance of project-related construction traffic impacts. The following steps were taken to develop the Baseline (2008) traffic conditions information.

Prepare Model of Study Area Roadways and Intersections--A traffic model of study area roadways and intersections was developed to assist with intersection capacity analysis (i.e., geometric configuration, quantitative delineation of capacity, and operational characteristics of intersections likely to be affected by project traffic). The model was developed using TRAFFIX,[74] a commercially available traffic analysis software program designed for developing traffic forecasts and analyzing intersection and roadway capacities. The model uses widely accepted traffic engineering methodologies and procedures, including the Transportation Research Board Critical Movement Analysis (CMA) Circular 212 Planning Method,[75] which is the required intersection analysis methodology for traffic impact studies conducted within the City of Los Angeles.

Review Off-Airport Traffic Data Collected in 2008--Intersection turning movement counts for Baseline conditions were collected during a.m. and p.m. peak commute hours in July and August 2008. July and August are considered to be the peak months for airport-related traffic around LAX; therefore, additional seasonal adjustments were not required to convert the counts to peak month conditions. However, to estimate background traffic activity during peak construction periods, it was necessary to convert these data to represent the traffic activity that would occur during the clock hour that directly precedes the peak commute hours. This adjustment to the peak commute hour data reflects the fact that, as a result of LAX Master Plan Commitments ST-12 and ST-14 identified within the LAX Master Plan MMRP, construction work hours and construction vehicle deliveries are required to be scheduled so as to avoid peak commute hours. An adjustment factor was developed using 24-hour automatic traffic recorder (ATR) counts[76] collected at multiple locations within the study area during June 2008. The adjustment factor was calculated as the ratio of traffic volumes during the construction peak period divided by the traffic volumes during the corresponding commute peak period (see Section 4.3.3.3 below for discussion of the data used to develop the adjustment factor). It was assumed that the traffic volumes recorded in June 2008 provide a reasonable representative profile of the hourly peaking pattern of background traffic on the study area roadway network during the summer 2008 season and would, therefore, be representative of hourly peaking patterns in July and August 2008.

Estimate Baseline (2008) Traffic Volumes--Baseline (2008) traffic volumes consist of the data collected in July and August 2008 during the a.m. and p.m. peak commute hours adjusted using the ratio described in the preceding paragraph to represent estimated traffic volumes during the construction peak hour. The intersection levels of service calculated using these volumes served as a basis of comparison for assessing potential impacts generated by construction of the Bradley West Project.

4.3.2.3 Determination of Baseline (2008) Plus Peak Bradley West Project Traffic Conditions

This traffic analysis was designed to assess the direct impacts associated with the Bradley West Project, as well as the effects of future cumulative conditions as described below. For purposes of determining

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74 Dowling Associates, TRAFFIX Version 7.7. Based on information provided by Dowling Associates in May 2, 2008, over 425 site TRAFFIX licenses are owned by public and private entities, including licenses owned by 44 cities, 5 countries, and Caltrans within the State of California.

75 Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

76 Traffic data were collected in support of the SGI Group Inc, LAX Air Quality and Source Apportionment Study, July 30, 2008.

the direct project-related impacts, a traffic scenario was developed consisting of the Baseline (2008) traffic described above plus the additional traffic that would be generated by the Bradley West Project during the peak construction period. The Baseline (2008) Plus Peak Bradley West Project traffic condition is somewhat hypothetical in nature, inasmuch as it combines the project-related traffic estimated to occur during a future peak period of construction (fourth quarter 2011) with the Baseline (2008) traffic volumes identified for current conditions.

The following steps were conducted to determine the Baseline (2008) Plus Peak Bradley West Project traffic volumes.

Analyze Peak Bradley West Project Construction Activity--Vehicle trips associated with construction of the Bradley West Project during the peak month of construction activity were estimated and distributed throughout the study area network. The trips were estimated based on a review of the proposed construction schedule, associated equipment crews, and associated equipment, including trucks and other construction vehicles, for the Bradley West Project. Project-related construction trips were summarized to delineate peak month inbound and outbound construction employee trips, delivery truck trips, transfer trips, and shuttle bus trips by hour of the day. The estimate of Bradley West Project construction trips was based on construction employee workload schedules prepared for the Bradley West Project.[77] The construction employee trip distribution patterns were based on regional patterns developed for the CFTP using the modeling results prepared for the LAX Master Plan EIR, specific haul route information, airline passenger survey information, and regional population distributions.

Peak construction activity was estimated for the following general scenarios that are defined more fully in Section 4.3.4.2 below:

- Scenario 1: All Construction Employee Parking Occurs at the Northwest Construction Staging/ Parking Area
- Scenario 2: All Construction Employee Parking Occurs at the East Contractor Employee Parking Area or the Southeast Construction Staging/Parking Area
- Scenario 3: Sensitivity Analysis Assuming Temporary 60% Surge in Number of Employees and Employee Parking Demand is Distributed between the Northwest Construction Staging/Parking Area (63%) and the Southeast Construction Staging/Parking Area (37%)
- Scenario 4: Sensitivity Analysis Assuming Temporary 60% Surge in Number of Employees and Employee Parking Demand is Distributed between the Northwest Construction Staging/Parking Area (37%) and the Southeast Construction Staging/Parking Area (63%)

Estimate Baseline (2008) Plus Peak Bradley West Project Traffic Volumes--The Estimated Baseline (2008) Plus Peak Bradley West Project (referred to hereinafter as Baseline Plus) traffic volumes were estimated by adding the project volumes during the peak project activity period anticipated to occur in the fourth quarter of 2011 to Baseline (2008) traffic volumes.

4.3.2.4 Delineation of Future Cumulative Traffic Conditions

In addition to the Baseline Plus Project condition described above, future cumulative traffic conditions were analyzed. In accordance with Section 15355 of the CEQA Guidelines, cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." For this traffic analysis, cumulative traffic conditions were assessed for the period during the overall Bradley West Project construction program when the cumulative traffic associated with other LAX development programs would be greatest. This peak cumulative period was estimated to occur during the Fourth Quarter of 2010. To add a conservative measure to this analysis, the traffic volumes associated with the peak period of Bradley West Project construction during the Fourth Quarter of 2011 was added to cumulative peak period from the Fourth

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[77] U.S. Cost, Bradley West Resource Loaded Schedule, November 19, 2008.

Quarter of 2010. As an additional conservative measure, the future cumulative analysis was conducted for the Scenario 3 and Scenario 4 worst-case surged conditions described in the previous section.

The conservative assumptions used to prepare the cumulative impacts analysis accounts for potentially two points in time during the approximate 5-year construction schedule when the combined impacts of Bradley West Project-related traffic and traffic from other projects may differ; one point is when construction activities specific to the Bradley West Project are at their peak and other project construction is also underway (Q4 2011) and the second point is when Bradley West Project construction levels are lower than peak, but the construction activity of other projects may combine to produce a peak that is higher than the Bradley West Project peak (Q4 2010). Refer to Section 4.3.5 below for information related to peaking characteristics of the Bradley West Project and other concurrent construction projects.

In accordance with CEQA Guidelines Section 15130(b), there are essentially two options for delineating cumulative development for evaluating potential impacts:

a. List past, present, and reasonably foreseeable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or

b. Summarize projections contained in an adopted general plan or related planning document, or in a prior adopted or certified environmental document, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

For purposes of the Bradley West Project, the first of the two options, commonly referred to as "the list approach," was used to delineate cumulative projects - see Section 4.3.5.1 for a description of cumulative projects and Sections 4.3.5.1 and 4.3.5.3 for specific project listings and descriptions regarding how and when the traffic generation related to those projects would overlap with that of the Bradley West Project. Background traffic was increased to reflect additional growth from non-specific projects, which adds an element of the second option to result in a cumulative impacts analysis that is more conservative.

Cumulative impacts were determined using a process that requires the development of the two sets of future cumulative traffic volume conditions, as described below.

Cumulative Traffic (Fourth Quarter 2010) Without Project

This is a hypothetical scenario that combines Baseline (2008) traffic volumes with growth from all sources other than the project during the peak construction period for the Bradley West Project. The following steps were taken to develop the traffic volumes for this scenario.

Develop Fourth Quarter 2010 Focused Study Area Roadway Network--The TRAFFIX model was updated, as necessary, to reflect any committed and funded study area transportation improvements that would be in place by the fourth quarter of 2011. Additional information on committed transportation improvements is provided in Section 4.3.5.2 below.

Estimate Fourth Quarter 2010 Cumulative Traffic Volumes--Cumulative (Q4 2010) traffic volumes were estimated using the following process:

- ♦ The Baseline (2008) traffic volumes defined previously were multiplied by a growth factor of 2 percent per year to account for local background traffic growth through 2010. This assumption was deemed to be conservative given that roadway traffic in the study area generally decreased between 2004 and 2008 (refer to "Annual Growth Patterns" in Section 4.3.3.3 below). This annual growth rate assumption is consistent with previous direction provided by LADOT for use in the SAIP study.[78]
- ♦ Construction trips for committed LAX development projects that are expected to commence during the period of Bradley West Project construction were directly estimated and included in the analysis. Construction trips associated with the peak period of cumulative construction (Fourth Quarter 2010) were estimated based on the construction cost of the project and the timeline for project completion.

78 City of Los Angeles, Los Angeles World Airports, Draft Environmental Impact Report for South Airfield Improvement Project, Los Angeles International Airport (LAX), August 2005, page IV-38.

The projects that are considered as part of this analysis and the estimated trips associated with these projects are described in more detail in Section 4.3.5.1 below.

- The location and trip generation characteristics of the development identified on the list of related projects (refer to Section 4.3.5.3 below, and Table 4.2-5 in Section 4.2 of this EIR, particularly the other approved "non-airport" development projects that would be in place by Q4 2010) were reviewed and incorporated. Given that these other "non-airport" projects are not in the immediate vicinity of the study area, it was determined that the effects of associated traffic activity would be indirectly included as part of the assumed 2 percent growth rate.
- In addition to the specific projects addressed in the cumulative analysis as described above, there were several past and present projects that may have contributed vehicle trips to the traffic volumes used to define the Baseline (2008) traffic conditions. Those projects that were initiated in the past and were under construction during the traffic data collection periods for this project, and that may have been represented in the Baseline volumes (i.e., construction-related trips from such projects were already occurring at the time of the traffic counts and were therefore already included in the Baseline volumes), were conservatively assumed to increase in proportion with the "non-airport" growth rate described above resulting in a higher future cumulative traffic volume than likely given that these projects will not be underway during the Bradley West Project peak. Examples of such projects occurring in the vicinity of the Bradley West Project area include the TBIT Interior Improvements Program and the In-Line Baggage Screening Systems. With respect to past projects in the vicinity of the Bradley West Project that have already been completed, the operations-related trips for those completed projects would have also been included in the Baseline volumes; however, the construction-related trips of such completed projects would have already occurred prior to the traffic counts and therefore are not within the Baseline volumes. An example of such a past project in the vicinity of the Project site is the SAIP, which was under construction from March 2006 to June 2008. Other notable non-LAWA development projects completed over the past few years that are located along or near major roadways common to LAX include: Phase I development at Playa Vista near Lincoln Boulevard and Jefferson Boulevard; multi-story residential and mixed use development along Lincoln Boulevard south of Manchester Avenue; partial development of the El Segundo Corporate Campus on Nash Street near Imperial Highway; and, development of the initial phases of Plaza El Segundo on El Segundo Boulevard at Rosecrans Avenue. Inasmuch as the construction-related trips associated with these projects no longer occur, these projects would not add construction-related vehicle trips. To the extent that there might be an indirect cumulative relationship between the projects, such as if local drivers automatically change their commute patterns during construction of the Bradley West Project based solely on the traffic congestion characteristics, if any, that they experienced during construction of these other projects, the identification and analysis of such indirect cumulative impacts are too speculative to address. Regarding operational trips associated with these developments that were under construction in the past, it was determined that these projects are not in the immediate vicinity of the study area and that the operational effects of associated traffic activity would be already included in the background traffic volumes collected for the study and/or indirectly included as part of the assumed 2 percent growth rate.

Cumulative Traffic (Fourth Quarter 2010) With Project

The project-related (fourth quarter 2011) traffic volumes described in Section 4.3.2.3 above were added to the Cumulative Traffic (fourth quarter 2010) "Without Project" traffic volumes described in the previous section. This is a realistic traffic scenario that is intended to represent the estimated total peak hour traffic volumes (consisting of background traffic, traffic related to ambient growth, traffic related to other projects, and Bradley West Project construction peak traffic) that would use the study area intersections during the overall cumulative peak in the fourth quarter of 2010.[79]

[79] Cumulative traffic scenarios were evaluated for the more conservative “surge” conditions defined as Scenarios 3 and 4 which represent a worst-case demand condition for the project combined with the maximum volume associated with cumulative traffic from other projects (see Section 4.3.4.2).

4.3.2.5 Delineation of Impacts and Mitigation Measures

The following steps were conducted to calculate intersection levels of service, identify impacts, and identify potential mitigation measures, if necessary.

Analyze Intersection and Roadway Levels of Service--The levels of service on the study area intersections and roadways were analyzed using TRAFFIX. Intersection level of service was estimated using the CMA planning level methodology, as defined in Transportation Research Board Circular 212,[80] in accordance with LADOT Traffic Studies Policies and Procedures guidelines,[81] and the L.A. CEQA Thresholds Guide.[82] Intersection level of service was analyzed for the following conditions:

- Baseline (2008)
- Baseline (2008) Plus Peak Bradley West Project
- Cumulative Traffic (Fourth Quarter 2010) Without Project
- Cumulative Traffic (Fourth Quarter 2010) With Project

Identify Project Impacts--Project-related impacts associated with construction of the Bradley West Project were identified. Intersections that were anticipated to be significantly affected by project-related construction were identified according to the criteria established in the L.A. CEQA Thresholds Guide.[83] Impacts were determined by comparing the level of service results for the following:

- **Baseline (2008) Plus Peak Bradley West Project Compared with Baseline (2008)** - This comparison is utilized to isolate the potential impacts of the project.
- **Cumulative Impacts** - Cumulative impacts were determined using a two-step process. Initially, the cumulative "With Project" condition was compared to the Baseline (2008) condition to determine if a cumulative impact would occur relative to the Baseline. An impact was deemed significant if it would exceed the allowable threshold of significance defined in the LADOT Guidelines. If a cumulative impact were determined, then a second comparison of the "With Project" vs. the "Without Project" level of service conditions was made to determine if the project's contribution of the cumulative impact is determined to be "cumulatively considerable" in accordance with the impact thresholds defined in Section 4.3.6 below.

Identify Potential Mitigation Measures--The traffic analysis methodology included provisions to identify mitigation measures, as necessary, for intersections determined to be significantly affected by construction-related traffic. The identification of appropriate mitigation measures includes integration of the applicable Master Plan commitments intended to address construction-related impacts.

4.3.3 Baseline (2008) Conditions

As indicated above, the Baseline (2008) conditions relate to the facilities and general conditions that existed during the month in which the NOP for the Bradley West Project Draft EIR was published.

4.3.3.1 Study Area

The construction traffic analysis study area is depicted in **Figure 4.3-1**. The scope of the study area was determined by identifying the intersections most likely to be used by construction-related vehicles accessing the Bradley West Project construction site and construction employees accessing construction parking areas. The study area is generally bounded by I-405 to the east, I-105 and Imperial

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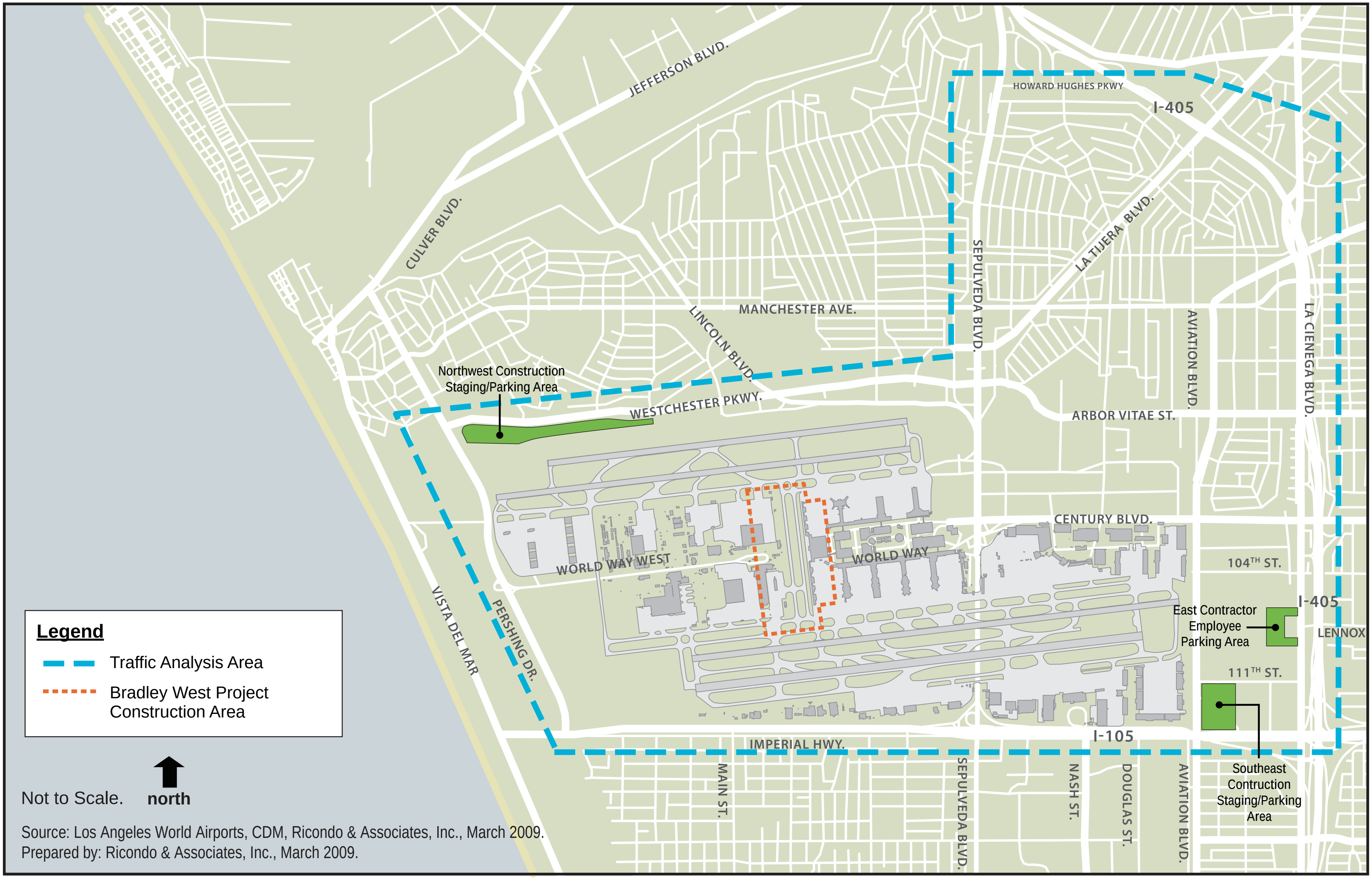
80 Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

81 Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002, Available: http://www.lacity.org/LADOT/TrafficStudyGuidelines.pdf.

82 City of Los Angeles, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analysis in Los Angeles, 2006.

83 City of Los Angeles, Department of City Planning, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analysis in Los Angeles, 2006.



LAX Bradley West Project Draft EIR	Construction Traffic Analysis Study Area	Figure 4.3-1

Highway to the south, Pershing Drive to the west, and Sepulveda Boulevard and Howard Hughes Parkway to the north. **Figure 4.3-1** depicts the Bradley West Project construction site, which would be accessed via a gate located on World Way West. As also shown in **Figure 4.3-1**, three areas have been identified as potential locations for construction employee parking, including: the Northwest Construction Staging/Parking Area, which would be accessed via a driveway off of Westchester Parkway; the East Employee Parking Area, which would be accessed via La Cienega Boulevard; and the Southeast Construction Staging/Parking Area, which would be accessed via Aviation Boulevard and 111th Street.

4.3.3.2 Study Area Roadways

The principal freeways and roadways serving as access routes within the construction traffic analysis study area include the following:

- **I-405 (San Diego Freeway)** - This north-south freeway generally forms the eastern boundary of the construction traffic analysis study area and provides regional access to the airport and the surrounding area. Access to the study area is provided via ramps at Howard Hughes Parkway, Century Boulevard, I-105, Imperial Highway, and three locations along La Cienega Boulevard.
- **I-105 (Glenn M. Anderson or Century Freeway)** - Along with Imperial Highway (described below), this east-west freeway forms the southern boundary of the construction traffic analysis study area, and extends from the San Gabriel Freeway (I-605) on the east to Sepulveda Boulevard on the west. Access to the study area is provided via ramps at Sepulveda Boulevard and along Imperial Highway. This freeway is a primary access roadway for both employee and construction traffic. The westbound off-ramp from the I-105 Freeway to northbound Sepulveda Boulevard is currently being widened by the California Department of Transportation (Caltrans). The construction is scheduled to be completed during the first quarter of 2010.
- **Aviation Boulevard** - This north-south four-lane roadway bisects the study area.
- **Century Boulevard** - This eight-lane divided roadway serves as the primary entry to the LAX CTA. This roadway also provides access to off-airport businesses and hotels and on-airport aviation-related facilities (e.g., air cargo facilities) located between the airport CTA and I-405.
- **Imperial Highway** - This east-west roadway is located at-grade and beneath much of the elevated I-105 freeway. The number of lanes on this roadway varies from six-lanes east of the merge with I-105 to four-lanes west of the merge with I-105. Imperial Highway is a key access route to Pershing Drive and the employee parking facility located on Westchester Parkway. Imperial Highway is also part of the exclusive travel route for construction delivery trucks accessing the West Construction Staging Area.
- **La Cienega Boulevard** - This north-south roadway parallels I-405 at the east boundary of the study area. The roadway varies from four to six lanes. This roadway serves as the primary access route to the East Contractor Employee Parking Area near the intersection with Lennox Boulevard.
- **Pershing Drive** - This north-south four-lane divided roadway forms the western boundary of the construction traffic analysis study area. The roadway serves as the primary access route for traffic from the south to the Northwest Construction Staging/Parking Area. Additionally, this roadway would serve as the exclusive access route for delivery trucks accessing the West Construction Staging Area.
- **Westchester Parkway** - This east-west four-lane divided arterial roadway provides direct access to the Northwest Construction Staging/Parking Area. This roadway forms a portion of the northern boundary of the study area.
- **Sepulveda Boulevard (State Route 1 south of Lincoln Boulevard)** - This major north-south six-lane arterial roadway provides direct access to the airport and Bradley West Project study area via I-405 and Westchester Parkway on the north and via I-105 on the south. Sepulveda Boulevard between I-105 and Century Boulevard is located in a tunnel section beneath the south airfield runways.

- **111th Street** - This east-west roadway has one lane in each direction separated by a continuous two-way left turn lane. This roadway provides access to the airport's Public Parking Lot B, Airport Employee Parking Lot E, and other businesses in the study area. The Southeast Construction Staging/Parking Area would be located south of 111th Street near the intersection with Aviation Boulevard.

4.3.3.3 Existing Traffic Conditions

Traffic conditions at the study area intersections and existing traffic activity (peak month, hourly, and annual) are discussed below.

Study Area Intersections

Intersection locations and intersection control and geometry are discussed in this section.

Intersection Locations

The anticipated routes used by construction-related vehicles were reviewed to identify the intersections likely to be used by vehicles accessing the project construction site or one of the construction employee parking areas. Based on this review, the key intersections to be analyzed are depicted in **Figure 4.3-2**.

Intersection Number[84]	Intersection Location
14.	Aviation Boulevard and Century Boulevard
16.	Imperial Highway and Aviation Boulevard
19.	Aviation Boulevard and 111th Street
36.	La Cienega Boulevard and Century Boulevard
39.	Century Boulevard and I-405 Northbound Ramps East of La Cienega Boulevard
47.	Imperial Highway and Douglas Street
65.	Imperial Highway and La Cienega Boulevard
67.	Imperial Highway and La Cienega Boulevard
68.	Imperial Highway and Main Street
69.	Imperial Highway and Pershing Drive
71.	Imperial Highway and Sepulveda Boulevard
73.	Imperial Highway and Nash Street
74.	Imperial Highway and I-105 Ramp
75.	Imperial Highway and I-405 Northbound Ramp
89.	La Cienega Boulevard and Lennox Boulevard
94.	La Cienega Boulevard and 111th Street
96.	La Cienega Boulevard and I-405 Southbound Ramps North of Century Boulevard
97.	La Cienega Boulevard and I-405 Southbound Ramps South of Century Boulevard
98.	La Cienega Boulevard and I-405 Southbound Ramps North of Imperial Highway
101.	Sepulveda Boulevard and La Tijera Boulevard
108.	Sepulveda Boulevard and Lincoln Boulevard
114.	Sepulveda Boulevard and Manchester Avenue
123.	Westchester Parkway and Pershing Drive
135.	Sepulveda Boulevard and Westchester Parkway
136.	Sepulveda Boulevard and 76th/77th Street
137.	Sepulveda Boulevard and 79th/80th Street
138.	Sepulveda Boulevard and 83rd Street
1000.[85]	La Cienega Boulevard and 104th Street

[84] The intersection numbers correspond with the intersection number designations associated with the August 2008 intersection traffic count database that has been collected to support analyses associated with the LAX Specific Plan Amendment Study.

[85] The intersection of La Cienega Boulevard and 104th Street is not included in the August 2008 intersection traffic count database that has been collected to support analyses associated with the LAX Specific Plan Amendment Study.

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Construction Traffic Study Area Intersections

Figure
4.3-2

Intersection Control and Geometry

All of the study area intersections listed above and depicted in **Figure 4.3-2** are signalized. In addition, all of the intersections are included in LADOT's Automated Traffic Surveillance and Control (ATSAC) system, except Imperial Highway and the I-405 northbound ramps (east of La Cienega Boulevard) (Intersection #75) and Century Boulevard and the I-405 northbound ramps east of La Cienega Boulevard (Intersection #39). The ATSAC system provides for monitoring of intersection traffic conditions and the flexibility to adjust traffic signal timing in response to current conditions.

The geometry for the intersections listed above is provided in Appendix D-1.

Traffic Activity

Traffic data collected to support the traffic analyses required for the Bradley West Project are summarized below.

Peak Month Activity

Monthly traffic data in the vicinity of LAX over the past nine years were reviewed to identify the typical peak month of traffic activity associated with airport operations. The average daily traffic (ADT) volumes accessing the CTA by month for January 2000 through December 2008 are provided in **Table 4.3-1**. As shown, CTA traffic reached peak activity during the summer months of July and August. August is typically the peak month for airport roadway traffic followed closely by July. Given the influence of airport activity on the study area roadways and intersections, it was determined that the analysis of 2008 background traffic should be based on peak August 2008 conditions.

Table 4.3-1

CTA Average Daily Traffic Volumes

Monthly Traffic	2000	2001	2002	2003	2004	2005	2006	2007	2008
January	82,136	90,683	65,135	66,039	61,775	69,554	67,727	66,999	67,483
February	79,791	87,509	61,148	60,808	59,802	60,930	63,715	65,339	64,924
March	86,627	93,186	66,794	59,921	64,431	63,748	69,034	68,380	69,819
April	92,863	96,566	68,164	60,434	68,164	64,771	69,230	70,268	69,184
May	98,052	96,341	70,867	64,306	68,155	68,982	70,303	71,599	72,022
June	102,392	101,585	72,282	65,903	74,650	75,699	72,647	73,669	75,118
July	106,445	**105,842**	75,433	74,047	**78,674**	75,635	75,895	78,342	75,640
August	**108,871**	103,308	**79,427**	**76,556**	77,986	**79,046**	**78,236**	**82,193**	**76,434**
September	95,917	59,987	66,630	60,762	66,276	68,151	67,171	68,316	65,227
October	92,169	42,370	65,166	59,904	66,395	66,607	66,981	68,152	64,260
November	96,308	56,579	62,264	59,944	65,525	68,200	70,326	72,098	64,128
December	94,551	60,649	71,845	68,666	73,107	70,700	71,978	71,900	70,972
Annual	1,136,122	994,605	825,155	777,290	824,940	832,023	843,243	857,255	835,211
Average Daily Traffic									
Average Daily Traffic	94,692	82,884	68,763	64,774	68,901	69,335	70,270	71,438	69,601
% Annual Change	--	-12.5%	-17.0%	-5.8%	6.4%	0.6%	1.3%	1.7%	-2.6%
Million Annual Passengers	67.3	61.6	56.2	55.0	60.7	61.5	61.0	62.4	59.8
% Annual Change	--	-8.5%	-8.8%	-2.1%	10.4%	1.3%	-0.8%	1.5%	-4.2%

Source: City of Los Angeles, Los Angeles World Airports, Ground Transportation Report, Ground Transportation Planning and Design, February 26, 2009.

The peak Bradley West Project construction period is anticipated to occur in the fourth quarter of 2011, a period in which average daily CTA traffic volumes have historically been significantly lower than during peak summer months. The project-related traffic analysis was based on peak month traffic activity combined with peak Bradley West Project construction activity. Using peak month data for background roadway traffic combined with peak traffic associated with Bradley West Project construction produces a conservative result, representing the maximum potential traffic activity in the study area for purposes of defining future roadway traffic conditions.

Project-related Peak Hours

Certain project commitments identified in the LAX Master Plan Final EIR are required to be implemented in conjunction with LAX Master Plan development projects, and many of these commitments would have a direct effect on the traffic generated by the construction associated with the Bradley West Project. Specifically, Master Plan Commitments ST-12 (Designated Truck Delivery Hours) and ST-14 (Construction Employee Shift Hours) are designed to control truck deliveries and construction employee trip activity to avoid the a.m. (7:00 a.m. to 9:00 a.m.) and p.m. (4:30 p.m. to 6:30 p.m.) peak commute periods, and would apply to the Bradley West Project. These commitments, along with other transportation-related commitments relevant to the Bradley West Project, are listed in Section 4.3.7 below.

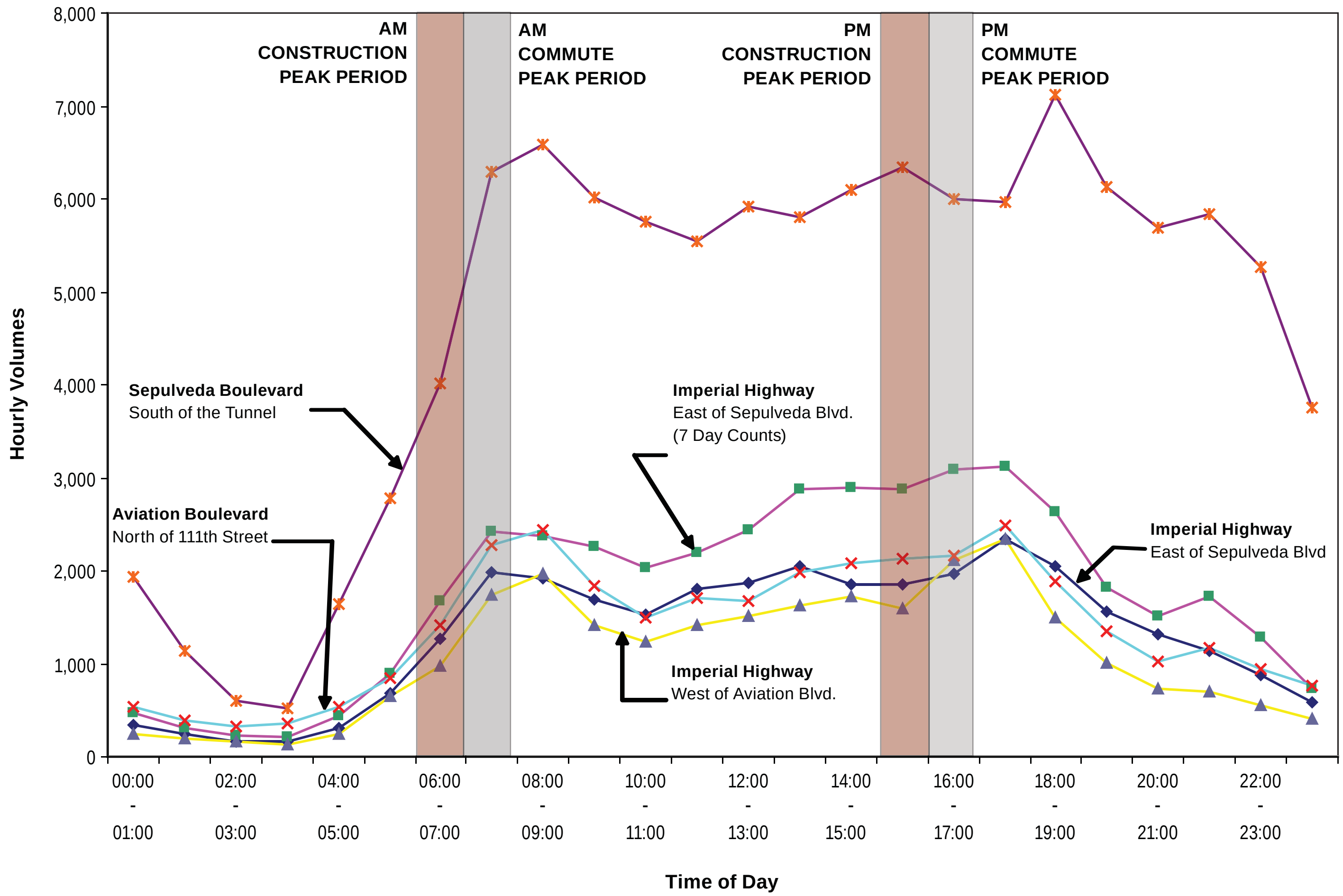
The anticipated project-related traffic peak hours were identified by reviewing estimates of the construction-related traffic associated with the Bradley West Project. Using these data, the peak hours analyzed for the project were determined to be the following:

- **Project Construction A.M. Peak Hour (6:00 a.m. to 7:00 a.m.)** - The project construction a.m. peak hour represents the peak period for construction employees arriving to the construction employee parking lots. Based on review of the employee schedule, employees are likely to arrive between 5:00 a.m. and 6:00 a.m. However, it was determined that peak period volumes between 6:00 a.m. and 7:00 a.m. in combination with peak employee activity would produce a more conservative estimate of activity in the event that the future construction contractor chooses to allow employee arrivals up to the desired "cut-off" time of 7:00 a.m., just prior to the start of the morning peak commute period.
- **Project Construction P.M. Peak Hour (3:30 p.m. to 4:30 p.m.)** - The project construction p.m. peak hour represents the peak period for construction employees leaving the construction employee parking lots. This period also represents the peak period for trucks delivering materials to the project site or material staging areas. The peak period was assumed to end at 4:30 p.m., just prior to the start of the afternoon peak commute period.

Hourly Traffic Patterns

ATR data collected in June 2008 at multiple locations within the study area were used to evaluate traffic peaking patterns throughout the day and to adjust intersection turning movement traffic volume data collected during the a.m. and p.m. commute peak hours to corresponding traffic during the construction peak hours. It is anticipated that the data collected in June 2008 will provide a representative profile of the hourly peaking pattern of background traffic using the study area roadway network during the summer 2008 season and will, therefore, be representative of hourly peaking patterns during the 2008 peak months. Hourly traffic volumes counted at five locations within the study area are graphically depicted in **Figure 4.3-3**. The volumes depicted in **Figure 4.3-3** represent traffic along the following roadways: (a) Aviation Boulevard, (b) Sepulveda Boulevard, and (c) Imperial Highway (three locations). These data were collected in the first and second week of June 2008. The reported traffic conditions represent activity on a typical busy weekday (Tuesday through Thursday).

As shown in **Figure 4.3-3**, the study area roadways tend to experience peaking patterns that correlate with the regional commute peaks. The morning peak period in the study area generally occurs over a sustained period between 7:00 a.m. and 9:00 a.m. The afternoon peak period generally occurs between 5:00 p.m. and 6:00 p.m., which is within the 4:30 p.m. to 6:30 p.m. peak commute period.



Source: Los Angeles World Airports, Traffic Survey Conducted in Support of LAWA Air Quality and Source Apportionment Study; Source Group Inc., 2008.
Prepared by: Ricondo & Associates, Inc., March 2009.

LAX Bradley West Project Draft EIR	Automatic Traffic Recorder Hourly Volumes (June 2008)	Figure 4.3-3

Table 4.3-2 shows the percentage difference between the commute and construction peak hours at five locations within the study area during June 2008. As depicted in **Table 4.3-2** and **Figure 4.3-3**, the traffic volumes on the study area roadways during the project construction peak hours were lower than the traffic volumes during the adjacent a.m. and p.m. commute peak periods. During the a.m. construction peak hour (6:00 a.m. to 7:00 a.m.), the roadway volumes were about 36 percent lower on average than the roadway volumes during the adjacent a.m. peak commute hour (7:00 a.m. to 8:00 a.m.). During the construction p.m. peak hour (3:30 p.m. to 4:30 p.m.), traffic volumes were approximately 11 percent lower on average than during the typical evening commuter peak (4:30 p.m. to 5:30 p.m.). For purposes of this analysis, and as a conservative assumption, background volumes during the construction peak periods were calculated by reducing the volumes collected during the peak commute periods by a factor obtained from the ATR location reflecting the least reduction between the construction and commute peak hour periods. As such, the a.m. construction peak hour volumes were estimated by reducing all of the a.m. commute peak volumes by 28.5 percent (reflecting the a.m. percentage change at Imperial Highway west of Sepulveda Boulevard). The p.m. construction peak hour volumes were assumed to be the same as the p.m. commute peak volumes (i.e., no reduction was applied based on the p.m. percentage change at Sepulveda Boulevard south of the tunnel).

Table 4.3-2

Comparison of Traffic Volumes during the Commute and Construction Peak Hours

Location	AM Peak Hour			PM Peak Hour		
	Construction Peak Hour 6:00 am-7:00 am	Commute Peak Hour 7:00 am-8:00 am	Percentage Change	Construction Peak Hour 3:30 pm-4:30 pm	Commute Peak Hour 4:30 pm-5:30 pm	Percentage Change
Imperial Highway, East of Sepulveda Boulevard[1]	1,263	1,990	-36.5%	1,890	2,257	-16.3%
Imperial Highway, West of Sepulveda Boulevard[2]	1,450	2,027	-28.5%	2,611	3,218	-18.9%
Imperial Highway, West of Aviation Boulevard[3]	971	1,741	-44.2%	1,864	2,537	-26.5%
Aviation Boulevard., North of 111th Street[4]	1,411	2,270	-37.8%	2,144	2,369	-9.5%
Sepulveda Boulevard, South of the Tunnel[5]	4,018	6,293	-36.2%	6,070	6,071	0.0%
Total/Average	**9,113**	**14,321**	**-36.4%**	**14,579**	**16,452**	**-11.40%**

1 Data Collected on Tuesday June 3, 2008
2 Data Collected on Wednesday June 4, 2008
3 Data Collected on Tuesday June 3, 2008
4 Data Collected on Tuesday June 10, 2008
5 Data Collected on Wednesday June 4, 2008

Source: Ricondo & Associates, Inc., using data from the traffic survey conducted in support of the SGI Group Inc., LAX Air Quality and Source Apportionment Study, July 30, 2008.

Annual Growth Patterns

Historical traffic data collected during the a.m. and p.m. commute peak hours were analyzed to assess historical growth patterns in the study area. As shown in **Table 4.3-3**, it was calculated that traffic volumes on the study area intersections decreased approximately 1.5 percent per year (compounded annually), on average, between 2004 and 2006. Study area traffic volumes continued to decrease an average of approximately 2.5 percent per year between 2006 and 2008. Overall between 2004 and 2008, traffic volumes at the study area intersections decreased at a compounded annual rate of 2.0 percent between 2004 and 2008. Although the traffic volumes on the study area intersections have decreased annually, on average, as shown in **Table 4.3-1**, average daily traffic accessing the CTA increased annually from 2004 through 2007. However, the average annual increases were nominal, ranging from 0.6 to 1.7 percent per year. Average daily traffic accessing the CTA during the peak month of August continued to increase at a higher rate. In 2008, average annual traffic accessing the CTA decreased 2.6 percent compared with traffic in 2007.

Table 4.3-3

Historical Traffic Volumes on Study Area Intersections

Study Area Intersections[1]		Peak Hour[1]	Intersection Total			Average Annual Growth Rate	
			August 2004	August 2006	August 2008	2004 to 2006	2006 to 2008
14.	Aviation Blvd. & Century Blvd.	AM	5,670	5,159	5,125	-4.6%	-0.3%
		PM	6,367	5,084	5,512	-10.6%	4.3%
16.	Imperial Hwy. & Aviation Blvd.	AM	3,840	3,779	3,941	-0.8%	2.1%
		PM	4,841	4,516	4,634	-3.4%	1.3%
19.	Aviation Blvd. & 111th St.	AM	2,470	2,004	2,435	-9.9%	10.2%
		PM	2,848	2,349	2,714	-9.2%	7.5%
36.	La Cienega Blvd. & Century Blvd.	AM	5,409	5,022	4,792	-3.6%	-2.3%
		PM	5,947	5,576	5,621	-3.2%	0.4%
39.	Century Blvd. & I-405 NB Ramps	AM	4,033	3,633	3,215	-5.1%	-5.9%
		PM	3,618	3,592	3,812	-0.4%	3.0%
47.	Imperial Hwy. & Douglas St.	AM	1,833	2,235	2,076	10.4%	-3.6%
		PM	2,566	2,665	2,499	1.9%	-3.2%
65.	Sepulveda Blvd. & H. Hughes Pkwy.	AM	N/A[2]	5,400	4,652	N/A	-7.2%
		PM	N/A	6,326	5,581	N/A	-6.1%
67.	Imperial Hwy. & La Cienega Blvd.	AM	2,975	3,213	2,863	3.9%	-5.6%
		PM	4,057	3,930	4,138	-1.6%	2.6%
68.	Imperial Hwy. & Main St.	AM	3,114	2,789	3,147	-5.4%	6.2%
		PM	3,238	2,907	3,229	-5.2%	5.4%
69.	Imperial Hwy. & Pershing Dr.	AM	2,720	2,601	2,567	-2.2%	-0.7%
		PM	2,612	2,510	2,608	-2.0%	1.9%
71.	Imperial Hwy. & Sepulveda Blvd.	AM	7,003	7,627	5,873	4.4%	-12.2%
		PM	7,818	7,236	6,897	-3.8%	-2.4%
73.	Imperial Hwy. & Nash St.	AM	4,232	4,229	3,658	0.0%	-7.0%
		PM	2,577	2,676	2,491	1.9%	-3.5%
74.	Imperial Hwy. & I-105 EB Ramps	AM	3,027	3,230	3,355	3.3%	1.9%
		PM	3,321	3,138	3,469	-2.8%	5.1%
75.	Imperial Hwy. & I-405 NB Ramps	AM	1,951	2,298	1,852	8.5%	-10.2%
		PM	2,732	2,822	2,944	1.6%	2.1%
89.	La Cienega Blvd. & Lennox Blvd.	AM	1,569	1,452	1,349	-3.8%	-3.6%
		PM	1,986	2,031	1,875	1.1%	-3.9%
94.	La Cienega Blvd. & 111th St.	AM	1,601	1,579	1,505	-0.7%	-2.4%
		PM	2,140	2,052	2,037	-2.1%	-0.4%
96.	La Cienega Blvd. & I-405 Southbound Ramps North of Century	AM	2,341	2,316	2,106	-0.5%	-4.6%
		PM	2,573	2,615	2,365	0.8%	-4.9%

Table 4.3-3

Historical Traffic Volumes on Study Area Intersections

Study Area Intersections[1]		Peak Hour[1]	Intersection Total			Average Annual Growth Rate	
			August 2004	**August 2006**	**August 2008**	**2004 to 2006**	**2006 to 2008**
97.	La Cienega Blvd. & I-405 Southbound Ramps South of Century	AM	1,687	1,714	1,878	0.8%	4.7%
		PM	2,700	2,726	2,682	0.5%	-0.8%
98.	La Cienega Blvd. & I-405 Southbound Ramps North of Imperial	AM	1,690	1,524	1,550	-5.0%	0.8%
		PM	2,124	1,834	1,993	-7.1%	4.2%
101.	Sepulveda Blvd. & La Tijera Blvd.	AM	N/A	3,918	3,425	N/A	-6.5%
		PM	N/A	4,972	4,397	N/A	-6.0%
108.	Sepulveda Blvd. & Lincoln Blvd.	AM	N/A	6,183	5,690	N/A	-4.3%
		PM	N/A	7,170	6,504	N/A	-4.8%
114.	Sepulveda Blvd. & Manchester Ave.	AM	N/A	5,358	4,687	N/A	-6.5%
		PM	N/A	6,328	5,649	N/A	-5.5%
123.	Westchester Pkwy. & Pershing Dr.	AM	N/A	1,741	1,725	N/A	-0.5%
		PM	N/A	1,945	1,609	N/A	-9.0%
135.	Sepulveda Blvd. & Westchester Pkwy.	AM	N/A	4,298	3,558	N/A	-9.0%
		PM	N/A	4,878	4,326	N/A	-5.8%
136.	Sepulveda Blvd. & 76th/77th St.	AM	N/A	4,949	4,293	N/A	-6.9%
		PM	N/A	5,160	4,865	N/A	-2.9%
137.	Sepulveda Blvd. & 79th/80th St.	AM	N/A	4,688	3,594	N/A	-12.4%
		PM	N/A	4,718	4,204	N/A	-5.6%
138.	Sepulveda Blvd. & 83rd St.	AM	N/A	4,325	3,115	N/A	-15.1%
		PM	N/A	4,698	3,866	N/A	-9.3%
1000.	La Cienega Blvd. & 104th St.	AM	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A
Average Compounded Annual Growth Rate							
Year - to - Year				**-1.5%**	**-2.5%**		
2004 - 2008					**-2.0%**		

[1] AM Peak Hour refers to traffic volumes collected between 8:00 a.m. and 9:00 a.m.; PM Peak Hour refers to traffic volumes collected between 5:00 p.m. and 6:00 p.m.
[2] N/A = Not Available

Source: Ricondo & Associates, Inc., using data collected by Wiltec on August 3 to 5, 2004; August 1 to 9, 2006; and July 16 to August 28, 2008.

In summary, traffic volume on the study area roadways during the peak month of August declined even during a period when airport passenger activity continued to experience growth on an average daily basis. However, rather than assuming that traffic activity will continue to decrease through the 2010 study period, a conservative assumption of 2 percent growth per year was used to adjust these volumes to represent future year traffic conditions. This annual growth rate assumption is consistent with previous direction provided by LADOT for use in the SAIP and CFTP studies.[86]

4.3.3.4 Baseline (2008) Intersection Volumes

Baseline (2008) traffic volumes consist of the traffic volumes at the time the NOP for the Bradley West Project Draft EIR was published (December 2008). The Baseline (2008) volumes were estimated based on actual data collected during the 2008 a.m. and p.m. commute peak hours that were adjusted using factors derived from ATR counts in the study area to reflect 2008 conditions during the a.m. and p.m. construction peak hours. Baseline (2008) intersection traffic volumes are provided in Appendix D-3.

4.3.3.5 Baseline (2008) Intersection Analyses

Intersection level of service was analyzed using the CMA methodology to assess the estimated operating conditions during Baseline (2008) conditions for the a.m. and p.m. construction peak hours. Level of service is a qualitative measure that describes traffic operating conditions (e.g., delay, queue lengths, congestion). Intersection level of service ranges from A (i.e., excellent conditions with little or no vehicle delay) to F (i.e., excessive vehicle delays and queue lengths). Levels of service definitions for the CMA methodology are presented in **Table 4.3-4**.

Table 4.3-4

Level of Service Thresholds and Definitions for Signalized Intersections

Level of Service (LOS)	Volume/Capacity Ratio Threshold	Definition
A	0 - 0.6	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.7	VERY GOOD. An occasional approach phase is fully used; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.8	GOOD. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.9	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.0	POOR. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	Greater than - 1.0	FAILURE. Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, January 1980.

In accordance with LADOT analysis procedures, the volume/capacity (v/c) ratio calculated using the CMA methodology is further reduced by 0.07 for those intersections included within the ATSAC system (discussed earlier in Section 4.3.3.3) to account for the improved operation and increased efficiency from the ATSAC system that is not captured as part of the CMA methodology. Application of the ATSAC reduction is described in Attachment D of the LADOT Traffic Study Policies and Procedures Manual.[87]

86 City of Los Angeles, Los Angeles World Airports, Draft Environmental Impact Report for South Airfield Improvement Project, Los Angeles International Airport (LAX), August 2005, page IV-38.

87 Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002, Available: http://www.lacity.org/LADOT/TrafficStudyGuidelines.pdf.

The estimated intersection level of service for Baseline (2008) conditions is provided in **Table 4.3-5**. As shown in **Table 4.3-5**, it was estimated that most of the intersections operated at LOS C or better in 2008 during the construction a.m. and p.m. peak periods analyzed for the Bradley West Project. The three exceptions occurred at the following locations:

(1) Intersection of La Cienega Boulevard and Century Boulevard (Intersection #36), which was estimated to operate at LOS E during the construction p.m. peak period;

(2) Intersection of Imperial Highway and Sepulveda Boulevard (Intersection #71), which was estimated to operate at LOS F during the construction p.m. peak period;

(3) Intersection of Sepulveda Boulevard and Manchester Avenue (Intersection #114), which was estimated to operate at LOS D during the construction p.m. peak period.

Table 4.3-5

Baseline (2008) Intersection Analysis Results

	Intersection	Peak Hour[1]	V/C[2]	LOS[3]
14.	Aviation Blvd. & Century Blvd.	Construction AM	0.469	A
		Construction PM	0.757	C
16.	Imperial Hwy. & Aviation Blvd.	Construction AM	0.523	A
		Construction PM	0.667	B
19.	Aviation Blvd. & 111th St.	Construction AM	0.353	A
		Construction PM	0.488	A
36.	La Cienega Blvd. & Century Blvd.	Construction AM	0.392	A
		Construction PM	0.910	E
39.	Century Blvd. & I-405 N/B Ramp	Construction AM	0.514	A
		Construction PM	0.548	A
47.	Imperial Hwy. & Douglas St.	Construction AM	0.155	A
		Construction PM	0.412	A
65.	Sepulveda Blvd. & H. Hughes Pkwy.	Construction AM	0.256	A
		Construction PM	0.643	B
67.	Imperial Hwy. & La Cienega Blvd.	Construction AM	0.220	A
		Construction PM	0.568	A
68.	Imperial Hwy. & Main St.	Construction AM	0.405	A
		Construction PM	0.716	C
69.	Imperial Hwy. & Pershing Dr.	Construction AM	0.481	A
		Construction PM	0.434	A
71.	Imperial Hwy. & Sepulveda Blvd.	Construction AM	0.509	A
		Construction PM	1.185	F
73.	Imperial Hwy. & Nash St.	Construction AM	0.377	A
		Construction PM	0.300	A
74.	Imperial Hwy. & I-105 Ramp	Construction AM	0.533	A
		Construction PM	0.541	A
75.	Imperial Hwy. & I-405 NB Ramp	Construction AM	0.246	A
		Construction PM	0.554	A
89.	La Cienega Blvd. & Lennox Blvd.	Construction AM	0.224	A
		Construction PM	0.408	A
94.	La Cienega Blvd. & 111th St.	Construction AM	0.122	A
		Construction PM	0.363	A
96.	La Cienega Blvd. & I-405 Southbound Ramps North of Century	Construction AM	0.442	A
		Construction PM	0.560	A
97.	La Cienega Blvd. & I-405 Southbound Ramps South of Century	Construction AM	0.238	A
		Construction PM	0.424	A
98.	La Cienega Blvd. & I-405 Southbound Ramps North of Imperial	Construction AM	0.173	A
		Construction PM	0.279	A
101.	Sepulveda Blvd. & La Tijera Blvd.	Construction AM	0.377	A
		Construction PM	0.663	B
108.	Sepulveda Blvd. & Lincoln Blvd.	Construction AM	0.409	A
		Construction PM	0.715	C

Table 4.3-5

Baseline (2008) Intersection Analysis Results

	Intersection	Peak Hour[1]	V/C[2]	LOS[3]
114.	Sepulveda Blvd. & Manchester Ave.	Construction AM	0.501	A
		Construction PM	0.877	D
123.	Westchester Pkwy. & Pershing Dr.	Construction AM	0.212	A
		Construction PM	0.255	A
135.	Sepulveda Blvd. & Westchester Pkwy.	Construction AM	0.331	A
		Construction PM	0.636	B
136.	Sepulveda Blvd. & 76th/77th St.	Construction AM	0.510	A
		Construction PM	0.552	A
137.	Sepulveda Blvd. & 79th/80th St.	Construction AM	0.421	A
		Construction PM	0.508	A
138.	Sepulveda Blvd. & 83rd St.	Construction AM	0.308	A
		Construction PM	0.459	A
1000.	La Cienega Blvd. & 104th St.	Construction AM	0.154	A
		Construction PM	0.356	A

1 The hours of analysis include the construction a.m. peak (6:00 a.m. - 7:00 a.m.) and the construction p.m. peak (3:30 p.m. - 4:30 p.m.).
2 Volume to capacity ratio.
3 Level of Service range: A (excellent) to F (failure).

Source: Ricondo & Associates, Inc., using TRAFFIX, December 2008.

Appendix D-4 provides the level of service results from the TRAFFIX program, including the volume, geometry and other inputs used to produce these results.

4.3.4 Project-Generated Traffic

Traffic that would be generated by the Bradley West Project is defined for the anticipated peak period of traffic generation.

4.3.4.1 Bradley West Project Construction Traffic during Project Peak (Fourth Quarter 2011)

The peak construction period for the Bradley West Project is anticipated to occur during the fourth quarter of 2011. Construction employee and delivery vehicle trips were estimated on an hourly basis over the typical busy day (with the exception of the peak a.m. and p.m. commute periods) during the peak construction period. Based on the resource loaded schedule developed for the project, it is estimated that 691 construction employees (553 in the a.m. and 138 in the p.m.) would access the Bradley West Project construction site on a daily basis during the peak period of construction.[88] Vehicle occupancy was assumed to be 1.15 employees per vehicle. According to a study published by the Southern California Association of Governments (SCAG), the average vehicle occupancy on several regional roadways in the Los Angeles region ranged from approximately 1.15 to 1.30.[89] Provided the temporary nature of construction employment and the lower likelihood of rideshare opportunities, a conservative estimate of vehicle occupancy of 1.15 employees per vehicle was assumed. By applying the assumed vehicle occupancy factor, it was projected that 601 construction employee vehicles per day would access and egress the study area in support of Bradley West Project construction.

For purposes of the intersection analyses, all vehicle trips were converted to a "passenger car equivalents" (PCEs) to account for the additional impact that large vehicles, such as delivery and transfer

88 U.S. Cost, Bradley West Resource Loaded Schedule, November 19, 2008.

89 Southern California Association of Governments, Regional High-Occupancy Vehicle Lane System Performance Study, November 4, 2004.

trucks and shuttle buses, would have on roadway traffic operations. As such, the number of construction-related vehicle trips was multiplied by the following PCE factors, consistent with the assumptions in the LAX Master Plan Final EIR:

Vehicle Type	PCE Factor
Construction employees[90]	1.0
Construction delivery/transfer trucks	2.5
Employee shuttle buses	2.0

Employee parking shuttles would be used to transport construction employees from the employee parking lots to the work site. The number of shuttle buses required to transport the construction employees was estimated based on an assumption that each bus would carry 40 passengers. Using an assumed PCE factor of 2.0 per vehicle and distributing these volumes in accordance with the anticipated employee arrival and departure schedule, it was estimated that shuttle buses would equate to 28 PCEs entering and 28 PCEs exiting the study area during the a.m. and p.m. peak hours of construction.

Delivery trucks carrying construction equipment and material would enter and exit the materials staging areas. It is estimated that approximately five construction-related truck delivery round trips would access the site during the construction a.m. peak hour and that four construction-related truck delivery round trips would access the site during the construction p.m. peak hour. Using an assumed PCE factor of 2.5 per vehicle and distributing these volumes in accordance with the anticipated delivery schedule, it was estimated that 13 PCEs entering and 13 PCEs exiting the study area during the construction a.m. peak hour. Meanwhile, it was estimated that 10 PCEs entering and 10 PCEs exiting the study area during the construction p.m. peak period.

Transfer trucks would be used to transfer materials from the project staging areas to the project site. It was assumed that transfer trucks would make twice as many round trips as delivery trucks; therefore, it is estimated that the number of delivery round trips would be 25 and 20 PCE during the a.m. and p.m. construction peak periods, respectively. However, it is important to note that transfer trucks would use the airfield service road system rather than the public roadway system to transfer goods between the construction staging area and the construction site and, as a result, would not have an effect on off-airport roadway traffic operations.

The estimated project-related construction trips (in PCEs) during the Bradley West Project construction peak in the fourth quarter of 2011 are summarized by hour in **Table 4.3-6**. **Table 4.3-6** includes construction employee vehicle trips, employee shuttle bus trips, construction delivery truck trips, and transfer truck trips. As shown, during the morning, construction employees were assumed to arrive between 5:00 a.m. and 6:00 a.m. to begin work at 6:00 a.m. These volumes were added to the 6:00 a.m. to 7:00 a.m. traffic volumes to produce a conservative estimate of construction employees arriving in the a.m. peak hour that is higher than would occur if the peak construction traffic were added to the 5:00 a.m. to 6:00 a.m. background traffic activity. During the afternoon, the second-shift employees were assumed to arrive during a half-hour period between 3:30 p.m. and 4:00 p.m. to begin the second shift at 4:00 p.m. The first shift was assumed to end at 4:00 p.m., with most employees accessing the parking lot and leaving the airport during the half-hour period from 4:00 p.m. to 4:30 p.m.

The traffic volumes during the construction a.m. and construction p.m. peak hours are summarized in the top portion of **Table 4.3-7** in the section of the table described labeled "standard operating condition." As shown, during the construction a.m. peak hour (6:00 a.m. to 7:00 a.m.), approximately 547 PCE trips were estimated to enter the study area roadway network and 66 PCE trips were estimated to exit the study area. During the construction p.m. peak hour (3:30 p.m. to 4:30 p.m.), approximately 178 PCE trips would enter the study area and 539 PCE trips would exit the study area.

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[90] It should be noted that a different conversion factor was applied to determine the number of construction employee vehicles that would access the project area. A vehicle occupancy factor of 1.15 employees per vehicle was used to convert from employees to vehicles. This conversion factor is different than the PCE factor discussed here, which is used to adjust for the additional impact that large vehicles have on roadway traffic operations.

Table 4.3-6

Bradley West Project Peak (Fourth Quarter 2011) - Project-Related Construction Traffic Volumes

Hour		Employee Trips In[1]	Employee Trips Out[1]	Shuttle Trips In[2]	Shuttle Trips Out[2]	Delivery Trips In[3]	Delivery Trips Out[3]	Transfer Trips In[3]	Transfer Trips Out[3]	Total Construction Trips
		Construction Trips in Passenger Car Equivalents (PCEs)								
0:00	1:00	0	0	0	0	0	0	0	0	0
1:00	2:00	0	0	0	0	0	0	0	0	0
2:00	3:00	0	120	6	6	0	0	0	0	132
3:00	4:00	0	0	0	0	0	0	0	0	0
4:00	5:00	0	0	0	0	0	0	0	0	0
5:00	6:00	481	0	28	28	13	13	25	25	613
6:00	7:00	0	0	0	0	13	13	25	25	76
7:00	8:00	0	0	0	0	0	0	0	0	0
8:00	9:00	0	0	0	0	0	0	0	0	0
9:00	10:00	0	0	0	0	13	13	25	25	76
10:00	11:00	0	0	0	0	13	13	25	25	76
11:00	12:00	0	0	0	0	13	13	25	25	76
12:00	13:00	0	0	0	0	13	13	25	25	76
13:00	14:00	0	0	0	0	13	13	25	25	76
14:00	15:00	0	0	0	0	13	13	25	25	76
15:00	16:00	0	0	0	0	0	0	0	0	0
16:00	17:00	120	481	28	28	0	0	0	0	657
17:00	18:00	0	0	0	0	0	0	0	0	0
18:00	19:00	0	0	0	0	0	0	0	0	0
19:00	20:00	0	0	0	0	10	10	20	20	60
20:00	21:00	0	0	0	0	5	5	10	10	30
21:00	22:00	0	0	0	0	5	5	10	10	30
22:00	23:00	0	0	0	0	5	5	10	10	30
23:00	0:00	0	0	0	0	0	0	0	0	0
Total		**601**	**601**	**62**	**62**	**129**	**129**	**250**	**250**	**2,084**

1 Estimate is based on 691 peak day construction employees. An occupancy factor of 1.15 employees per vehicle is included in the employee trip calculations.

2 Shuttles with maximum 40-person capacity or less would transport employees between the contractor employee parking lots and the construction site in the 30 minutes before and after each shift. Shuttle trips were converted to PCEs at a rate of 2 to PCEs per vehicle.

3 Truck trips (i.e., delivery and transfer) were converted at a rate of 2.5 PCEs per vehicle.

Source: U.S. Cost, Bradley West Resource Loaded Schedule, November 19, 2008.

Table 4.3-7

Bradley West Project Construction Trip Estimates and Assumptions

	Employees									
	People		Vehicles		Shuttle Vehicles		Delivery Vehicles[1]		Total	
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Standard operating condition										
a.m. construction peak (6:00 am - 7:00 am)	553	-	481	-	14	14	5	5	510	29
p.m. construction peak (3:30 pm - 4:30 pm)	138	553	120	481	14	14	4	4	146	507
Total daily	691	691	601	601						
People per Vehicle			1.15	1.15	40.0	40.0	NA	NA	--	--
PCE Factor	NA	NA	1.0	1.0	2.0	2.0	2.5	2.5	--	--
Passenger car equivalents:										
a.m. construction peak (6:00 am - 7:00 am)	NA	NA	481	-	28	28	13	13	547	66
p.m. construction peak (3:30 pm - 4:30 pm)	NA	NA	120	481	28	28	10	10	178	539
Peak surge condition (60% increase, 2 shifts)										
a.m. construction peak (6:00 am - 7:00 am)	880	-	766	-	22	22	5	5	803	37
p.m. construction peak (3:30 pm - 4:30 pm)	220	880	192	766	22	22	4	4	226	800
Total daily	1,100	1,100	957	957						
People per Vehicle			1.15	1.15	40.0	40.0	NA	NA	--	--
PCE Factor	NA	NA	1.0	1.0	2.0	2.0	2.5	2.5	--	--
Passenger car equivalents:										
a.m. construction peak (6:00 am - 7:00 am)	NA	NA	766	-	44	44	13	13	848	82
p.m. construction peak (3:30 pm - 4:30 pm)	NA	NA	192	766	44	44	10	10	266	840
Primary Location (62.8%):										
a.m. construction peak (6:00 am - 7:00 am)	553	-	481	-	28	28				
p.m. construction peak (3:30 pm - 4:30 pm)	138	553	120	481	28	28				
Secondary Location (37.2%):										
a.m. construction peak (6:00 am - 7:00 am)	327	-	285	-	16	16				
p.m. construction peak (3:30 pm - 4:30 pm)	82	327	72	285	16	16				

1 It is assumed that construction delivery vehicle movements would not be affected by employee surge conditions.
2 NA = Not Applicable

Source: Ricondo & Associates, Inc., 2009.

The calculation of 691 peak day employees is based on an assumption that Bradley West Project construction during the peak period occurs on a double-shift work schedule, with 10-hour days, and six-day work-weeks. For the purposes of this EIR, a sensitivity analysis was conducted to assess a potential scenario that assumes a short-term 60 percent surge in employees as might occur with a more intense single shift or a five-day work week. The bottom portion of **Table 4.3-7** labeled "Peak surge condition" provides the tabulations involved with the surged traffic condition. A total of 1,100 peak day construction employees was assumed for this sensitivity analysis. While the impacts analysis of 691 peak day employees addresses two alternate scenarios whereby all of the employee parking would occur either in the northwest portion of the airport or in the southeast or east portion of the airport, the sensitivity analysis assumes parking would be split between the two areas. Specifically, it was assumed that either the Northwest Construction Staging/Parking Area or the East Contractor Employee/Southeast Construction Staging/Parking Area would serve as the primary location for employee parking and equipment and material staging, thus accounting for the trips associated with 691 of these employees (i.e., 553 employees entering in the a.m. construction peak hour and 138 entering in the p.m. construction peak). Meanwhile the area that is not the primary location would provide service as the secondary location and would accommodate the remaining 409 employees (i.e., 327 employees entering in the a.m. construction peak and 82 entering in the p.m. construction peak). Applying the assumed vehicle occupancy factor of 1.15 employees per vehicle to the 409 additional employees assumed for the sensitivity analysis, it was projected that 357 additional construction employee vehicles round trips per day would access the study area in support of Bradley West Project construction. Additional shuttle buses would be required to transport construction employees from the secondary location to and from the worksite. No additional delivery or transfer trucks were assumed as part of this scenario.

Appendix D-3 provides Fourth Quarter 2011 peak hour intersection traffic volumes for the four modeled scenarios which are discussed in greater detail in Section 4.3.4.2 below.

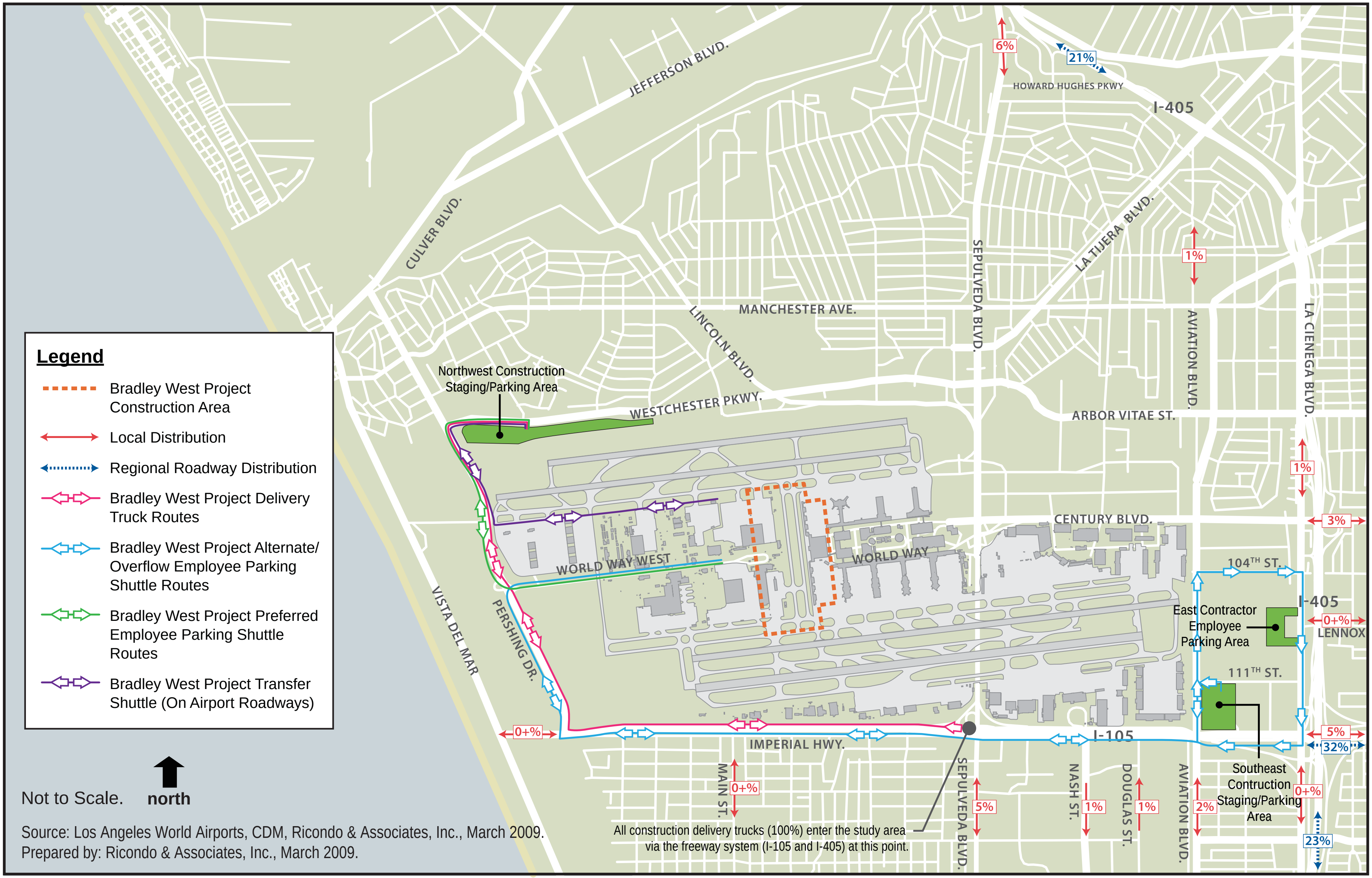
4.3.4.2 Bradley West Project Construction Trip Distribution

Given the dynamic nature of the LAX construction program, LAWA has decided to study the impacts of operating from one or a combination of three employee parking locations in order to maintain future flexibility to address changes in the construction program. In essence, this analysis is intended to result in a mitigation program to identify impacts associated with a range of employee parking lot options in order to maintain this flexibility.

Three locations for employee parking lots were considered for this analysis, with each parking facility accommodating varying parking demands. Furthermore, because the facilities are widely distributed throughout the study area the distribution of trips within the study area would be different for each location.

These three locations formed the basis for four parking and trip distribution scenarios that were studied as part of this analysis. Each of the four scenarios were analyzed using the peak Bradley West Project traffic volumes in order to ensure that all impacts would be accounted for throughout the Bradley West Project construction program in the event the need arises to adjust construction employee parking locations over the duration of the project. The locations of the Bradley West Project construction site, construction employee parking lots, delivery staging areas, and other relevant features of the four scenarios are depicted in **Figure 4.3-4**. The specific details of the scenarios are as follows:

- Scenario 1: *All Construction Employee Parking Occurs at the Northwest Construction Staging/Parking Area* - This analysis scenario assumes that all 601 Bradley West Project construction employee vehicles would park at the Northwest Construction Staging/Parking Area located on Westchester Parkway east of Pershing Drive. The driveway for this facility is located on the south leg of the signalized intersection of Westchester Parkway and Falmouth Avenue. Only right and left turns into and out of this driveway are permitted with no through traffic allowed between Falmouth Avenue and the driveway. Equipment and materials staging would also take place at this location. Shuttle buses would transport employees to and from the employee parking facility to the construction site.



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Project Construction Vehicle Routes & Trip Distribution

Figure 4.3-4

Alternatively, it is possible that LAWA may elect to use an employee parking area on the west side of the airport accessed via World Way West (located in the southeast quadrant of the interchange of World Way West with Pershing Drive).[91]

- Scenario 2: *All Construction Employee Parking Occurs at the East Contractor Employee Parking Area or the Southeast Construction Staging/Parking Area* - This analysis scenario assumes that all 601 Bradley West Project construction employee vehicles would park at the East Contractor Employee Parking Area or the Southeast Construction Staging/Parking Area. Shuttle buses would transport employees to and from the employee parking facility to the construction site. The Bradley West Project East Contractor Employee Parking Area is the same lot that was used for the construction employees on the SAIP and is designated for use during construction of the CFTP. It is located near the intersection of La Cienega Boulevard and Lennox Boulevard, with access from La Cienega Boulevard. If for any reason the East Contractor Employee Parking Area becomes unavailable, Scenario 2 assumes the proposed Southeast Construction Staging/Parking Area would instead be used. Given the proximity of the two subject sites and that the main access routes are similar for both sites including the employee shuttle route to and from the construction site, the traffic impacts associated with employee parking at either site are considered to be the same.
- Scenario 3: *Sensitivity Analysis Assuming Temporary 60% Surge in Number of Employees and Employee Parking Demand is Distributed between the Northwest Construction Staging/Parking Area (63%) and the Southeast Construction Staging/Parking Area (37%)* - This scenario assumes a 60 percent temporary increase in the peak period construction work force, based on a more intense daytime work shift, and a split distribution of employee parking. Under this scenario, 601 Bradley West Project construction employee vehicles would be assigned to the Northwest Construction Staging/Parking Area and 357 construction employee vehicles would be assigned to the Southeast Construction Staging/Parking Area. As discussed within Section 4.3.4.1 above, additional shuttle bus trips were also included in this analysis.
- Scenario 4: *Sensitivity Analysis Assuming Temporary 60% Surge in Number of Employees and Employee Parking Demand is Distributed between the Northwest Construction Staging/Parking Area (37%) and the Southeast Construction Staging/Parking Area (63%)* - This scenario assumes a 60 percent temporary increase in the peak period construction work force, based on a more intense daytime work shift, and a split distribution of employee parking. Under this scenario, 601 Bradley West Project construction employee vehicles would be assigned to the Southeast Construction Staging/Parking Area and 357 construction employee vehicles would be assigned to the Northwest Construction Staging/Parking Area. As discussed within Section 4.3.4.1 above, additional shuttle bus trips were also included in this analysis.

As shown in **Figure 4.3-4**, delivery trucks are anticipated to use the regional freeway system (I-405 and I-105), Imperial Highway, and Pershing Drive to access the West Construction Staging Area or the Northwest Construction Staging/Parking Area. The delivery truck routes are consistent amongst the various parking scenarios. The routes for employee parking shuttles are also depicted in **Figure 4.3-4**. As shown, employee parking shuttle routes to and from the two proposed southeast employee parking areas differ by the access locations for the various routes. While the lot at proposed Southeast Construction Staging/Parking Area would be accessed via 111th Street, the other lot at the East Contractor Employee Parking Area would be accessed via La Cienega Boulevard. Project-related construction employees are anticipated to park in the potential construction employee parking lots. While the employee parking shuttles and delivery trucks are assumed to travel on off-airport roadways, transfer shuttles are assumed to travel on on-airport roadway. The regional and local traffic flow distributions are

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91 Due to its geographic proximity to the Northwest Construction Staging/Parking Area, this location accessed via World Way West was not analyzed separately and the impacts are assumed to be the same as those discussed in Scenario 1. It should be noted that the use of this location along World Way West for employee parking would reduce the amount of traffic at the study area intersection of Westchester Parkway and Pershing Drive given that employees accessing employee parking facilities from northbound Pershing Drive would not be required to drive through this intersection.

also provided in **Figure 4.3-4**. The estimated flow paths used by employees are documented in Appendix D-2.

For purposes of distributing traffic on the study area roadway network, it was assumed that construction employee and delivery vehicle trips would originate from geographic locations in proportion to the regional population distribution shown in **Table 4.3-8**. The regional population distribution was developed during the SAIP traffic study and is based on information obtained from the LAX Master Plan Final EIR and the 2001 Air Passenger Survey. LAWA conducts airline passenger surveys on a regular basis to determine airline passenger travel characteristics and to assess changes in these travel patterns over time. Based on a review of the 2006 Air Passenger Survey data, it was determined that the regional travel and access patterns and regional population distribution percentages have not materially changed from the data obtained in 2001. Therefore, the distribution pattern assumptions used to distribute construction employee and construction delivery trips on the study area roadway network remain unchanged from those in the 2005 SAIP EIR.

Table 4.3-8

Regional Population Distribution

Area	Population (2002)	Percent of Population	Route Percentage to Airport: I-405 North	I-405 South	I-105 East	Local Roads	Total
Primary Study Area	423,185	3%	0%	0%	0%	3%	3%
South LA County	9,052,477	54%	15%	5%	18%	16%	54%
North LA County	706,077	4%	2%	0%	2%	0%	4%
Orange County	2,772,302	17%	0%	14%	0%	2%	17%
Riverside/San Bernardino County	2,961,693	18%	0%	4%	12%	2%	18%
Ventura County	771,734	5%	4%	0%	0%	0%	5%
Total	**16,687,468**	**100%**	**21%**	**23%**	**32%**	**24%**	**100%**

Sources: LAX Master Plan Supplement to the Draft EIR, Figure 4.3.2-3 (Existing 1996 Airport Traffic versus Non-Airport Traffic Comparison); 2001 LAX Passenger Survey Report (Table 39), Los Angeles International Airport, April 2004, Applied Management & Planning Group; 2006 LAX Passenger Survey Report, Los Angeles International Airport, December 2007, Applied Management & Planning Group.

As shown in **Table 4.3-8** and in **Figure 4.3-4**, it was estimated that approximately 21 percent of the construction-related traffic would access the airport from I-405 north, 23 percent from I-405 south, 32 percent from I-105 east, and 24 percent from local roadways. These route characteristics represent the roadway that a construction-related vehicle would use to access the study area.

In assigning traffic to the study area roadways, it was assumed that construction vehicles, consisting of delivery trucks and construction employee automobiles, would approach the study area in proportion to the regional distributions described above. The freeway ramps, roadways, and intersections representing the travel paths for construction-related vehicles within the study area were determined by reviewing the potential paths that would be used by vehicles traveling to the employee parking lots and to the construction staging areas, and assigning those trips to the most logical routes. The analysis is not particularly sensitive to the regional approach assumptions, given that a large proportion of the construction-related trips would access the study area via a limited number of freeway access points that may accommodate traffic originating from several regional directions.

Detailed trip distribution patterns were estimated for vehicles in the study area based on consultation with LAWA staff. The assumed study area circulation routes for construction employees, shuttle buses, delivery trucks, and transfer trucks are described in Appendix D-2.

4.3.5 Future Cumulative Traffic

The components of traffic for the future cumulative traffic condition are described in this section. The future cumulative traffic condition takes into consideration past, present, and reasonably foreseeable projects and includes growth in ambient background traffic and both airport and non-airport developments in the vicinity of the airport. (See Section 4.3.3.3 and Section 4.3.2.4 above for additional discussion of annual growth assumptions and cumulative methodology). Known development projects in the airport vicinity that may contribute traffic to the project study area roadway system during the peak Bradley West Project construction period were also considered. These trips would result from either the construction or the operation of those development projects. The list of local area development projects presented later in this section represents projects during a snapshot in time. The list is constantly changing as projects rotate off the list and new projects are approved and added to the list. Given that approval, construction, and operation of local area development projects is a continuous process, the traffic associated with the construction and operation of many past and current local area developments are represented in the traffic volume data that were collected for the Bradley West Project in 2008 and used as a basis for the traffic study. The development schedule and traffic characteristics of larger projects in close proximity to the Bradley West Project study area were reviewed and their effects were incorporated into the cumulative analysis. Other future "non-airport" projects that are not in the immediate vicinity of the study area are accounted for indirectly as part of the assumed 2 percent growth rate.

The cumulative traffic impacts analysis provided in this section supplements the impacts discussion contained in the LAX Master Plan Final EIR. In the LAX Master Plan Final EIR analysis, the potential for construction traffic from Master Plan projects to share the same roadways and haul routes as construction traffic from other projects in the general vicinity of LAX was discussed. The cumulative traffic impacts analysis presented in this Bradley West Project Draft EIR provides a detailed quantitative evaluation of construction-related impacts based on more complete and precise information than was available at the time the LAX Master Plan Final EIR was prepared, regarding the nature, location, and timing of construction projects occurring while the Bradley West Project is under construction.

4.3.5.1 Cumulative Projects

Development projects considered in the cumulative impacts analysis include both LAX Master Plan projects as well as other capital improvement projects undertaken by LAWA and other local agencies. Based on information available at the time the Bradley West Project construction traffic analysis was undertaken (March 2009), the development projects anticipated to be under construction concurrent with Bradley West Project construction and of a nature that would contribute to cumulative traffic impacts included the following:

- Security Program - In-Line Baggage Screening System (T6) - This project is to construct an in-line baggage screening system at LAX Terminal 6.
- Airfield Improvement Program - Taxiway/Taxilane/Service Roads - This project is to reconstruct multiple taxiways and taxilanes.
- Terminal Electrical Service Capacity Expansion - This project upgrades electrical systems to accommodate all ground support equipment at LAX.
- Central Utilities Plant (CUP) Replacement Program - This project is to replace the existing Central Utilities Plant with a new Leadership in Energy and Environmental Design (LEED™)-certified building to the east of the existing facility.
- CTA Elevators and Escalators Replacement - This project provides the replacement of existing elevators and escalators within parking structures and terminals at LAX.
- Miscellaneous Construction and Maintenance Activities.

Table 4.3-9 provides estimated construction costs, and the assumed start and end dates of construction for the Bradley West Project and each of the construction projects identified above.

Table 4.3-9

Construction Projects Concurrent with Bradley West Project Peak Construction

Project Number	Concurrent Construction Project	Estimated Total Construction Cost (millions)	Start Date	End Date	Estimated Employee Hours during Projects (Total)
N/A[1]	Bradley West Project	$2,000	Nov 2009	Feb 2015	4,483,216
1	Security Program - In-Line Baggage Screening Systems (T6)	80	Jun 2010	Sep 2011	134,496
2	Airfield Improvement Program - Taxiway/ Taxilane/Service Roads	125	Jun 2010	Dec 2012	210,151
3	Terminal Electrical Service Capacity Expansion	49	Dec 2010	Dec 2011	65,903
4	Central Utilities Plant (CUP) Replacement Program	558	May 2010	Apr 2013	938,113
5	CTA Elevators and Escalators Replacement	175	Feb 2010	Feb 2013	98,070
6	Misc Construction and Maintenance Activities	200	Jan 2009	Jan 2015	110,414

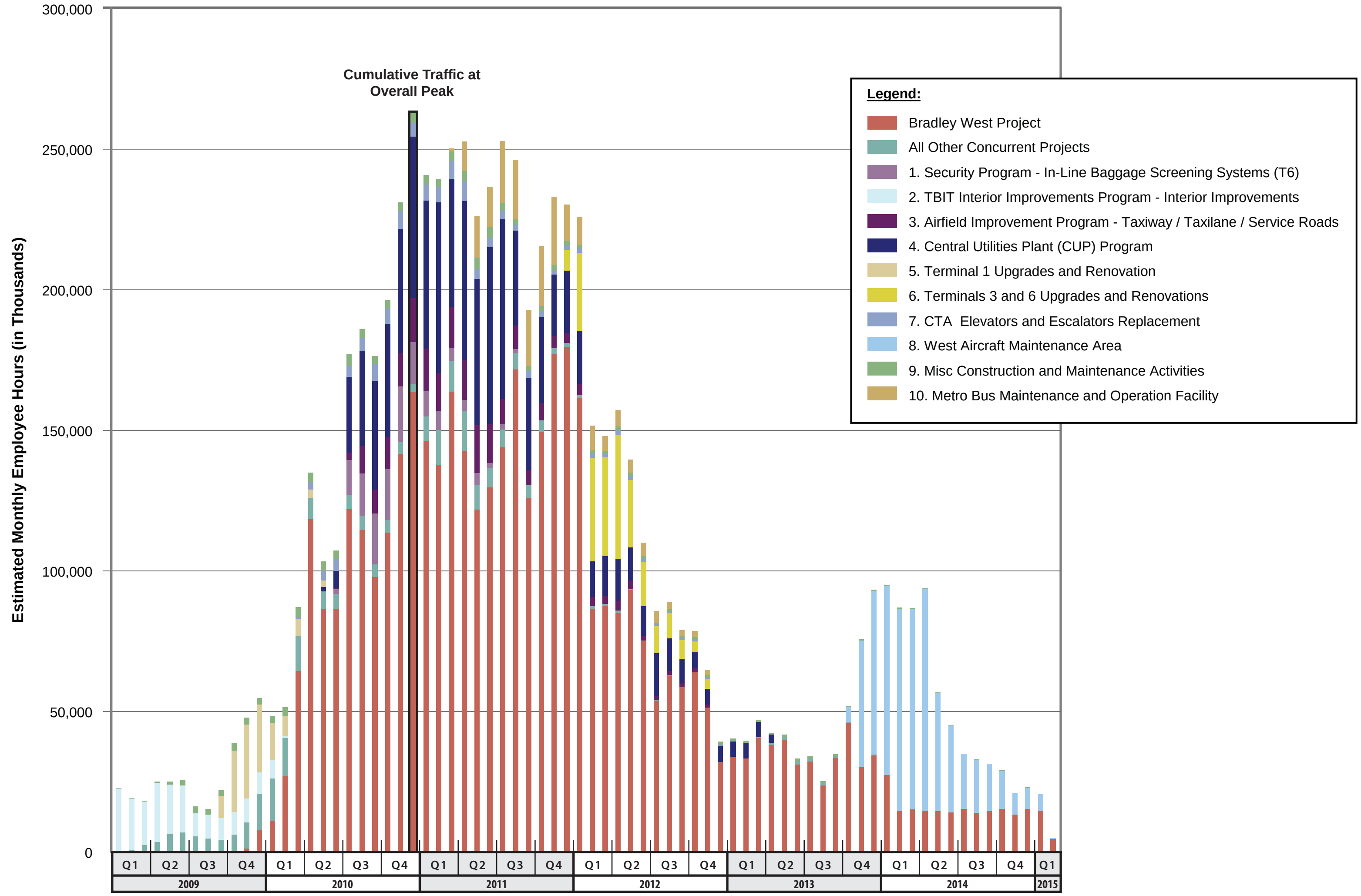
[1] N/A = Not Available

Source: CDM (Cumulative Project List Assumptions), Ricondo & Associates, Inc. (Estimated Employee Hours), U.S. Cost (Bradley West Project), 2009.

Detailed construction vehicle trip estimates were not available for each of these projects. Therefore, it was necessary to estimate future trips associated with construction of these projects for purposes of estimating cumulative traffic impacts. Detailed analysis of monthly construction activity for the Bradley West Project was possible through analysis of a resource loaded schedule prepared by U.S. Cost. Using the relationship between estimated project labor cost and total construction employee hours for the Bradley West Project, total employee hours for the other concurrent projects were estimated. In addition, the general distribution of employee hours over the course of the Bradley West Project construction program was used to distribute the total employee hours over the course of the individual projects. **Figure 4.3-5** provides a chart of estimated employee hours by month for the Bradley West Project and the concurrent construction projects during the Bradley West Project construction period. As shown in **Figure 4.3-5**, the peak period for Bradley West Project construction (estimated to be December 2011) does not coincide with the overall cumulative peak during construction of the Bradley West Project (estimated to be December 2010). The Bradley West Project is expected to be completed in the first quarter of 2015.

Based on the current level of planning and the anticipated timing for other Master Plan projects, it is not anticipated that other LAX Master Plan projects would be under construction during the peak month of Bradley West Project construction. However, as discussed previously, the assumed conservative growth in background traffic is anticipated to produce a conservative traffic volume scenario that would account for additional construction-related traffic in the event that additional LAX Master Plan construction projects are initiated during the time frame evaluated for this study.

Estimated a.m. and p.m. construction peak hour vehicle trips associated with Bradley West Project construction during December 2011 and the six concurrent construction projects during December 2010 are provided in **Table 4.3-10**. Traffic volumes associated with each construction project were estimated by calculating the relationship of vehicle trips to employee hours for the Bradley West Project and multiplying this relationship by the estimated total number of employee trips for each project in December 2010. The distribution of vehicle trips arriving at and departing the study area by hour of the day was assumed to be the same as for the Bradley West Project.



Note: Overall cumulative peak occurs in Fourth Quarter 2010.

Source: U.S. Cost (TBIT), CDM (Construction cost and schedule), Ricondo & Associates, Inc., March 2009 (Estimated trips for all projects except Bradley West Project).
Prepared by: Ricondo & Associates, Inc., March 2009.

LAX Bradley West Project Draft EIR

Estimated Employee Hours for Bradley West and Other Concurrent Construction Projects

Figure **4.3-5**

Table 4.3-10

A.M. and P.M. Construction Peak Hour Traffic Volumes by Project

	Construction Trips in Passenger Car Equivalents (PCEs)															
	Construction A.M. Peak Hour (6:00 a.m. - 7:00 a.m.)								Construction P.M. Peak Hour (3:30 p.m. - 4:30 p.m.)							
	Employees		Shuttles		Delivery Trucks[1]		Transfer Trucks		Employees		Shuttles		Delivery Trucks[1]		Transfer Trucks	
Project	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Bradley West Project (December 2011)[2]	481	0	14	14	5	5	10	10	120	481	14	14	4	4	8	8
Other Concurrent Projects in December 2010																
1. Security Program - In-Line Baggage Screening Systems (T6)	40	0	2	2	2	2	4	4	10	40	2	2	2	2	4	4
2. Airfield Improvement Program - Taxiway/ Taxilane/Service Roads	42	0	2	2	2	2	4	4	10	42	2	2	2	2	4	4
3. Terminal Electrical Service Capacity Expansion	8	0	1	1	1	1	2	2	2	8	1	1	1	1	2	2
4. Central Utilities Plant (CUP) Replacement Program	154	0	6	6	6	6	12	12	38	154	6	6	6	6	12	12
5. CTA Elevators and Escalators Replacement	12	0	1	1	1	1	2	2	3	12	1	1	1	1	2	2
6. Misc Construction and Maintenance Activities	10	0	1	1	1	1	2	2	3	10	1	1	1	1	2	2
Total for Other Concurrent Projects in Dec. 2010	**266**	**0**	**13**	**13**	**13**	**13**	**26**	**26**	**66**	**266**	**13**	**13**	**13**	**13**	**26**	**26**

1 Peak hour for delivery trucks was assumed to represent 10 percent of daily trips based on Bradley West Project.
2 The Bradley West Project trips shown here are based on 691 peak day construction employees generating 601 daily employee vehicles.

Source: Ricondo & Associates, Inc., 2009.

For purposes of distributing traffic within the study area, it was necessary to identify the employee parking and staging locations for the concurrent projects. The locations of construction staging areas and general access and circulation patterns of construction-related vehicle activity for the Bradley West Project and the concurrent construction projects are depicted in **Figure 4.3-6**. The anticipated contractor employee parking and staging areas for the six concurrent construction projects are also depicted in **Figure 4.3-6** at multiple locations within the study area. The regional and local area distribution patterns are anticipated to be generally the same as for the Bradley West Project, with adjustments as necessary for access to the individual sites. The estimated flow paths used by the employees and delivery trucks are documented in Appendix D-2.

4.3.5.2 Transportation Network Improvements

Caltrans is constructing high occupancy vehicle (HOV) lanes northbound and southbound on I-405 from I-10 to SR-90. Originally expected to be completed by late 2008, the project remains under construction. It is not believed that this construction will result in traffic diverting from the freeway system to local streets in the study area.

Construction of the westbound I-105 off-ramp to northbound Sepulveda Boulevard began in August 2008. This project will widen the off-ramp to install a third lane. While this project has resulted in the ramp being closed infrequently during the early morning (midnight to 5 AM) hours, lane closures on the westbound I-105 off-ramp to northbound Sepulveda Boulevard are not expected to occur until the last half of 2009. According to an e-mail from Mr. David Njoya, Construction Engineer/Senior Resident Engineer for Caltrans, to LAWA on August 18, 2008,[92] the traffic generated by the contractor's work force is minimal, with no more than 20 people working on the project at one time. Therefore, the volume of construction and employee traffic generated by the off-ramp widening project would be indirectly included as part of the assumed 2 percent growth factor for study area traffic. The off-ramp widening project is scheduled for completion in January 2010.

In addition, Caltrans recently improved Lincoln Boulevard (SR-1). In August 2008, Caltrans opened four lanes northbound from Loyola Marymount University (LMU) Drive to Jefferson Boulevard and four lanes southbound from Jefferson Boulevard, narrowing to three lanes just north of LMU Drive. During Phase 2 of the project, completed in January 2009, Lincoln Boulevard was widened from La Tijera Boulevard to LMU Drive to provide an additional northbound lane along with traffic signal modifications.

The City of Los Angeles is currently improving Sepulveda Boulevard from Howard Hughes Parkway to south of 92nd Street. One component of the project is to widen Sepulveda Boulevard south of Manchester Avenue to create three moving lanes of traffic, with parking, for both northbound and southbound directions. While the entire project is not expected to be finished until later this year, the physical widening of the roadway has already been completed. Sepulveda Boulevard is the primary access roadway for employee traffic accessing Northwest Construction Staging/Parking Area from the north.

4.3.5.3 Local Area Construction and Development Projects

Planned development projects in the City of Los Angeles and neighboring communities within the vicinity of the study area were previously noted in Table 4.2-5 in Section 4.2 of this EIR, provided in the off-airport traffic analysis section of this EIR. The list was prepared to document and describe all known local area development projects that may contribute traffic to the Bradley West Project study area. The list is based on consultation with representatives of the LADOT, Culver City, El Segundo, Hawthorne, Inglewood, Los Angeles County, and Manhattan Beach. Table 4.2-5 lists, if known, the estimated daily and hourly trips generated by the development project and includes notes relating to project status. The a.m. and p.m. peak hour trips presented in the table represent the development-related traffic generated during the a.m. and p.m. peak commute periods that do not coincide with the "off-peak" construction peak periods analyzed for construction of the Bradley West Project.

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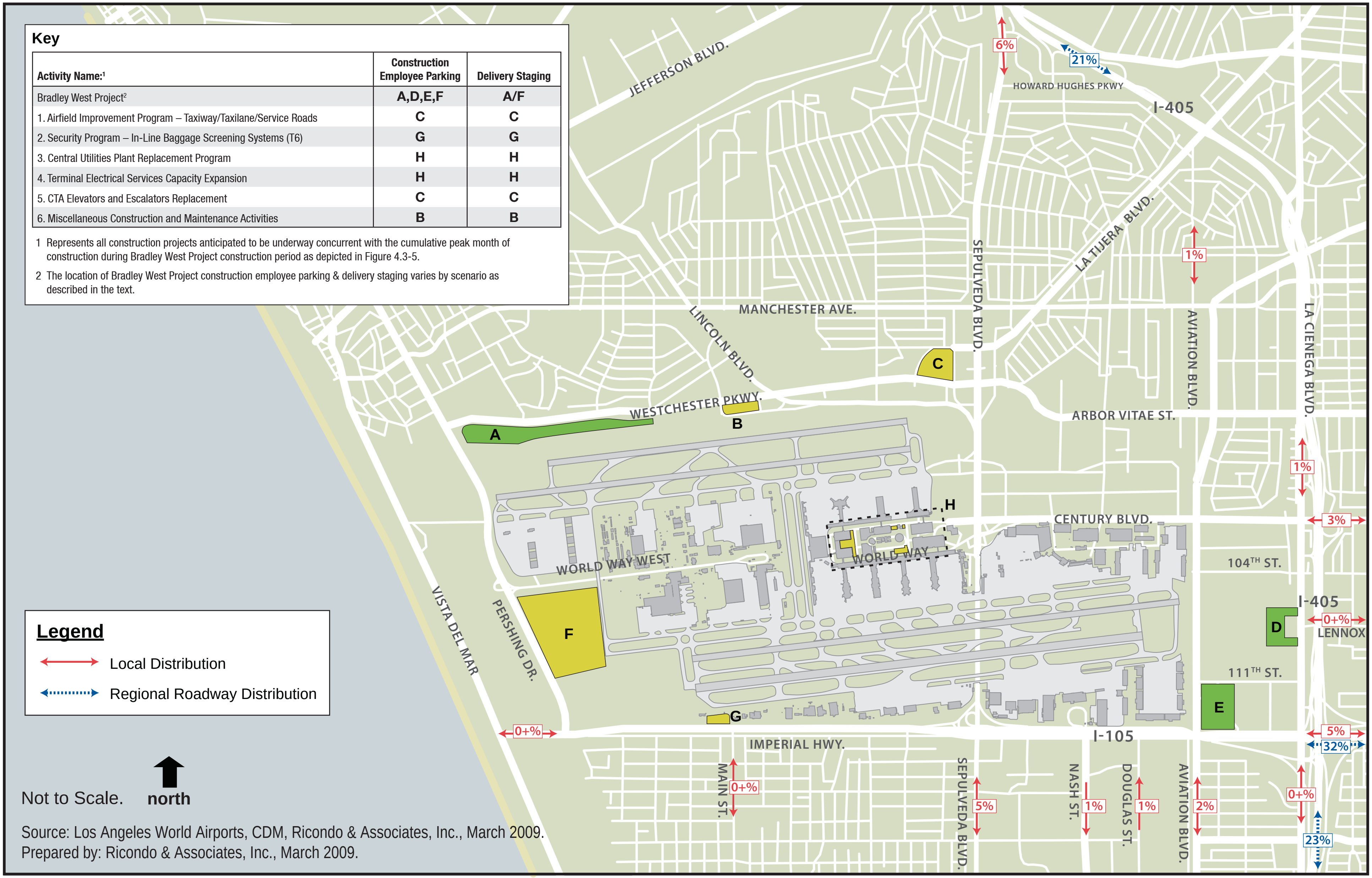
[92] Njoya, David, Construction Engineer/Senior Resident Engineer, Caltrans, Personal Communication, August 18, 2008.



Key

Activity Name:[1]	Construction Employee Parking	Delivery Staging
Bradley West Project[2]	A,D,E,F	A/F
1. Airfield Improvement Program – Taxiway/Taxilane/Service Roads	C	C
2. Security Program – In-Line Baggage Screening Systems (T6)	G	G
3. Central Utilities Plant Replacement Program	H	H
4. Terminal Electrical Services Capacity Expansion	H	H
5. CTA Elevators and Escalators Replacement	C	C
6. Miscellaneous Construction and Maintenance Activities	B	B

1 Represents all construction projects anticipated to be underway concurrent with the cumulative peak month of construction during Bradley West Project construction period as depicted in Figure 4.3-5.

2 The location of Bradley West Project construction employee parking & delivery staging varies by scenario as described in the text.

Source: Los Angeles World Airports, CDM, Ricondo & Associates, Inc., March 2009.
Prepared by: Ricondo & Associates, Inc., March 2009.

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Employee Parking and Staging Locations for Bradley West Project and Other Projects at Construction Peak

Figure
4.3-6

As described in Section 4.3.3 above, Bradley West Project construction-related traffic would be managed such that construction-related trips related to the project would be negligible during a.m. and p.m. peak commute periods. Therefore, it is anticipated that traffic volumes generated by these projects during the peak hours analyzed for construction traffic would be generally lower than the volumes shown in Table 4.2-5 in Section 4.2 of this EIR.

The construction schedules and specific dates of occupancy for most of the developments listed in Table 4.2-5 were not available. However, given the locations of these projects, it is reasonable to assume that construction-related traffic would access the project areas via freeway ramps and roadways that are outside the Bradley West Project study area. As such, construction vehicle trips generated by those developments would be represented within the 2 percent growth rate assumed for background traffic and would have negligible impact on the study area intersections.

In summary, the few local development projects anticipated to be under construction or operational during the project construction period for the Bradley West Project are anticipated to generate relatively few commute peak hour trips (and even fewer trips during the peak hours analyzed for the Bradley West Project) within the project study area. Given these characteristics, it is anticipated that traffic volumes generated by the developments listed in Table 4.2-5 that would be under construction or operational during the project peak construction period would be included in the assumed 2 percent growth factor for background traffic. The potential effect of trips on the study area intersections generated by local developments would be further reduced given that the peak hours evaluated for this study do not coincide with the a.m. and p.m. commute peak periods that generally correspond with the peak traffic generation periods for most of these developments.

4.3.6 CEQA Thresholds of Significance

As described in Section 4.3.2.1 above, for the SAIP, which is similar in nature to the Bradley West Project, LADOT stated that intersection analysis was sufficient and analysis of freeway and roadway links was not required given that the project would not produce traffic volumes during the a.m. and p.m. commute peak hours; therefore, criteria for determining significant impacts are limited to analysis of intersections. In accordance with LADOT criteria defined in its *Traffic Study Policy and Procedures*.[93] Based on the LADOT definition, an impact is considered to be significant if one of the following thresholds is exceeded:

- The LOS is C, its final v/c ratio 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 v/c ratio 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 v/c ratio is 0.901 or greater, and the project-related increase in v/c is 0.010 or greater.

The "final v/c ratio" as defined by LADOT consists of the future v/c ratio at an intersection that includes volume from the project, baseline, ambient background growth,[94] and other related projects, but without proposed intersection traffic mitigation[95] as potentially required by the project. The "project-related increase" is defined as the change in the unmitigated LOS condition between the (a) future v/c "with" the

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93 Los Angeles Department of Transportation, Traffic Study Policies and Procedures, Revised March 2002, Available: http://www.lacity.org/LADOT/TrafficStudyGuidelines.pdf.

94 This definition applies to the cumulative analysis and not the project-specific analysis where ambient background growth and and trips from other concurrent construction projects are not included in the calculation of the “final v/c ratio.” The “final v/c ratio” for the project-specific analysis is calculated using future project volumes associated with construction of the project added directly to the Baseline volumes.

95 As discussed in Section 4.3.7, commitments identified within the LAX Master Plan Mitigation Monitoring and Reporting Program are considered as part of these analyses. Future transportation network improvements described in Section 4.3.5.2 are assumed within future year transportation networks and are not considered as possible mitigation measures to address project-related impacts.

project, baseline, ambient background growth (for the cumulative analysis), and other related project growth, and (b) the future v/c "without" the project, but with baseline, ambient background growth, and other related project growth.

For purposes of this analysis and in accordance with CEQA, project impacts were determined by comparing the level of service results for the following conditions:

- **Project Impacts--**The direct project impacts are determined by calculating the difference in LOS for (a) the Baseline (2008) Plus Peak Bradley West Project LOS and (b) the Baseline (2008) LOS. This comparison is required to isolate the direct impacts of the project. The difference in LOS is compared to the thresholds identified earlier in this section to determine if the project would result in a significant impact.
- **Cumulative Impacts--**The cumulative impacts analysis is intended to provide a realistic comparison of future traffic conditions, consisting of traffic generated by all anticipated sources described previously in this document. Cumulative impacts were analyzed using a two-step process. Initially, the cumulative "With Project" LOS condition was compared with the Baseline (2008) condition to determine if a cumulative impact would occur relative to the Baseline. A cumulative impact was deemed significant it if exceeded the allowable threshold of significance defined earlier in this section. If a cumulative impact was determined, then a second comparison was conducted by calculating the difference in LOS for the "With Project" and "Without Project" levels of service to determine the proposed project's contribution. If the calculated differences in LOS exceed the threshold guidelines defined in this section, then it was determined that the project component would represent a cumulatively considerable contribution in terms of impact.

4.3.7 LAX Master Plan Commitments and Mitigation Measures

The following transportation-related commitments identified in the LAX Master Plan Mitigation Monitoring and Reporting Program are applicable to the Bradley West Project and thus are included as part of the project for purposes of environmental review:

- **C-1. Establishment of a Ground Transportation/Construction Coordination Office**. Establish this office for the life of the construction projects to coordinate deliveries, monitor traffic conditions, advise motorists and those making deliveries about detours and congested areas, and monitor and enforce delivery times and routes. LAWA will periodically analyze traffic conditions on designated routes during construction to see whether there is a need to improve conditions through signage and other means.

  This office may undertake a variety of duties, including but not limited to:

  - Inform motorists about detours and congestion by use of static signs, changeable message signs, media announcements, airport website, etc.;
  - Work with airport police and the Los Angeles Police Department to enforce delivery times and routes;
  - Establish staging areas;
  - Coordinate with police and fire personnel regarding maintenance of emergency access and response times;
  - Coordinate roadway projects of Caltrans, City of Los Angeles, and other jurisdictions with those of the airport construction projects;
  - Monitor and coordinate deliveries;
  - Establish detour routes;

  - Work with residential and commercial neighbors to address their concerns regarding construction activity; and
  - Analyze traffic conditions to determine the need for additional traffic controls, lane restriping, signal modifications, etc.

- **C-2. Construction Personnel Airport Orientation**. All construction personnel will be required to attend an airport project-specific orientation (pre-construction meeting) that includes where to park, where staging areas are located, construction policies, etc.
- **ST-9. Construction Deliveries**. 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 to approved traffic detour plans.
- **ST-12. Designated Truck Delivery Hours**. Truck deliveries shall be encouraged to use night-time 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.

  [*Note: This measure provides guidelines for controlling the arrival and departure times of construction related traffic during peak commute periods, and served as input for developing an estimated schedule of Bradley West Project construction delivery activity*.]
- **ST-14. Construction Employee Shift Hours**. 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.

  [*Note: This measure provides guidelines for controlling the arrival and departure times of construction employees, and served as direct input for determining the employee traffic activity associated with the Bradley West Project. Traffic analysis was limited to weekday traffic conditions to provide a conservative estimate of potential impacts given that weekday traffic activity is typically significantly higher than during the weekend traffic*.]
- **ST-16. Designated Haul Routes**. Every effort will be made to ensure that haul routes are located away from sensitive noise receptors.
- **ST-17. Maintenance of Haul Routes**. 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**. 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-22. Designated Truck Routes**. 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; and I-105.

4.3.8 Impact Analysis

As described previously in Section 4.3.2, potential traffic-related impacts pertaining to construction of the Bradley West Project were assessed by conducting the two impact comparisons described in the following sections.

4.3.8.1 Impact Comparison 1--Peak Project Traffic Plus Baseline (2008) Traffic Measured against Baseline (2008)

This comparison provides the basis for determining project-related impacts. The comparison is based on project specific traffic activity during the peak Bradley West Project (fourth quarter 2011) added to Baseline (2008) traffic volumes. The resulting levels of service were compared to the levels of service associated with the Baseline (2008) condition. A significant impact would be realized if/when the thresholds of significance defined in Section 4.3.6 above are met or exceeded.

As described previously in Section 4.3.4.2, four potential employee parking scenarios were evaluated in order to identify potential impacts of operating from one or a combination of three potential employee parking locations order to maintain future flexibility to address changes in the construction program over the duration of the project. In essence, this analysis is intended to result in a potential mitigation program to address impacts associated with a range of employee parking lot options in order to maintain this desired flexibility.

Impact comparisons under construction employee parking Scenario 1, Scenario 2, Scenario 3, and Scenario 4 are depicted in **Table 4.3-11**, **Table 4.3-12**, **Table 4.3-13**, and **Table 4.3-14**, respectively. As shown in the tables, it is anticipated that the following intersections would experience project-related impacts:

- **La Cienega Boulevard and Century Boulevard (Intersection #36)**. It is anticipated that this intersection would experience project-related traffic impacts as part of employee parking Scenario 1, Scenario 2, Scenario 3, and Scenario 4.
- **Imperial Highway and Main Street (Intersection #68)**. It is anticipated that this intersection would experience project-related traffic impacts as part of employee parking Scenario 1, Scenario 3 and Scenario 4.
- **Imperial Highway and Pershing Drive (Intersection #69)**. It is anticipated that this intersection would experience project-related traffic impacts as part of employee parking Scenario 1 and Scenario 3.
- **Sepulveda Boulevard and Manchester Avenue (Intersection #114)**. It is anticipated that this intersection would experience project-related traffic impacts as part of employee parking Scenario 1, Scenario 3, and Scenario 4.

Table 4.3-11

Level of Service Analysis Results - Impact Comparison 1 Baseline (2008) Compared to Project plus Baseline (2008); Scenario 1

	Intersection	Peak Hour[1]	Baseline (2008) V/C[2]	Baseline (2008) LOS[3]	Bradley West Project Plus Baseline (2008) V/C[2]	Bradley West Project Plus Baseline (2008) LOS[3]	Change in V/C	Significant Impact
14.	Aviation Boulevard and Century Boulevard	Construction AM	0.469	A	0.470	A	0.001	--[4]
		Construction PM	0.757	C	0.757	C	0.000	--
16.	Imperial Highway and Aviation Boulevard	Construction AM	0.523	A	0.523	A	0.000	--
		Construction PM	0.667	B	0.702	C	0.035	--
19.	Aviation Boulevard and 111th Street	Construction AM	0.353	A	0.353	A	0.000	--
		Construction PM	0.488	A	0.488	A	0.000	--
36.	La Cienega Boulevard and Century Boulevard	Construction AM	0.392	A	0.392	A	0.000	--
		Construction PM	0.910	E	0.921	E	0.011	Yes
39.	Century Boulevard and I-405 Northbound Ramp	Construction AM	0.514	A	0.518	A	0.004	--
		Construction PM	0.548	A	0.551	A	0.003	--
47.	Imperial Highway and Douglas Street	Construction AM	0.155	A	0.193	A	0.038	--
		Construction PM	0.412	A	0.448	A	0.036	--
65.	Sepulveda Boulevard and Howard Hughes Pkwy.	Construction AM	0.256	A	0.256	A	0.000	--
		Construction PM	0.643	B	0.643	B	0.000	--
67.	Imperial Highway and La Cienega Boulevard	Construction AM	0.220	A	0.220	A	0.000	--
		Construction PM	0.568	A	0.568	A	0.000	--
68.	Imperial Highway and Main Street	Construction AM	0.404	A	0.410	A	0.006	--
		Construction PM	0.716	C	0.827	D	0.111	Yes
69.	Imperial Highway and Pershing Drive	Construction AM	0.479	A	0.704	C	0.225	Yes
		Construction PM	0.426	A	0.556	A	0.130	--
71.	Imperial Highway and Sepulveda Boulevard	Construction AM	0.509	A	0.509	A	0.000	--
		Construction PM	1.185	F	1.185	F	0.000	--
73.	Imperial Highway and Nash Street	Construction AM	0.377	A	0.492	A	0.115	--
		Construction PM	0.300	A	0.335	A	0.035	--
74.	Imperial Highway and I-105 Ramp	Construction AM	0.533	A	0.580	A	0.047	--
		Construction PM	0.541	A	0.565	A	0.024	--
75.	Imperial Highway and I-405 Northbound Ramp	Construction AM	0.246	A	0.276	A	0.030	--
		Construction PM	0.554	A	0.584	A	0.030	--
89.	La Cienega Boulevard and Lennox Boulevard	Construction AM	0.224	A	0.224	A	0.000	--
		Construction PM	0.408	A	0.408	A	0.000	--
94.	La Cienega Boulevard and 111th Street	Construction AM	0.122	A	0.122	A	0.000	--
		Construction PM	0.363	A	0.363	A	0.000	--
96.	La Cienega Blvd. & I-405 Southbound Ramps North of Century	Construction AM	0.442	A	0.442	A	0.000	--
		Construction PM	0.560	A	0.562	A	0.002	--
97.	La Cienega Blvd. & I-405 Southbound Ramps South of Century	Construction AM	0.238	A	0.238	A	0.000	--
		Construction PM	0.424	A	0.424	A	0.000	--
98.	La Cienega Blvd. & I-405 Southbound Ramps North of Imperial	Construction AM	0.173	A	0.173	A	0.000	--

Table 4.3-11

Level of Service Analysis Results - Impact Comparison 1 Baseline (2008) Compared to Project plus Baseline (2008); Scenario 1

	Intersection	Peak Hour[1]	Baseline (2008) V/C[2]	Baseline (2008) LOS[3]	Bradley West Project Plus Baseline (2008) V/C[2]	Bradley West Project Plus Baseline (2008) LOS[3]	Change in V/C	Significant Impact
		Construction PM	0.279	A	0.279	A	0.000	--
101.[5]	Sepulveda Boulevard and La Tijera Boulevard	Construction AM	0.377	A	0.377	A	0.000	--
		Construction PM	0.663	B	0.681	B	0.018	--
108.	Sepulveda Boulevard and Lincoln Boulevard	Construction AM	0.409	A	0.409	A	0.000	--
		Construction PM	0.715	C	0.725	C	0.010	--
114.[5]	Sepulveda Boulevard and Manchester Avenue	Construction AM	0.501	A	0.501	A	0.000	--
		Construction PM	0.877	D	0.908	E	0.031	Yes
123.	Westchester Parkway and Pershing Drive	Construction AM	0.212	A	0.364	A	0.152	--
		Construction PM	0.255	A	0.429	A	0.174	--
135.[5]	Sepulveda Boulevard and Westchester Parkway	Construction AM	0.331	A	0.331	A	0.000	--
		Construction PM	0.636	B	0.636	B	0.000	--
136.[5]	Sepulveda Boulevard and 76th/77th Street	Construction AM	0.510	A	0.510	A	0.000	--
		Construction PM	0.552	A	0.559	A	0.007	--
137.	Sepulveda Boulevard and 79th/80th Street	Construction AM	0.421	A	0.421	A	0.000	--
		Construction PM	0.508	A	0.515	A	0.007	--
138.	Sepulveda Boulevard and 83rd Street	Construction AM	0.308	A	0.308	A	0.000	--
		Construction PM	0.459	A	0.464	A	0.005	--
1000.	La Cienega Boulevard and 104th Street	Construction AM	0.154	A	0.156	A	0.002	--
		Construction PM	0.356	A	0.356	A	0.000	--

1 The hours of analysis include the construction a.m. peak (6:00 a.m. - 7:00 a.m.), and the construction p.m. peak (3:30 p.m. - 4:30 p.m.).
2 Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #39 and #75, which are not a part of the LADOT system.
3 Level of Service range: A (excellent) to F (failure).
4 -- Indicates "No Impact"
5 The Baseline (2008) plus Project level of service did not include the additional capacity from the widening of Sepulveda Boulevard that was completed subsequent to publication of the NOP for the Bradley West Project Draft EIR. As a result, the level of service for the Baseline (2008) conditions would provide improved conditions relative to the results shown if these improvements were included.

Source: Ricondo & Associates, Inc., using TRAFFIX, 2009.

Table 4.3-12

Level of Service Analysis Results - Impact Comparison 1 Baseline (2008) Compared to Project plus Baseline (2008); Scenario 2

	Intersection	Peak Hour[1]	Baseline (2008) V/C[2]	Baseline (2008) LOS[3]	Bradley West Project Plus Baseline (2008) V/C[2]	Bradley West Project Plus Baseline (2008) LOS[3]	Change in V/C	Significant Impact
14.	Aviation Boulevard and Century Boulevard	Construction AM	0.469	A	0.469	A	0.000	--[4]
		Construction PM	0.757	C	0.769	C	0.012	--
16.	Imperial Highway and Aviation Boulevard	Construction AM	0.523	A	0.675	B	0.152	--
		Construction PM	0.667	B	0.673	B	0.006	--
19.	Aviation Boulevard and 111th Street	Construction AM	0.353	A	0.439	A	0.086	--
		Construction PM	0.488	A	0.491	A	0.003	--
36.	La Cienega Boulevard and Century Boulevard	Construction AM	0.392	A	0.528	A	0.136	--
		Construction PM	0.910	E	0.947	E	0.037	Yes
39.	Century Boulevard and I-405 Northbound Ramp	Construction AM	0.514	A	0.559	A	0.045	--
		Construction PM	0.548	A	0.559	A	0.011	--
47.	Imperial Highway and Douglas Street	Construction AM	0.155	A	0.160	A	0.005	--
		Construction PM	0.412	A	0.419	A	0.007	--
65.	Sepulveda Boulevard and Howard Hughes Pkwy.	Construction AM	0.256	A	0.256	A	0.000	--
		Construction PM	0.643	B	0.647	B	0.004	--
67.	Imperial Highway and La Cienega Boulevard	Construction AM	0.220	A	0.230	A	0.010	--
		Construction PM	0.568	A	0.617	B	0.049	--
68.	Imperial Highway and Main Street	Construction AM	0.405	A	0.417	A	0.013	--
		Construction PM	0.716	C	0.726	C	0.010	--
69.	Imperial Highway and Pershing Drive	Construction AM	0.481	A	0.504	A	0.025	--
		Construction PM	0.434	A	0.454	A	0.028	--
71.	Imperial Highway and Sepulveda Boulevard	Construction AM	0.509	A	0.527	A	0.018	--
		Construction PM	1.185	F	1.189	F	0.004	--
73.	Imperial Highway and Nash Street	Construction AM	0.377	A	0.388	A	0.011	--
		Construction PM	0.300	A	0.307	A	0.007	--
74.	Imperial Highway and I-105 Ramp	Construction AM	0.533	A	0.607	B	0.074	--
		Construction PM	0.541	A	0.601	B	0.060	--
75.	Imperial Highway and I-405 Northbound Ramp	Construction AM	0.246	A	0.251	A	0.005	--
		Construction PM	0.554	A	0.559	A	0.005	--
89.	La Cienega Boulevard and Lennox Boulevard	Construction AM	0.224	A	0.238	A	0.014	--
		Construction PM	0.408	A	0.408	A	0.000	--
94.	La Cienega Boulevard and 111th Street	Construction AM	0.122	A	0.126	A	0.004	--
		Construction PM	0.363	A	0.486	A	0.123	--
96.	La Cienega Blvd. & I-405 Southbound Ramps North of Century	Construction AM	0.442	A	0.481	A	0.039	--
		Construction PM	0.560	A	0.572	A	0.012	--

Table 4.3-12

Level of Service Analysis Results - Impact Comparison 1 Baseline (2008) Compared to Project plus Baseline (2008); Scenario 2

	Intersection	Peak Hour[1]	Baseline (2008) V/C[2]	Baseline (2008) LOS[3]	Bradley West Project Plus Baseline (2008) V/C[2]	Bradley West Project Plus Baseline (2008) LOS[3]	Change in V/C	Significant Impact
97.	La Cienega Blvd. & I-405 Southbound Ramps South of Century	Construction AM	0.238	A	0.238	A	0.000	--
		Construction PM	0.424	A	0.424	A	0.000	--
98.	La Cienega Blvd. & I-405 Southbound Ramps North of Imperial	Construction AM	0.173	A	0.173	A	0.000	--
		Construction PM	0.279	A	0.357	A	0.078	--
101.[5]	Sepulveda Boulevard and La Tijera Boulevard	Construction AM	0.377	A	0.377	A	0.000	--
		Construction PM	0.663	B	0.670	B	0.007	--
108.	Sepulveda Boulevard and Lincoln Boulevard	Construction AM	0.409	A	0.409	A	0.000	--
		Construction PM	0.715	C	0.716	C	0.001	--
114.[5]	Sepulveda Boulevard and Manchester Avenue	Construction AM	0.501	A	0.501	A	0.000	--
		Construction PM	0.877	D	0.884	D	0.007	--
123.	Westchester Parkway and Pershing Drive	Construction AM	0.212	A	0.217	A	0.005	--
		Construction PM	0.255	A	0.255	A	0.000	--
135.[5]	Sepulveda Boulevard and Westchester Parkway	Construction AM	0.331	A	0.331	A	0.000	--
		Construction PM	0.636	B	0.642	B	0.006	--
136.[5]	Sepulveda Boulevard and 76th/77th Street	Construction AM	0.510	A	0.510	A	0.000	--
		Construction PM	0.552	A	0.554	A	0.002	--
137.	Sepulveda Boulevard and 79th/80th Street	Construction AM	0.421	A	0.421	A	0.000	--
		Construction PM	0.508	A	0.510	A	0.002	--
138.	Sepulveda Boulevard and 83rd Street	Construction AM	0.308	A	0.308	A	0.000	--
		Construction PM	0.459	A	0.460	A	0.001	--
1000.	La Cienega Boulevard and 104th Street	Construction AM	0.154	A	0.383	A	0.229	--
		Construction PM	0.356	A	0.424	A	0.068	--

1 The hours of analysis include the construction a.m. peak (6:00 a.m. - 7:00 a.m.), and the construction p.m. peak (3:30 p.m. - 4:30 p.m.).
2 Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #39 and #75, which are not a part of the LADOT system.
3 Level of Service range: A (excellent) to F (failure).
4 -- Indicates "No Impact"
5 The Baseline (2008) plus Project level of service did not include the additional capacity from the widening of Sepulveda Boulevard that was completed subsequent to publication of the NOP for the Bradley West Project Draft EIR. As a result, the level of service for the Baseline (2008) conditions would provide improved conditions relative to the results shown if these improvements were included.

Source: Ricondo & Associates, Inc., using TRAFFIX, 2009.

Table 4.3-13

Level of Service Analysis Results - Impact Comparison 1 Baseline (2008) Compared to Project plus Baseline (2008); Scenario 3

	Intersection	Peak Hour[1]	Baseline (2008) V/C[2]	Baseline (2008) LOS[3]	Bradley West Project Plus Baseline (2008) V/C[2]	Bradley West Project Plus Baseline (2008) LOS[3]	Change in V/C	Significant Impact
14.	Aviation Boulevard and Century Boulevard	Construction AM	0.469	A	0.470	A	0.001	--[4]
		Construction PM	0.757	C	0.764	C	0.007	--
16.	Imperial Highway and Aviation Boulevard	Construction AM	0.523	A	0.549	A	0.026	--
		Construction PM	0.667	B	0.706	C	0.039	--
19.	Aviation Boulevard and 111th Street	Construction AM	0.353	A	0.380	A	0.027	--
		Construction PM	0.488	A	0.515	A	0.027	--
36.	La Cienega Boulevard and Century Boulevard	Construction AM	0.392	A	0.392	A	0.000	--
		Construction PM	0.910	E	0.925	E	0.015	Yes
39.	Century Boulevard and I-405 Northbound Ramp	Construction AM	0.514	A	0.520	A	0.006	--
		Construction PM	0.548	A	0.553	A	0.005	--
47.	Imperial Highway and Douglas Street	Construction AM	0.155	A	0.197	A	0.042	--
		Construction PM	0.412	A	0.453	A	0.041	--
65.	Sepulveda Boulevard and Howard Hughes Pkwy.	Construction AM	0.256	A	0.256	A	0.000	--
		Construction PM	0.643	B	0.645	B	0.002	--
67.	Imperial Highway and La Cienega Boulevard	Construction AM	0.220	A	0.244	A	0.024	--
		Construction PM	0.568	A	0.587	A	0.019	--
68.	Imperial Highway and Main Street	Construction AM	0.405	A	0.420	A	0.015	--
		Construction PM	0.716	C	0.836	D	0.120	Yes
69.	Imperial Highway and Pershing Drive	Construction AM	0.481	A	0.726	C	0.245	Yes
		Construction PM	0.434	A	0.575	A	0.141	--
71.	Imperial Highway and Sepulveda Boulevard	Construction AM	0.509	A	0.520	A	0.011	--
		Construction PM	1.185	F	1.188	F	0.003	--
73.	Imperial Highway and Nash Street	Construction AM	0.377	A	0.504	A	0.127	--
		Construction PM	0.300	A	0.340	A	0.040	--
74.	Imperial Highway and I-105 Ramp	Construction AM	0.533	A	0.585	A	0.052	--
		Construction PM	0.541	A	0.605	B	0.064	--
75.	Imperial Highway and I-405 Northbound Ramp	Construction AM	0.246	A	0.304	A	0.058	--
		Construction PM	0.554	A	0.593	A	0.039	--
89.	La Cienega Boulevard and Lennox Boulevard	Construction AM	0.224	A	0.224	A	0.000	--
		Construction PM	0.408	A	0.408	A	0.000	--
94.	La Cienega Boulevard and 111th Street	Construction AM	0.122	A	0.233	A	0.111	--
		Construction PM	0.363	A	0.498	A	0.135	--
96.	La Cienega Blvd. & I-405 Southbound Ramps North of Century	Construction AM	0.442	A	0.466	A	0.024	--
		Construction PM	0.560	A	0.573	A	0.013	--

Table 4.3-13

Level of Service Analysis Results - Impact Comparison 1 Baseline (2008) Compared to Project plus Baseline (2008); Scenario 3

	Intersection	Peak Hour[1]	Baseline (2008) V/C[2]	Baseline (2008) LOS[3]	Bradley West Project Plus Baseline (2008) V/C[2]	Bradley West Project Plus Baseline (2008) LOS[3]	Change in V/C	Significant Impact
97.	La Cienega Blvd. & I-405 Southbound Ramps South of Century	Construction AM	0.238	A	0.238	A	0.000	--
		Construction PM	0.424	A	0.448	A	0.024	--
98.	La Cienega Blvd. & I-405 Southbound Ramps North of Imperial	Construction AM	0.173	A	0.173	A	0.000	--
		Construction PM	0.279	A	0.279	A	0.000	--
101.[5]	Sepulveda Boulevard and La Tijera Boulevard	Construction AM	0.377	A	0.377	A	0.000	--
		Construction PM	0.663	B	0.685	B	0.022	--
108.	Sepulveda Boulevard and Lincoln Boulevard	Construction AM	0.409	A	0.409	A	0.000	--
		Construction PM	0.715	C	0.725	C	0.010	--
114.[5]	Sepulveda Boulevard and Manchester Avenue	Construction AM	0.501	A	0.501	A	0.000	--
		Construction PM	0.877	D	0.912	E	0.035	Yes
123.	Westchester Parkway and Pershing Drive	Construction AM	0.212	A	0.379	A	0.167	--
		Construction PM	0.255	A	0.440	A	0.185	--
135.[5]	Sepulveda Boulevard and Westchester Parkway	Construction AM	0.331	A	0.331	A	0.000	--
		Construction PM	0.636	B	0.640	B	0.004	--
136.[5]	Sepulveda Boulevard and 76th/77th Street	Construction AM	0.510	A	0.510	A	0.000	--
		Construction PM	0.552	A	0.560	A	0.008	--
137.	Sepulveda Boulevard and 79th/80th Street	Construction AM	0.421	A	0.421	A	0.000	--
		Construction PM	0.508	A	0.516	A	0.008	--
138.	Sepulveda Boulevard and 83rd Street	Construction AM	0.308	A	0.308	A	0.000	--
		Construction PM	0.459	A	0.468	A	0.009	--
1000.	La Cienega Boulevard and 104th Street	Construction AM	0.154	A	0.159	A	0.005	--
		Construction PM	0.356	A	0.357	A	0.001	--

1 The hours of analysis include the construction a.m. peak (6:00 a.m. - 7:00 a.m.), and the construction p.m. peak (3:30 p.m. - 4:30 p.m.).
2 Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #39 and #75, which are not a part of the LADOT system.
3 Level of Service range: A (excellent) to F (failure).
4 -- Indicates "No Impact"
5 The Baseline (2008) plus Project level of service did not include the additional capacity from the widening of Sepulveda Boulevard that was completed subsequent to publication of the NOP for the Bradley West Project Draft EIR. As a result, the level of service for the Baseline (2008) conditions would provide improved conditions relative to the results shown if these improvements were included.

Source: Ricondo & Associates, Inc., using TRAFFIX, 2009.

Table 4.3-14

Level of Service Analysis Results - Impact Comparison 1 Baseline (2008) Compared to Project plus Baseline (2008); Scenario 4

	Intersection	Peak Hour[1]	Baseline (2008) V/C[2]	Baseline (2008) LOS[3]	Bradley West Project Plus Baseline (2008) V/C[2]	Bradley West Project Plus Baseline (2008) LOS[3]	Change in V/C	Significant Impact
14.	Aviation Boulevard and Century Boulevard	Construction AM	0.469	A	0.469	A	0.000	--[4]
		Construction PM	0.757	C	0.769	C	0.012	--
16.	Imperial Highway and Aviation Boulevard	Construction AM	0.523	A	0.566	A	0.043	--
		Construction PM	0.667	B	0.698	B	0.031	--
19.	Aviation Boulevard and 111th Street	Construction AM	0.353	A	0.398	A	0.045	--
		Construction PM	0.488	A	0.534	A	0.046	--
36.	La Cienega Boulevard and Century Boulevard	Construction AM	0.392	A	0.392	A	0.000	--
		Construction PM	0.910	E	0.923	E	0.013	Yes
39.	Century Boulevard and I-405 Northbound Ramp	Construction AM	0.514	A	0.520	A	0.006	--
		Construction PM	0.548	A	0.553	A	0.005	--
47.	Imperial Highway and Douglas Street	Construction AM	0.155	A	0.185	A	0.030	--
		Construction PM	0.412	A	0.442	A	0.030	--
65.	Sepulveda Boulevard and Howard Hughes Pkwy.	Construction AM	0.256	A	0.256	A	0.000	--
		Construction PM	0.643	B	0.647	B	0.004	--
67.	Imperial Highway and La Cienega Boulevard	Construction AM	0.220	A	0.261	A	0.041	--
		Construction PM	0.568	A	0.600	A	0.032	--
68.	Imperial Highway and Main Street	Construction AM	0.405	A	0.424	A	0.019	--
		Construction PM	0.716	C	0.796	C	0.080	Yes
69.	Imperial Highway and Pershing Drive	Construction AM	0.481	A	0.646	B	0.165	--
		Construction PM	0.434	A	0.531	A	0.097	--
71.	Imperial Highway and Sepulveda Boulevard	Construction AM	0.509	A	0.527	A	0.018	--
		Construction PM	1.185	F	1.189	F	0.004	--
73.	Imperial Highway and Nash Street	Construction AM	0.377	A	0.390	A	0.013	--
		Construction PM	0.300	A	0.329	A	0.029	--
74.	Imperial Highway and I-105 Ramp	Construction AM	0.533	A	0.569	A	0.036	--
		Construction PM	0.541	A	0.623	B	0.082	--
75.	Imperial Highway and I-405 Northbound Ramp	Construction AM	0.246	A	0.312	A	0.066	--
		Construction PM	0.554	A	0.587	A	0.033	--
89.	La Cienega Boulevard and Lennox Boulevard	Construction AM	0.224	A	0.224	A	0.000	--
		Construction PM	0.408	A	0.408	A	0.000	--
94.	La Cienega Boulevard and 111th Street	Construction AM	0.122	A	0.310	A	0.188	--
		Construction PM	0.363	A	0.590	A	0.227	--
96.	La Cienega Blvd. & I-405 Southbound Ramps North of Century	Construction AM	0.442	A	0.481	A	0.039	--
		Construction PM	0.560	A	0.579	A	0.019	--
97.	La Cienega Blvd. & I-405 Southbound Ramps South of Century	Construction AM	0.238	A	0.238	A	0.000	--
		Construction PM	0.424	A	0.464	A	0.040	--

Table 4.3-14

Level of Service Analysis Results - Impact Comparison 1 Baseline (2008) Compared to Project plus Baseline (2008); Scenario 4

	Intersection	Peak Hour[1]	Baseline (2008) V/C[2]	Baseline (2008) LOS[3]	Bradley West Project Plus Baseline (2008) V/C[2]	Bradley West Project Plus Baseline (2008) LOS[3]	Change in V/C	Significant Impact
98.	La Cienega Blvd. & I-405 Southbound Ramps North of Imperial	Construction AM	0.173	A	0.173	A	0.000	--
		Construction PM	0.279	A	0.279	A	0.000	--
101.[5]	Sepulveda Boulevard and La Tijera Boulevard	Construction AM	0.377	A	0.377	A	0.000	--
		Construction PM	0.663	B	0.680	B	0.017	--
108.	Sepulveda Boulevard and Lincoln Boulevard	Construction AM	0.409	A	0.409	A	0.000	--
		Construction PM	0.715	C	0.722	C	0.007	--
114.[5]	Sepulveda Boulevard and Manchester Avenue	Construction AM	0.501	A	0.501	A	0.000	--
		Construction PM	0.877	D	0.902	E	0.025	Yes
123.	Westchester Parkway and Pershing Drive	Construction AM	0.212	A	0.272	A	0.060	--
		Construction PM	0.255	A	0.352	A	0.097	--
135.[5]	Sepulveda Boulevard and Westchester Parkway	Construction AM	0.331	A	0.331	A	0.000	--
		Construction PM	0.636	B	0.642	B	0.006	--
136.[5]	Sepulveda Boulevard and 76th/77th Street	Construction AM	0.510	A	0.510	A	0.000	--
		Construction PM	0.552	A	0.558	A	0.006	--
137.	Sepulveda Boulevard and 79th/80th Street	Construction AM	0.421	A	0.421	A	0.000	--
		Construction PM	0.508	A	0.514	A	0.006	--
138.	Sepulveda Boulevard and 83rd Street	Construction AM	0.308	A	0.308	A	0.000	--
		Construction PM	0.459	A	0.464	A	0.005	--
1000.	La Cienega Boulevard and 104th Street	Construction AM	0.154	A	0.160	A	0.006	--
		Construction PM	0.356	A	0.358	A	0.002	--

1 The hours of analysis include the construction a.m. peak (6:00 a.m. - 7:00 a.m.), and the construction p.m. peak (3:30 p.m. - 4:30 p.m.).
2 Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #39 and #75, which are not a part of the LADOT system.
3 Level of Service range: A (excellent) to F (failure).
4 -- Indicates "No Impact"
5 The Baseline (2008) plus Project level of service did not include the additional capacity from the widening of Sepulveda Boulevard that was completed subsequent to publication of the NOP for the Bradley West Project Draft EIR. As a result, the level of service for the Baseline (2008) conditions would provide improved conditions relative to the results shown if these improvements were included.

Source: Ricondo & Associates, Inc., using TRAFFIX, 2009.

4.3.8.2 Impact Comparison 2--Cumulative Traffic (Q4 2010) Measured against Baseline (2008)

This comparison was conducted in two steps which are consistent with CEQA Guidelines Section 15130. An initial comparison was conducted by comparing the level of service associated with cumulative traffic volumes during the peak period of Bradley West Project construction with the Baseline 2008 levels of service. This initial comparison was conducted to determine if there would be a significant cumulative impact. If a significant cumulative impact were determined, then an additional comparison was conducted to determine if the project would produce a cumulatively considerable contribution to the significant cumulative impact. This second comparison was conducted by comparing cumulative conditions both with and without the project. Cumulatively considerable contributions are realized when the thresholds of significance defined in Section 4.3.6 above are met or exceeded.

Cumulative impacts were evaluated for the most critical "surged" conditions that would occur at the peak of the Bradley West Project construction (Fourth Quarter 2011) combined with the peak cumulative condition that would occur in the Fourth Quarter of 2010. These cumulative impact comparisons identified as Scenario 3 and Scenario 4 are presented in **Table 4.3-15** and **Table 4.3-16**, respectively. Given the traffic volume generated by Scenarios 3 and 4 are substantially higher than Scenarios 1 and 2, the analysis of Scenarios 3 and Scenario 4 provides a worst-case condition for the assessment of cumulative impacts. As shown in **Table 4.3-15** and **Table 4.3-16**, it is anticipated that the following intersections would experience cumulative impacts where the project-component would be cumulatively considerable under both employee parking Scenario 3 and Scenario 4:

- **La Cienega Boulevard and Century Boulevard (Intersection #36).**
- **Imperial Highway and Main Street (Intersection #68).**
- **Imperial Highway and Pershing Drive (Intersection #69).**
- **Sepulveda Boulevard and Manchester Avenue (Intersection #114).**

4.3.8.3 Summary of Impacts

Table 4.3-17 provides an overall summary of intersections that are estimated to experience future project-related impacts or experience cumulative impacts where the project-component would be cumulatively considerable.

Table 4.3-15

Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (Scenario 3, Fourth Quarter 2010)

			Baseline (2008) [A]		Bradley West Project Peak (Q4 2010) Without Project [B]		Bradley West Project Peak (Q4 2010) With Project[1] [C]		Cumulative Impact Determination [C]-[A]		Cumulative Considerable Determination/Significant Impact [C]-[B]	
	Intersection	Peak Hour[1]	V/C[2]	LOS[3]	V/C[2]	LOS[3]	V/C[2]	LOS[3]	Change in V/C	Cumulative Impact?	Change in V/C	Cumulatively Considerable Contribution?
14.	Aviation Boulevard and Century Boulevard	Construction AM	0.469	A	0.522	A	0.522	A	0.053	--	0.000	--[4]
		Construction PM	0.757	C	0.815	D	0.822	D	0.065	Yes	0.007	--
16.	Imperial Highway and Aviation Boulevard	Construction AM	0.523	A	0.591	A	0.617	B	0.094	--	0.026	--
		Construction PM	0.667	B	0.729	C	0.768	C	0.101	Yes	0.039	--
19.	Aviation Boulevard and 111th Street	Construction AM	0.353	A	0.397	A	0.424	A	0.071	--	0.027	--
		Construction PM	0.488	A	0.531	A	0.558	A	0.070	--	0.027	--
36.	La Cienega Boulevard and Century Boulevard	Construction AM	0.392	A	0.415	A	0.416	A	0.024	--	0.001	--
		Construction PM	0.910	E	0.958	E	0.973	E	0.063	Yes	0.015	Yes
39.	Century Boulevard and I-405 Northbound Ramp	Construction AM	0.514	A	0.540	A	0.546	A	0.032	--	0.006	--
		Construction PM	0.548	A	0.574	A	0.579	A	0.031	--	0.005	--
47.	Imperial Highway and Douglas Street	Construction AM	0.155	A	0.174	A	0.218	A	0.063	--	0.044	--
		Construction PM	0.412	A	0.439	A	0.480	A	0.068	--	0.041	--
65.	Sepulveda Boulevard and Howard Hughes Parkway	Construction AM	0.256	A	0.269	A	0.269	A	0.013	--	0.000	--
		Construction PM	0.643	B	0.672	B	0.674	B	0.031	--	0.002	--
67.	Imperial Highway and La Cienega Boulevard	Construction AM	0.220	A	0.242	A	0.266	A	0.046	--	0.024	--
		Construction PM	0.568	A	0.605	B	0.624	B	0.056	--	0.019	--
68.	Imperial Highway and Main Street	Construction AM	0.405	A	0.426	A	0.442	A	0.037	--	0.016	--
		Construction PM	0.716	C	0.801	D	0.921	E	0.205	Yes	0.120	Yes
69.	Imperial Highway and Pershing Drive	Construction AM	0.481	A	0.537	A	0.782	C	0.301	Yes	0.245	Yes
		Construction PM	0.434	A	0.472	A	0.562	A	0.128	--	0.090	--
71.	Imperial Highway and Sepulveda Boulevard	Construction AM	0.509	A	0.533	A	0.544	A	0.035	--	0.011	--
		Construction PM	1.185	F	1.237	F	1.240	F	0.055	Yes	0.003	--
73.	Imperial Highway and Nash Street	Construction AM	0.377	A	0.395	A	0.535	A	0.158	--	0.140	--
		Construction PM	0.300	A	0.324	A	0.364	A	0.064	--	0.040	--
74.	Imperial Highway and I-105 Ramp	Construction AM	0.533	A	0.586	A	0.638	B	0.105	--	0.052	--
		Construction PM	0.541	A	0.580	A	0.644	B	0.103	--	0.064	--
75.	Imperial Highway and I-405 Northbound Ramp	Construction AM	0.246	A	0.280	A	0.338	A	0.092	--	0.058	--
		Construction PM	0.554	A	0.589	A	0.628	B	0.074	--	0.039	--
89.	La Cienega Boulevard and Lennox Boulevard	Construction AM	0.224	A	0.236	A	0.236	A	0.012	--	0.000	--
		Construction PM	0.408	A	0.427	A	0.427	A	0.019	--	0.000	--
94.	La Cienega Boulevard and 111th Street	Construction AM	0.122	A	0.130	A	0.240	A	0.118	--	0.110	--
		Construction PM	0.363	A	0.381	A	0.515	A	0.152	--	0.134	--
96.	La Cienega Blvd. & I-405 Southbound Ramps North of Century	Construction AM	0.442	A	0.481	A	0.504	A	0.062	--	0.023	--
		Construction PM	0.560	A	0.597	A	0.610	B	0.050	--	0.013	--

Table 4.3-15

Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (Scenario 3, Fourth Quarter 2010)

			Baseline (2008) [A]		Bradley West Project Peak (Q4 2010) Without Project [B]		Bradley West Project Peak (Q4 2010) With Project[1] [C]		Cumulative Impact Determination [C]-[A]		Cumulative Considerable Determination/Significant Impact [C]-[B]	
	Intersection	**Peak Hour[1]**	**V/C[2]**	**LOS[3]**	**V/C[2]**	**LOS[3]**	**V/C[2]**	**LOS[3]**	**Change in V/C**	**Cumulative Impact?**	**Change in V/C**	**Cumulatively Considerable Contribution?**
97.	La Cienega Blvd. & I-405 Southbound	Construction AM	0.238	A	0.250	A	0.250	A	0.012	--	0.000	--
	Ramps South of Century	Construction PM	0.424	A	0.458	A	0.482	A	0.058	--	0.024	--
98.	La Cienega Blvd. & I-405 Southbound	Construction AM	0.173	A	0.182	A	0.182	A	0.009	--	0.000	--
	Ramps North of Imperial	Construction PM	0.279	A	0.292	A	0.292	A	0.013	--	0.000	--
101.[5]	Sepulveda Boulevard and La Tijera	Construction AM	0.377	A	0.377	A	0.377	A	0.000	--	0.000	--
	Boulevard	Construction PM	0.663	B	0.663	B	0.674	B	0.011	--	0.011	--
108.	Sepulveda Boulevard and Lincoln	Construction AM	0.409	A	0.429	A	0.429	A	0.020	--	0.000	--
	Boulevard	Construction PM	0.715	C	0.750	C	0.760	C	0.045	Yes	0.010	--
114.[5]	Sepulveda Boulevard and Manchester	Construction AM	0.501	A	0.515	A	0.515	A	0.014	--	0.000	--
	Avenue	Construction PM	0.877	D	0.902	E	0.937	E	0.060	Yes	0.035	Yes
123.	Westchester Parkway and Pershing Drive	Construction AM	0.212	A	0.228	A	0.429	A	0.217	--	0.201	--
		Construction PM	0.255	A	0.269	A	0.486	A	0.231	--	0.217	--
135.[5]	Sepulveda Boulevard and Westchester	Construction AM	0.331	A	0.351	A	0.351	A	0.020	--	0.000	--
	Parkway	Construction PM	0.636	B	0.644	B	0.668	B	0.032	--	0.024	--
136.[5]	Sepulveda Boulevard and 76th/77th	Construction AM	0.510	A	0.531	A	0.531	A	0.021	--	0.000	--
	Street	Construction PM	0.552	A	0.552	A	0.556	A	0.004	--	0.004	--
137.	Sepulveda Boulevard and 79th/80th	Construction AM	0.421	A	0.441	A	0.441	A	0.020	--	0.000	--
	Street	Construction PM	0.508	A	0.533	A	0.541	A	0.033	--	0.008	--
138.	Sepulveda Boulevard and 83rd Street	Construction AM	0.308	A	0.323	A	0.323	A	0.015	--	0.000	--
		Construction PM	0.459	A	0.481	A	0.489	A	0.030	--	0.008	--
1000	La Cienega Boulevard and 104th Street	Construction AM	0.154	A	0.156	A	0.160	A	0.006	--	0.004	--
.		Construction PM	0.356	A	0.373	A	0.374	A	0.018	--	0.001	--

1 The hours of analysis include the construction a.m. peak (6:00 a.m. - 7:00 a.m.) and the construction p.m. peak (3:30 p.m. - 4:30 p.m.).
2 Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #39 and #75, which are not a part of the LADOT system
3 Level of Service range: A (excellent) to F (failure).
4 -- Indicates "No Impact"
5 The Bradley West Project With and Without Project scenarios level of service were calculated to include the widening of Sepulveda Boulevard that was completed subsequent to publication of the NOP for the Bradley West Project Draft EIR.

Source: Ricondo & Associates, Inc., using TRAFFIX, 2009.

Table 4.3-16

Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (Scenario 4, Fourth Quarter 2010)

			Baseline (2008) [A]		Bradley West Project Peak (Q4 2010) Without Project [B]		Bradley West Project Peak (Q4 2010) With Project[1] [C]		Cumulative Impact Determination [C]-[A]		Cumulative Considerable Determination/Significant Impact [C]-[B]	
	Intersection	**Peak Hour[1]**	**V/C[2]**	**LOS[3]**	**V/C[2]**	**LOS[3]**	**V/C[2]**	**LOS[3]**	**Change in V/C**	**Cumulative Impact?**	**Change in V/C**	**Cumulatively Considerable Contribution?**
14.	Aviation Boulevard and Century	Construction AM	0.469	A	0.522	A	0.522	A	0.053	--	0.000	--[4]
	Boulevard	Construction PM	0.757	C	0.815	D	0.827	D	0.070	Yes	0.012	--
16.	Imperial Highway and Aviation	Construction AM	0.523	A	0.591	A	0.635	B	0.112	--	0.044	--
	Boulevard	Construction PM	0.667	B	0.729	C	0.760	C	0.093	Yes	0.031	--
19.	Aviation Boulevard and 111th	Construction AM	0.353	A	0.397	A	0.443	A	0.090	--	0.046	--
	Street	Construction PM	0.488	A	0.531	A	0.577	A	0.089	--	0.046	--
36.	La Cienega Boulevard and	Construction AM	0.392	A	0.415	A	0.415	A	0.023	--	0.000	--
	Century Boulevard	Construction PM	0.910	E	0.958	E	0.986	E	0.076	Yes	0.028	Yes
39.	Century Boulevard and I-405	Construction AM	0.514	A	0.540	A	0.546	A	0.032	--	0.006	--
	Northbound Ramp	Construction PM	0.548	A	0.574	A	0.579	A	0.031	--	0.005	--
47.	Imperial Highway and Douglas	Construction AM	0.155	A	0.174	A	0.204	A	0.049	--	0.030	--
	Street	Construction PM	0.412	A	0.439	A	0.469	A	0.057	--	0.030	--
65.	Sepulveda Boulevard and Howard	Construction AM	0.256	A	0.269	A	0.269	A	0.013	--	0.000	--
	Hughes Parkway	Construction PM	0.643	B	0.672	B	0.676	B	0.033	--	0.004	--
67.	Imperial Highway and La Cienega	Construction AM	0.220	A	0.242	A	0.280	A	0.060	--	0.038	--
	Boulevard	Construction PM	0.568	A	0.605	B	0.637	B	0.069	--	0.032	--
68.	Imperial Highway and Main Street	Construction AM	0.405	A	0.426	A	0.445	A	0.040	--	0.019	--
		Construction PM	0.716	C	0.801	D	0.881	D	0.165	Yes	0.080	Yes
69.	Imperial Highway and Pershing	Construction AM	0.481	A	0.537	A	0.702	C	0.221	Yes	0.165	Yes
	Drive	Construction PM	0.434	A	0.472	A	0.518	A	0.084	--	0.046	--
71.	Imperial Highway and Sepulveda	Construction AM	0.509	A	0.533	A	0.551	A	0.042	--	0.018	--
	Boulevard	Construction PM	1.185	F	1.237	F	1.241	F	0.056	Yes	0.004	--
73.	Imperial Highway and Nash Street	Construction AM	0.377	A	0.395	A	0.527	A	0.150	--	0.132	--
		Construction PM	0.300	A	0.324	A	0.353	A	0.053	--	0.029	--
74.	Imperial Highway and I-105 Ramp	Construction AM	0.533	A	0.586	A	0.623	B	0.090	--	0.037	--
		Construction PM	0.541	A	0.580	A	0.662	B	0.121	--	0.082	--
75.	Imperial Highway and I-405	Construction AM	0.246	A	0.280	A	0.345	A	0.099	--	0.065	--
	Northbound Ramp	Construction PM	0.554	A	0.589	A	0.622	B	0.068	--	0.033	--
89.	La Cienega Boulevard and Lennox	Construction AM	0.224	A	0.236	A	0.236	A	0.012	--	0.000	--
	Boulevard	Construction PM	0.408	A	0.427	A	0.427	A	0.019	--	0.000	--
94.	La Cienega Boulevard and 111th	Construction AM	0.122	A	0.130	A	0.318	A	0.196	--	0.188	--
	Street	Construction PM	0.363	A	0.381	A	0.607	B	0.244	--	0.226	--
96.	La Cienega Blvd. & I-405 South-	Construction AM	0.442	A	0.481	A	0.520	A	0.078	--	0.039	--
	bound Ramps North of Century	Construction PM	0.560	A	0.597	A	0.616	B	0.056	--	0.019	--

Table 4.3-16

Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (Scenario 4, Fourth Quarter 2010)

			Baseline (2008) [A]		Bradley West Project Peak (Q4 2010) Without Project [B]		Bradley West Project Peak (Q4 2010) With Project[1] [C]		Cumulative Impact Determination [C]-[A]		Cumulative Considerable Determination/Significant Impact [C]-[B]	
	Intersection	Peak Hour[1]	V/C[2]	LOS[3]	V/C[2]	LOS[3]	V/C[2]	LOS[3]	Change in V/C	Cumulative Impact?	Change in V/C	Cumulatively Considerable Contribution?
97.	La Cienega Blvd. & I-405 South-	Construction AM	0.238	A	0.250	A	0.250	A	0.012	--	0.000	--
	bound Ramps South of Century	Construction PM	0.424	A	0.458	A	0.499	A	0.075	--	0.041	--
98.	La Cienega Blvd. & I-405 South-	Construction AM	0.173	A	0.182	A	0.182	A	0.009	--	0.000	--
	bound Ramps North of Imperial	Construction PM	0.279	A	0.292	A	0.292	A	0.013	--	0.000	--
101.[5]	Sepulveda Boulevard and La	Construction AM	0.377	A	0.377	A	0.377	A	0.000	--	0.000	--
	Tijera Boulevard	Construction PM	0.663	B	0.663	B	0.666	B	0.003	--	0.003	--
108.	Sepulveda Boulevard and Lincoln	Construction AM	0.409	A	0.429	A	0.429	A	0.020	--	0.000	--
	Boulevard	Construction PM	0.715	C	0.750	C	0.757	C	0.042	Yes	0.007	--
114.[5]	Sepulveda Boulevard and	Construction AM	0.501	A	0.515	A	0.515	A	0.014	--	0.000	--
	Manchester Avenue	Construction PM	0.877	D	0.902	E	0.927	E	0.050	Yes	0.025	Yes
123.	Westchester Parkway and	Construction AM	0.212	A	0.228	A	0.322	A	0.110	--	0.094	--
	Pershing Drive	Construction PM	0.255	A	0.269	A	0.398	A	0.143	--	0.129	--
135.[5]	Sepulveda Boulevard and	Construction AM	0.331	A	0.351	A	0.351	A	0.020	--	0.000	--
	Westchester Parkway	Construction PM	0.636	B	0.644	B	0.652	B	0.016	--	0.008	--
136.[5]	Sepulveda Boulevard and	Construction AM	0.510	A	0.531	A	0.531	A	0.021	--	0.000	--
	76th/77th Street	Construction PM	0.552	A	0.552	A	0.552	A	0.000	--	0.000	--
137.	Sepulveda Boulevard and	Construction AM	0.421	A	0.441	A	0.441	A	0.020	--	0.000	--
	79th/80th Street	Construction PM	0.508	A	0.533	A	0.539	A	0.031	--	0.006	--
138.	Sepulveda Boulevard and 83rd	Construction AM	0.308	A	0.323	A	0.323	A	0.015	--	0.000	--
	Street	Construction PM	0.459	A	0.481	A	0.487	A	0.028	--	0.006	--
1000.	La Cienega Boulevard and 104th	Construction AM	0.154	A	0.156	A	0.162	A	0.008	--	0.006	--
	Street	Construction PM	0.356	A	0.373	A	0.374	A	0.018	--	0.001	--

1 The hours of analysis include the construction a.m. peak (6:00 a.m. - 7:00 a.m.) and the construction p.m. peak (3:30 p.m. - 4:30 p.m.).
2 Volume to capacity ratio. Includes an LADOT ATSAC benefit applied at each intersection with the exception of intersections #39 and #75, which are not a part of the LADOT system
3 Level of Service range: A (excellent) to F (failure).
4 -- Indicates "No Impact"
5 The Bradley West Project With and Without Project scenarios level of service were calculated to include the widening of Sepulveda Boulevard that was completed subsequent to publication of the NOP for the Bradley West Project Draft EIR.

Source: Ricondo & Associates, Inc., using TRAFFIX, 2009.

Table 4.3-17

Level of Service Analysis Results Summary

Intersection	Peak Hour[1]	Impact Comparison 1 Baseline (2008) Compared to Baseline (2008) + Project Scenario				Impact Comparison 2 Cumulative Traffic at Bradley West Project Peak (Cumulative Considerable Determination, 4th Quarter 2010)	
		Scenario 1[2]	Scenario 2[3]	Scenario 3[4]	Scenario 4[5]	Scenario 3[4]	Scenario 4[5]
36. La Cienega Blvd and Century Blvd	Construction AM	--[6]	--	--	--	--	--
	Construction PM	Yes	Yes	Yes	Yes	Yes	Yes
68. Imperial Highway and Main Street	Construction AM	--	--	--	--	--	--
	Construction PM	Yes	--	Yes	Yes	Yes	Yes
69. Imperial Highway and Pershing Drive	Construction AM	Yes	--	Yes	--	Yes	Yes
	Construction PM	--	--	--	--	--	--
114. Sepulveda Blvd and Manchester Ave	Construction AM	--	--	--	--	--	--
	Construction PM	Yes	--	Yes	Yes	Yes	Yes

1 The hours of analysis include the construction a.m. peak (6:00 a.m. - 7:00 a.m.), and the construction p.m. peak (3:30 p.m. - 4:30 p.m.).
2 Scenario 1: 601 trips allocated to the Northwest Parking Area (located on Westchester Parkway at Pershing Drive).
3 Scenario 2: 601 trips allocated to the Southeast Parking Area (located on La Cienega Boulevard at Lennox Boulevard).
4 Scenario 3: 357 trips allocated to the Southeast Parking Area (located at Continental City) and 601 trips allocated to the Northwest Parking Area.
5 Scenario 4: 601 trips allocated to the Southeast Parking Area (located at Continental City) and 357 trips allocated to the Northwest Parking Area.
6 -- Indicates "No Impact"

Source: Ricondo & Associates, Inc., 2009.

4.3.9 Mitigation Measures

As described above in the impact discussions in Sections 4.3.8.1 and 4.3.8.2, the Bradley West Project would result in significant construction traffic-related impacts. Given the dynamic nature of the construction program, LAWA has performed a worst-case analysis to identify the collective impacts associated with operating construction employee parking from one and a combination of four employee parking areas described previously within the four scenarios. In order to maintain future flexibility in the construction program, LAWA developed a mitigation program that, if implemented, would mitigate construction impacts at some of the impacted intersections when operating from any of the four scenarios in accordance with the assumptions described previously. In essence, this program is intended to mitigate impacts at these intersections in order to maintain this necessary flexibility that would allow LAWA to use the identified construction employee lots either individually or collectively over the course of the construction program.

In developing the proposed mitigation program, LAWA evaluated possible improvements that could be made at each of the significantly impacted intersections. In some cases, it was determined that the improvements would not be feasible to implement and that the impact would be significant and unavoidable. In other cases, it would be feasible to implement the mitigation under consideration. The discussion below presents both those improvements that were considered but determined to be infeasible, as well as those improvements that would be feasible and are thereby included in the recommended mitigation program. The existing and potential future lane geometry for each intersection is depicted in **Figure 4.3-7**. This figure depicts the future lane geometry with the feasible improvements that were considered for each intersection.

Intersection Improvements Considered but Determined to be Infeasible

The following improvements were identified at the intersections that were anticipated to be significantly impacted by construction-related traffic generated by the Bradley West Project, but were determined to be infeasible to implement. For each intersection, the improvement is described, as is the reason it is not considered to be feasible to implement.

- **La Cienega Boulevard and Century Boulevard (Intersection #36)**

  To mitigate the anticipated impacts, the landscaped median on eastbound Century Boulevard west of La Cienega Boulevard could be removed to accommodate an additional right-turn lane on the west leg of the intersection. The westbound approach could be restriped to provide one left-turn lane, three through lanes, and a right-turn lane. Existing roadway widths and right-of-way constraints do not allow for the proposed lane reconfiguration at this intersection without demolition of the landscaped median installed by the City of Los Angeles that reduced the capacity of the eastbound approach by converting the dual eastbound right-turn lane to a single right-turn lane. Therefore, the impact is considered significant and unavoidable due to physical constraints in place and given that the short-term nature of the impact would not justify the removal of the landscaped median.

- **Sepulveda Boulevard and Manchester Avenue (Intersection #114)**

  To mitigate the anticipated impacts to this intersection, the southbound approach could be widened to provide an additional left turn lane. The resulting southbound lane geometry would consist of a dual left-turn lane, three through lanes, and a single right-turn lane. However, this improvement is considered infeasible due to right-of-way constraints on the northwest corner associated with widening the southbound approach. This intersection would therefore remain unmitigated and the impact is considered significant and unavoidable.

Intersection Improvements Determined to be Feasible

The following improvements were identified at the intersections that were anticipated to be significantly impacted by construction-related traffic generated by the Bradley West Project, and were determined to be feasible to implement.

- **Imperial Highway and Main Street (Intersection #68)**

  To mitigate construction-related impacts at this intersection, the median island on the east leg of the intersection would be modified to provide a second left turn lane. The resulting westbound configuration would be comprised of a dual left-turn lane and two through lanes. Implementation of this mitigation measure would reduce the impact to a less-than-significant level for all scenarios and all impact comparisons.

- **Imperial Highway and Pershing Drive (Intersection #69)**

  To mitigate construction-related impacts to this intersection, the north side of the westbound approach of Imperial Highway would be widened to provide a second right-turn lane. The resulting westbound lane configuration would be comprised of one left turn lane, two through lanes, and two right turn lanes. Implementation of this mitigation measure would reduce the impact to a less-than-significant level for all scenarios and all impact comparisons.

Recommended Mitigation Program

Based on the information provided above, the following mitigation measures are proposed to address construction-related surface transportation impacts associated with the Bradley West Project. As stated in Section 4.3.8.2 above, neither of these mitigation measures would be needed under employee parking Scenario 2.

- **MM-ST (BWP)-10. Modify the Intersection of Imperial Highway and Main Street (Intersection #68).**

  Modify the median island on the east leg of the intersection to provide a second left turn lane. The resulting westbound configuration would be comprised of a dual left-turn lane and two through lanes.

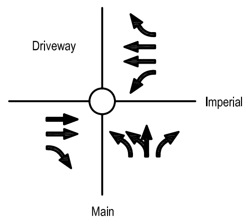
- **MM-ST (BWP)-11. Modify the Intersection of Imperial Highway and Pershing Drive (Intersection #69).**

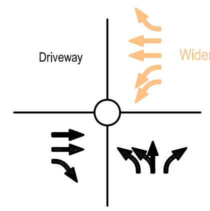
  Widen the north side of the westbound approach of Imperial Highway to provide a second right-turn lane. The resulting westbound lane configuration would be comprised of one left turn lane, two through lanes, and two right turn lanes.

BASELINE CONDITIONS (YEAR 2008)

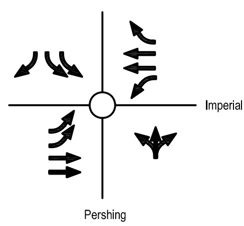
FUTURE CONDITION WITH MITIGATION

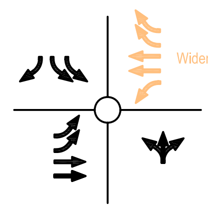
68. Imperial Hwy. & Main St.





69. Imperial Hwy. & Pershing Dr.





north

Source: Ricondo & Associates, Inc., March 2009.
Prepared by: Ricondo & Associates,Inc., March 2009.

Legend

○ Signalized Intersection

LAX Bradley West Project Draft EIR

Lane Configurations at Mitigated Intersections

Figure **4.3-7**

4.3.10 Level of Significance After Mitigation

Table 4.3-18 summarizes the final LOS if all the potential intersection improvements identified in Section 4.3.9 were feasible to implement. Although not summarized in the table, the improvements, if implemented, would also address the project impacts associated with the Baseline (2008) Plus Project compared with the Baseline (2008) condition. This is because the future With Project condition compared with the Without Project condition, which is used to assess whether the impact is cumulatively considerable (and therefore an impact) is a more conservative analysis than the Baseline Plus Project compared with the Baseline, which is used to assess project impacts. It is more conservative because the difference in traffic activity which determines an impact for both comparisons is comprised of the same "project" volume distributed throughout the study area network in the same manner for both comparisons; however, the Baseline condition used in the cumulative analysis is of a greater magnitude which results in a lower tolerance for adding project traffic before an impact would occur.

As noted in Section 4.3.9, it is likely that physical constraints adjacent to two impacted intersections, La Cienega Boulevard and Century Boulevard (Intersection #36) and Sepulveda Boulevard and Manchester Avenue (Intersection #114), would render the improvements identified in Section 4.3.9 infeasible. As a result, impacts to these intersections would be significant and unavoidable.

With the implementation of Mitigation Measures MM-ST (BWP)-10 and MM-ST (BWP)-11, project and cumulative construction-related impacts to the intersections of Imperial Highway and Main Street (Intersection #68) and Imperial Highway and Pershing Drive (Intersection #69) would be less than significant. However, the improvements identified for the intersections at La Cienega Boulevard and Century Boulevard (Intersection #36) and Sepulveda Boulevard and Manchester Avenue (#114) were determined to be infeasible; therefore, the impacts associated with these two intersections would remain significant and unavoidable. The final LOS after implementing the recommended transportation mitigation plan, which includes only feasible mitigation measures, is summarized in **Table 4.3-19**. Except for Intersections #68 and #69, all significant impacts identified in Section 4.3.8 would remain significant and unavoidable for both Scenario 3 and Scenario 4.

Table 4.3-18

Level of Service With Potential Intersection Improvements

Intersection Number	Peak Hour	Intersection	Improvements	Affected Scenario	2010 Without Project (Without Improvements) V/C	2010 Without Project (Without Improvements) LOS	2010 With Project (Without Improvements) V/C	2010 With Project (Without Improvements) LOS	2010 With Project (With Improvements) V/C	2010 With Project (With Improvements) LOS	Significance Impact with Improvements?
#36	PM	La Cienega and Century	Improvements for this impact would involve 1) widening Century to the south for the addition of a right-turn lane on the west leg of the intersection and 2) restriping the WB approach with a resulting lane configuration of WB - 1 LT, 3 TH, 1 RT.[2]	Scenario 3 Scenario 4	0.958 0.958	E E	0.973 0.986	E E	0.787 0.800	C[1] C[1]	NA[1] NA[1]
#68	PM	Imperial and Main	Mitigation for this impact involves narrowing the median island on the east leg of the intersection for the addition of a second left-turn lane.	Scenario 3 Scenario 4	0.801 0.801	D D	0.921 0.881	E D	0.774 0.732	C C	No No
#69	AM	Imperial and Pershing	Mitigation for this impact involves widening Imperial to the north for the addition of a right-turn lane on the east leg of the intersection. Resulting lane configuration is WB - 1 LT, 2 TH, 2 RT.	Scenario 3 Scenario 4	0.537 0.537	A A	0.782 0.702	C C	0.244 0.248	A A	No No
#114	PM	Sepulveda and Manchester	Improvements for this impact would involve widening Sepulveda to the west for the addition of a left-turn lane on the north leg of the intersection.	Scenario 3 Scenario 4	0.902 0.902	E E	0.937 0.927	E E	0.856 0.846	D[1] D[1]	NA[1] NA[1]

1 Although potential intersection improvements would reduce the impacts at this intersection, the improvements are not considered to be feasible.
2 WB = westbound, LT - left-turn lane, TH = through lane, RT = right-turn lane

Source: Ricondo & Associates, Inc., using TRAFFIX, 2009.

Table 4.3-19

Construction-Related Impacts With Mitigation

Intersection Number	Peak Hour	Intersection	Affected Scenario	2010 Without Project V/C	2010 Without Project LOS	2010 With Project V/C	2010 With Project LOS	Significant Impact?
#36	PM	La Cienega and Century	Scenario 3	0.958	E	0.973	E	Yes
			Scenario 4	0.958	E	0.986	E	
#68	PM	Imperial and Main	Scenario 3	0.801	D	0.774	C	No
			Scenario 4	0.801	D	0.732	C	
#69	AM	Imperial and Pershing	Scenario 3	0.537	A	0.244	A	No
			Scenario 4	0.537	A	0.248	A	
#114	PM	Sepulveda and Manchester	Scenario 3	0.902	E	0.937	E	Yes
			Scenario 4	0.902	E	0.927	E	

Source: Ricondo & Associates, Inc., using TRAFFIX, 2009.

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